



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

DEC 21 2011

REPLY TO THE ATTENTION OF:

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

James Boyd  
Branch Manager  
PPG Industries  
760 Pittsburgh Drive  
Delaware, Ohio 43015

RE: Finding of Violation  
PPG Industries  
Delaware, Ohio

Dear Mr. Boyd:

The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to PPG Industries (you) under Section 113(a)(3) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a)(3). We find that you are in violation of Section 112 of the Act, 42 U.S.C. § 7412, and the implementing regulations at 40 C.F.R. Part 63, Subpart FFFF, the National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing; 40 C.F.R. Part 63, Subpart UU, the National Emissions Standards for Equipment Leaks – Control Level 2; and 40 C.F.R Part 60, Appendix A, EPA Reference Method 21, at your Delaware, Ohio facility.

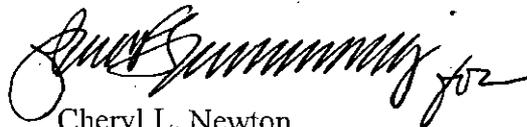
Section 113 of the Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the FOV. The conference will give you the opportunity to present information on the specific findings of violation, the 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 attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Ray Cullen. You may call him at (312) 886-0538 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Cheryl L. Newton". The signature is fluid and cursive, with a large initial "C" and "N".

Cheryl L. Newton  
Director  
Air and Radiation Division

Enclosure

cc: Adam Ward, Manager  
Central District Office  
Ohio Environmental Protection Agency

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

**IN THE MATTER OF:**

PPG Industries  
Delaware, Ohio

)  
)  
) **FINDING OF VIOLATION**  
) **EPA-5-12-OH-08**  
)  
)  
)

Proceedings Pursuant to Section 113(a)(3)  
of the Clean Air Act, 42 U.S.C.  
§ 7413(a)(3)

**FINDING OF VIOLATION**

The U.S. Environmental Protection Agency is issuing this Finding of Violation under Section 113(a)(3) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a)(3). EPA finds that PPG Industries (PPG) is violating Section 112 of the Act, 42 U.S.C. § 7412, and the implementing regulations at 40 C.F.R. Part 63, Subpart FFFF, the National Emission Standards for Hazardous Air Pollutants (HAPs): Miscellaneous Organic Chemical Manufacturing (the MON); 40 C.F.R. Part 63, Subpart UU, the National Emissions Standards for Equipment Leaks – Control Level 2 (Subpart UU); and 40 C.F.R. Part 60, Appendix A, EPA Reference Method 21 (Method 21), at its Delaware, Ohio facility, as follows:

**Statutory and Regulatory Authority**

- 1) Section 112(d) of the Act, 42 U.S.C. § 7412(d), authorizes EPA to promulgate regulations for particular industrial sources that emit one or more of the HAPs listed in Section 112(b) of the Act, 42 U.S.C. § 7412(b), in significant quantities.
- 2) Pursuant to Section 112(d) of the Act, 42 U.S.C. § 7412(d), EPA promulgated Subpart UU on June 29, 1999, 64 Fed. Reg. 34899 (June 29, 1999). Subpart UU applies only to owners and operators of facilities subject to a referencing subpart, per 40 C.F.R. § 63.1019(a).
- 3) Pursuant to Section 112(d) of the Act, 42 U.S.C. § 7412(d), EPA promulgated the MON on November 10, 2003, 68 Fed. Reg. 63888 (November 10, 2003). The owner or operator of an existing affected source as of November 10, 2003 must comply with the provisions of this subpart no later than May 10, 2008, as required under 40 C.F.R. § 63.2445(b).
- 4) The MON, at 40 C.F.R. § 63.2440, applies to each miscellaneous organic chemical manufacturing affected source, which is the facility-wide collection of miscellaneous organic chemical manufacturing process units (MCPUs) and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials described in 40 C.F.R. § 63.2435(b)(1).

- 5) The MON, at 40 C.F.R. § 63.2435(a), applies to owners or operators of MPCUs that are located at, or are part of, a major source of HAP emissions as defined in Section 112(a) of the Act, 42 U.S.C. § 7412(a).
- 6) The MON, at 40 C.F.R. § 63.2435(b), states that an MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in 40 C.F.R. § 63.2550, that a) produces an organic chemical classified using the 1987 version of Standard Industrial Classification (SIC) code 282, 283, 284, 285, 286, 287, 289, or 386; an organic chemical classified using the 1997 version of North American Industry Classification System (NAICS) code 325; quaternary ammonium compounds and ammonium sulfate produced with caprolactam; hydrazine; or organic solvents classified in any of the SIC or NAICS previously listed that are recovered using non-dedicated solvent recovery operations; b) processes, uses, or generates any of the organic HAP listed in Section 112(b) of the Act or hydrogen halide and halogen HAP, as defined in 40 C.F.R. § 63.2550; and c) is not an affected source or part of an affected source under another subpart in Part 63, except for process vents from batch operations within a chemical manufacturing process unit, as identified in 40 C.F.R. § 63.100(j)(4). The 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 instrumentations systems that are used to manufacture any material or family of materials described above.
- 7) The MON, at 40 C.F.R. § 63.2480(a), states that the owner or operator of an affected source must meet each requirement in Table 6 to this subpart that applies to its equipment leaks, except as specified in paragraphs (b) through (d) of this section.
- 8) The MON, at 40 C.F.R. § 63.2550, defines “equipment” as each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic HAP service; and any control devices or systems used to comply with Table 6 to this subpart.
- 9) The MON, at 40 C.F.R. § 63.2550, defines “in organic HAP service” as 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 HAP as determined according to the provisions of 40 C.F.R. § 63.180(d).
- 10) Table 6 to the MON states that for all equipment that is in organic HAP service, the owner or operator of an affected source must either comply with the requirements of Subpart UU or Subpart H of Part 63 and the requirements referenced therein, except as specified in 40 C.F.R. §§ 63.2480(b) and (d), or comply with the requirements of Subpart F of Part 65 and the requirements referenced therein, except as specified in 40 C.F.R. §§ 63.2480(c) and (d).
- 11) Subpart UU, at 40 C.F.R. § 63.1022(a), requires equipment subject to Subpart UU to be identified.

- 12) Subpart UU, at 40 C.F.R. § 63.1033(b)(3), states that when a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (b)(1) of this section at all other times.
- 13) Subpart UU, at 40 C.F.R. § 63.1020, defines “double block and bleed system” as two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.
- 14) Subpart UU, at 40 C.F.R. § 63.1033(b)(1), requires each open-ended valve or line to be equipped with a cap, blind flange, plug, or second valve.
- 15) Subpart UU, at 40 C.F.R. § 63.1020, defines “open-ended valve or line” as any valve, except relief valves, having one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping.
- 16) Subpart UU, at 40 C.F.R. § 63.1023(b), states that instrument monitoring, as required under Subpart UU, shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of this section.
- 17) Subpart UU, at 40 C.F.R. § 63.1023(b)(5), requires monitoring to be performed when the equipment is in regulated material service or is in use with any other detectable material.
- 18) Subpart UU, at 40 C.F.R. § 63.1023(a), requires the owner or operator of a regulated source subject to Subpart UU to monitor regulated equipment as specified in paragraph (a)(1) of this section for instrument monitoring.
- 19) Subpart UU, at 40 C.F.R. § 63.1023(a)(1)(i), requires valves in gas and vapor service and in light liquid service shall be monitored pursuant to 40 C.F.R. § 63.1025(b).
- 20) Subpart UU, at 40 C.F.R. § 63.1025(b)(1), requires that the valves be monitored to detect leaks by the method specified in 40 C.F.R. § 63.1023(b).
- 21) Subpart UU, at 40 C.F.R. § 63.1023(b)(1), requires monitoring to comply with Method 21, except as otherwise provided in this section.
- 22) Method 21, at 40 C.F.R. Part 60, Appendix A, Section 8.3.1, requires the owner or operator of an affected source to slowly sample the interface of a component where leakage is indicated until the maximum meter reading is obtained.
- 23) The MON, at 40 C.F.R. § 63.2470(a), states that the owner or operator of an affected source must meet each emission limit in Table 4 to this subpart that applies to its storage tanks.
- 24) Table 4 to the MON states that for each Group 1 storage tank for which the maximum true vapor pressure of total HAP at the storage temperature is  $\geq 76.6$  kilopascals, the owner or operator of an affected source must reduce total HAP emissions by  $\geq 95$  percent by weight or

to  $\leq 20$  parts per million by volume (ppmv) of total organic compounds or organic HAP and  $\leq 20$  ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices.

- 25) The MON, at 40 C.F.R. § 63.2550, defines a “Group 1 storage tank,” in part, as a storage tank with a capacity greater than or equal to 10,000 gallons storing material that has a maximum true vapor pressure of total HAP greater than or equal to 6.9 kilopascals at an existing source.

### Findings of Fact

- 26) PPG owns and operates a resin and coating manufacturing facility at 760 Pittsburgh Drive, Delaware, Ohio (the facility).
- 27) The facility, a major source of HAP emissions as defined in Section 112(a) of the Act, 42 U.S.C. § 7412(a), contains one MCPU as that term is defined at 40 C.F.R. § 63.2435(b): the resin manufacturing process.
- 28) EPA inspected the facility on August 1-4, 2011 for compliance with the equipment leak standards of the MON.
- 29) PPG uses tags to identify equipment subject to the MON equipment leak standards.
- 30) During the inspection, EPA discovered several components subject to the MON equipment leak standards without tags and several components that were tagged but were not subject, as summarized in Table A, below.

Table A: Improperly tagged components

Component Description	Note
Valves 11374 – 11379 by the top of Reactor #3	Tagged but haven't been active in approximately 10 years
Valves on the stripper	Tagged but in vacuum service
Valve 10803 at the bottom of the Reactor #1 thin tank	Tagged but part of the nitrogen line
Valves 10494 (plus another one next to it that's too far away to read), 10501 (plus one next to it), 10508, 10509, 10510, 10522, 10523, 10525, 10533, 10536, 10537, 10550, 10551, 10552, 10565, 10568, 10569, 10575, 10576, 10577, 10598, 10599, 10609, 10611, 10612, 10620, 10621, 10622, 10631, 10632, and 10633	Tagged but part of the nitrogen lines for the blend tanks
Valves 10521, 10530, 10549, 10562, 10563, 10573, 10590, 10617, and 10618	Tagged but part of closed-vent system
2 valves on the DP cell line near valve 11397 on top of Reactor #3	Not tagged – the DP cell line is used to check headspace pressure in the reactor
1 valve next to valve 11397 on top of Reactor #3	Not tagged
1 valve on the “111 TK Bypass” line by the top of Reactor #3	Not tagged
1 check valve on Thin Tank 15TT0126	Not tagged but apparently contained only water and acid
1 pump near valve 10906.1	Not tagged
2 valves on the pump 11906 line in the tank farm	Not tagged

1 valve at the bottom of Tank 14B0183	New valve, not tagged
1 valve on the XV-1060 line at the top of the Reactor #1 thin tank	Not tagged
Filters on the lines between Thin Tanks #1 & #2	Not tagged
8 valves on the portable filter unit by Reactor #2	Not tagged
Each sampling valve at the bottom of every reactor and tank	Not tagged

- 31) PPG uses a double block and bleed system at the transfer racks of the resin manufacturing process.
- 32) During the inspection, EPA counted 83 open-ended lines at the transfer racks of the resin manufacturing process without a cap, blind flange, plug, or second valve. Operations at the time did not require venting the lines between the block valves.
- 33) During the inspection, EPA counted 83 valves at the transfer racks that PPG has failed to conduct leak detection and repair (LDAR) monitoring of per the MON equipment leak standards. These valves are the secondary closure before the open-ended line.
- 34) Darbonne Services, Inc. conducts LDAR monitoring of valves semiannually in the resin manufacturing process.
- 35) During the inspection, PPG provided EPA with MON semi-annual reports.
- 36) According to the MON semi-annual reports provided by PPG, the highest leak rate PPG found for valves in the resin manufacturing process from May 2008 until the date of the inspection is 0.25 percent, which occurred in the first half of 2009.
- 37) During the inspection, EPA used a toxic vapor analyzer to conduct LDAR monitoring per Method 21 in the resin manufacturing process and found the seven leaks identified in Table B, below.

Table B: Leaking Valves Found by EPA

Component ID	EPA Reading (ppm)
10829	750
11816	750
11820	5,600
11827	1,300
11937	1,200
11942	1,175
12220	525 (also visual)

- 38) EPA monitored 826 valves during the inspection, resulting in a leak rate of 0.85 percent.
- 39) During the inspection, EPA used a FLIR<sup>®</sup> GasFindIR infrared camera to conduct screening for hydrocarbon emissions (i.e. HAP) from storage tanks.
- 40) EPA imaged a hydrocarbon leak (i.e. a HAP) from a blow-off vent on the fixed roof of Group 1 storage tank 15RMT109 during normal operation.

41) EPA used its toxic vapor analyzer to monitor conservation vents, vacuum control valves, and blow-off vent flanges per Method 21 on the fixed roofs of Group 1 storage tanks during normal operations and obtained the readings in Table C, below.

Table C: HAP Emissions from Group 1 Storage Tank Equipment

Tank Number	Material	Vacuum Control (ppm)	Blow-off Vent Flange (ppm)
14B0180	Acrylonitrile	-	1,025
15RMT108	Urethane Crosslinker	600 (valve 12153)	11,000
15RMT109	Crosslinker/ Auto OEM	900	29,000 (visual)

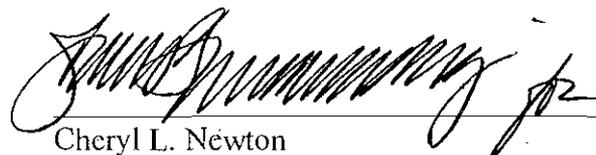
### Violations

- 42) PPG failed to identify each piece of equipment subject to the MON equipment leak standards and erroneously identified as subject pieces of equipment that are not subject, in violation of 40 C.F.R. § 63.1022(a) and 40 C.F.R. § 63.2480(a).
- 43) PPG failed to equip each open-ended line with a cap, blind flange, plug, or second valve, in violation of 40 C.F.R. § 63.1033(b)(1) and (3) and 40 C.F.R. § 63.2480(a).
- 44) PPG failed to monitor valves subject to the MON equipment leak standards, in violation of 40 C.F.R. § 63.1023(b)(5) and 40 C.F.R. § 63.2480(a).
- 45) PPG failed to monitor valves subject to the MON equipment leak standards in accordance with Method 21, in violation of 40 C.F.R. § 63.1023(a)(1)(i), 40 C.F.R. § 63.1023(b)(1), 40 C.F.R. § 63.1025(b)(1), 40 C.F.R. § 63.2480(a), and Method 21, at 40 C.F.R. Part 60, Appendix A, Section 8.3.1.
- 46) PPG failed to reduce total HAP emissions from Group 1 storage tanks 14B0180, 15RMT108, and 15RMT109 by  $\geq 95$  percent by weight or to  $< 20$  ppmv, in violation of 40 C.F.R. § 63.2470(a) and Table 4 of the MON.

### Environmental Impact of Violations

47) Violation of the NESHAP standards can result in excess HAP emissions that may cause serious health effects, such as birth defects and cancer, and harmful environmental and ecological effects.

12/21/11  
 \_\_\_\_\_  
 Date

  
 \_\_\_\_\_  
 Cheryl L. Newton  
 Director  
 Air and Radiation Division

**CERTIFICATE OF MAILING**

I, Tracy Jamison, certify that I sent a Finding of Violation, No. EPA-5-12-OH-08, by Certified Mail, Return Receipt Requested, to:

James Boyd  
Branch Manager  
PPG Industries  
760 Pittsburgh Drive  
Delaware, Ohio 43015

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

Adam Ward  
Manager  
Ohio Environmental Protection Agency  
Central District Office  
P.O. Box 1049  
Columbus, Ohio 43216-1049

on the 22nd day of December, 2011.

  
Tracy Jamison,  
Office Automation Assistant  
AECAS, (MI/WI)

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7673 9009