

**BEFORE THE WV ENVIRONMENTAL QUALITY BOARD  
CHARLESTON, WEST VIRGINIA**

**WEST VIRGINIA RIVERS COALITION,**

**Appellant,**

**v.**

**LISA McCLUNG, DIRECTOR,  
DIVISION OF WASTE MANAGEMENT,  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION,**

**Appellee,**

**AND**

**PPG INDUSTRIES, INC.,**

**Appellant,**

**v.**

**DIRECTOR, DIVISION OF WATER AND  
WASTE MANAGEMENT, WEST  
VIRGINIA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION,**

**Appellee.**

**APPEAL NO.: 05-17-EQB**

**APPEAL NO.: 05-18-EQB**

**FINAL ORDER**

The Appellants, West Virginia Rivers Coalition ("WVRC") and PPG Industries, Inc., ("PPG") filed the above captioned appeals of NPDES Permit No. WV0004359 ("Permit"). On December 15 and 16, 2005, and January 12, 2006, a quorum of the Board convened in Charleston, West Virginia, to conduct a joint evidentiary hearing on the issues raised in the two separate appeals. The appeals were consolidated by Order dated September 8, 2005, after a determination that both appeals involved the same permit and that judicial economy would be served best by consolidation. The Appellant, WVRC, was represented by Joe Lovett. The Appellant, PPG, was represented by David L. Yaussy and Ann C. Blankenship. The Appellee was represented by Jay Lazell.

The Board's duty in these two appeals was to enter an order to affirm, modify or vacate the

NPDES permit. The applicable standard of review for this appeal is de novo. W.Va. Code § 22B-1-7(e). Pursuant to de novo review, the Board “is not required to afford any deference to the WVDEP’s decision but shall act independently on the evidence before it.” *West Virginia Division of Environmental Protection v. Kingwood Coal Co.*, 200 W.Va. 734, 490 S.E. 2d 823 (1997).

Based upon the certified record, the testimony and exhibits presented at the hearing, all written filings and memoranda, the relevant Statutes and Rules, and arguments by counsel, the Board unanimously makes the following Findings of Fact, Conclusions of Law and Final Order.

### **Findings of Fact**

1. On July 14, 2005, the West Virginia Department of Environmental Protection (“WVDEP”) reissued West Virginia/National Pollutant Discharge Elimination System (“NPDES”) Permit No. WV0004359 to PPG, pursuant to the West Virginia Water Pollution Control Act (“State Act”). It replaced an NPDES permit previously issued to PPG on June 29, 2001 (“2001 Permit”), and is scheduled to expire on June 30, 2009. [Certified Record (“CR”), pp. 540, 699-700].

2. The Permit authorizes the discharge of various pollutants from a chemical manufacturing facility owned and operated by PPG near Natrium, Marshall County, West Virginia. The pollutants are discharged directly to the Ohio River from eighteen Outlets, subject to certain discharge limitations. Nine of the Outlets, 002, 004, 009, 014, 015, 017, 019, 021, and 022, are at issue in these appeals. Outlets 002, 014, 015, 017, 019, 021, and 022 are used solely for the discharge of storm water runoff (“Storm Water Outlets”). Outlet 004 is used for the discharge of industrial wastes, non-contact cooling water, and storm water. Outlet 009 is used for the discharge of industrial wastes, non-contact cooling water, sanitary waste, cooling tower blow down, and storm water. [CR, p. 700].

3. The appeal by WVRC challenged the reissuance on numerous grounds. [CR, pp. 5-19]. During the evidentiary hearing on December 15, 2005, WVRC announced to the Board that it had narrowed its appeal to essentially two grounds. It contends that the Permit cannot legally authorize discharge limits for Mercury at Outlets 004 and 009 which exceed the human health water quality criterion for mercury established by the Ohio River Valley Water Sanitation Commission

("ORSANCO"). It also contends the Permit should require use of a different analytical method for detecting the presence of mercury in discharges from the Natrium chemical manufacturing facility because the chosen analytical method in the permit does not detect mercury at the permitted level. [Appeal Hearing Transcript ("Tr.") pp. 13-14].

4. Similarly, PPG initially cited several grounds in its appeal, but eventually narrowed the grounds after reaching an agreement with the WVDEP. According to the agreement, PPG withdrew its appeal as it pertained to storm water Outlets 005 and 023 with the understanding that it may perform certain studies and then propose a modification for those two Outlets. PPG also withdrew its appeal of the discharge limitations assigned in the Permit for copper, aluminum, lead, zinc, and iron. In return, PPG may sample the Ohio River for those metals utilizing a protocol approved by the WVDEP and then submit a permit modification which requests a re-evaluation of the discharge limitations for metals. If PPG disagrees with WVDEP, it may file an appeal with this Board. If an appeal is filed, the WVDEP has agreed not to oppose a stay of any applicable permit conditions while the appeal is pending. PPG also withdrew its appeal of the Permit requirement to monitor for nutrients based on an agreement which reduces the number of Outlets at which PPG must conduct monitoring. [Tr., pp. 470-472].

5. The remaining grounds of PPG's appeal are PPG's contention that Storm Water Outlets 002, 014, 015, 017, 019, 021, and 022 do not come within the scope of industrial activity, are not subject to an NPDES permit, and that best professional judgment was not applied properly by the agency in setting the discharge limits for iron and total suspended solids discharged from the Outlets. PPG also contends that ORSANCO regulations do not prohibit a mixing zone or the development of discharge limitations which implement a mixing zone for mercury at Outlet 009. Finally, PPG argues that the NPDES Permit should not require PPG to report the migration of contaminated groundwater because it is already required to report groundwater migration under the West Virginia regulatory program. [Tr., pp. 470-472].

#### **Mercury and Outlets 004 and 009**

6. It is undisputed that Mercury is a pollutant that is particularly harmful to human health

and is known to cause birth defects in humans. [Tr. 85, 197, 357]. It has been designated by ORSANCO as a bioaccumulative chemical of concern, which is a chemical that accumulates in aquatic life and is harmful to humans. [ORSANCO Rule VI.G; Cr, p. 114].

7. The ORSANCO is an interstate agency which was established to control and abate pollution in the Ohio River and develop discharge requirements and water quality criteria for the protection of aquatic life and human health. [See ORSANCO Pollution Control Standards ("ORSANCO Standards"), pp. 1-2; Tr., p.46]. Water quality criteria include numeric values that represent concentrations of chemicals and other pollutants in a water body that are not to be exceeded to protect aquatic life and human health. Chemicals or pollutants which exceed their specific water quality criteria in the water body are considered unsafe or harmful. [ORSANCO Standards, pp. 2-3; 47 CSR § 2-2.22]. West Virginia is a member of ORSANCO and is required to incorporate into its NPDES permits any ORSANCO water quality criteria or discharge requirement that is more stringent than state requirements. [See ORSANCO Standards, pp. 1-2].

8. The ORSANCO developed water quality criteria for mercury in the Ohio River. It has been determined that mercury discharges that do not raise the concentration of mercury in the Ohio River above 0.012 ug/l (micrograms per liter), or 12 parts per trillion ("ppt"), are not harmful to human health. [Tr., pp. 221, 225; WVRC Exhibit No. 3]. The ORSANCO standard of 12 ppt for mercury applies to the Permit as well as other West Virginia NPDES permits. [Tr., pp. 69-70; ORSANCO Standards, p. 2].

9. The PPG Natrium chemical manufacturing facility is one of the largest, if not the largest, wastewater dischargers of mercury in the State of West Virginia. [Tr., pp. 197-198]. It uses technology that dates back to at least the 1940s that produces mercury as a byproduct in the production of chlorine. [Tr., pp. 304-307]. The chlorine production process at the Natrium plant is generated from four circuits. Only one of the circuits, amounting to approximately 20% of the chlorine production, uses the mercury-producing circuit. [Tr., pp. 308, 309]. Most, if not all, of the mercury produced by PPG is discharged to the Ohio River from Outlet 009. [Tr., pp. 303-314].

10. The Permit imposes both interim and final limitations for mercury at Outlet 009. The

interim limitations apply to all discharges occurring through July 13, 2007. After that date, final discharge limitations apply until the Permit expires in 2009. [CR, pp. 560-569].

11. The interim discharge limitations are expressed in units of mass and impose an average monthly limit of 0.25 pounds. The maximum daily limit is 0.05 pounds per day. [CR, 562, 686]. Expressed as a concentration in ppt, 0.25 pounds per day converts to approximately 914 ppt, which is 76 times greater than the ORSANCO standard of 12 ppt. [CR, p. 686; Tr., p. 225; WVRC Exhibit No. 3].

12. As a result of an appeal of the 2001 Permit, the discharge limit for mercury was increased to the current interim limit of 914 ppt in December 2001. [Tr., pp. 203-206; CR, p. 272].

13. WVDEP established a compliance schedule for PPG's discharge of mercury from Outlet 009. PPG data reflect that discharges from Outlet 009 have averaged 780 ppt for the past several years. [Tr., pp. 215-218; 229-232, 401-402]. The WVDEP granted a two-year compliance period for mercury discharges to exceed applicable criteria until July 14, 2007, when the final discharge limitation of 12 ppt takes effect. [CR, p. 686]

14. The Board finds that the interim discharge limitations constitute a violation of the State Act, and applicable federal law, which prohibit discharges that cause a violation of applicable water quality criteria. The State Act allows the WVDEP to establish a compliance schedule or a reasonable period of time for discharges to come into compliance with applicable criteria where data establish that discharges cannot meet criteria. However, in this instance, the Board finds that because 2001 permit limits of 914 ppt were in effect a compliance schedule to comply with the ORSANCO standard, it was unreasonable for the WVDEP to insert a two-year interim compliance period in the reissued Permit. PPG, via its 2001 Permit, has been on notice that it must meet applicable water quality criteria. The testimony of PPG's Manager of Environmental Control revealed that it is unlikely that PPG will be able to meet the 12 ppt average monthly limit for mercury after July 14, 2007. [Tr., pp. 302-303]. In essence, WVDEP granted PPG a variance of the water quality standards without requiring it to follow the procedures outlined for variances in West Virginia Water Quality Standards.

15. There is no compliance schedule for mercury discharges from Outlet 004 because data

indicate that discharges from the Outlet currently meet applicable criteria. Accordingly, the Permit imposes discharge limits which comply with the ORSANCO standard of 12 ppt immediately, and which remain in effect until Permit expiration in 2009. [CR, pp. 548, 552; Tr., p. 233].

### **Mixing Zone**

16. A mixing zone is a definable area in a receiving stream in which a pollutant is not required to meet applicable water quality criteria or standards until the pollutant reaches the boundary of the mixing zone. Mixing zones are implemented through discharge limitations assigned in an NPDES permit to ensure that applicable water quality criteria are met at the edge of the mixing zone.

17. Section VI of ORSANCO's Pollution Control Standards provides guidance for granting mixing zones where allowed by the applicable permitting authority. In October 2003, ORSANCO revised Section VI to limit mixing zones for pollutants identified as Bioaccumulative Chemicals of Concern ("BCCs"), which are essentially chemicals that accumulate in aquatic organisms and have the potential to harm human health. The October 2003 revision prohibits mixing zones for BCCs effective immediately, but grants an exception for existing discharges with mixing zones for BCCs to continue until October 16, 2013. Mercury is a BCC and therefore is subject to the ORSANCO mixing zone prohibition. This prohibition applies to the Permit.

18. The Permit does not grant or approve a mixing zone for mercury at Outlet 009, nor does it impose discharge limitations which implement a mixing zone for mercury at the Outlet.

19. The 2001 Permit did not grant or approve a mixing zone for mercury at Outlet 009, nor did it impose discharge limitations which implemented a mixing zone for mercury. [Tr., pp 596, 602]. However, it did contain a provision which authorized PPG to conduct a study for a mixing zone for discharges from Outlet 009. [Tr. 602; PPG Exhibit No. 5]. But the provision did not guarantee, nor could it guarantee, that a mixing zone or mixing zone discharge limits would be approved if PPG submitted the study. [Tr. Pp 322-323].

20. A mixing zone limit cannot be approved until a permit application based on a study is submitted to modify existing permit discharge limits and a draft permit is prepared and sent out to public

review and comment. [Tr., pp. 320-322, 325-326].

21. PPG did submit a mixing zone study report to the DEP in December 2002. But, it did not submit an application to modify the 2001 Permit limits for mercury at Outlet 009 based on the study. [Tr., pp. 599-600, 602-603]. PPG did not apply for a modification of the discharge limits for mercury to implement a mixing zone at Outlet 009 in its Permit renewal application. [Tr., pp. 320-322, 602-603; CR., p. 22, Permit Renewal Application, Section VI.B.].

22. In a February 2003 letter to PPG, DEP acknowledged receipt of PPG's mixing zone study. [PPG Exhibit No. 4]. The letter did not, nor could it, grant discharge limits which implemented a mixing zone for mercury without a permit application and a draft permit sent to public review and comment. [Tr., pp. 560-562, 571-572, 597-599].

23. The Board finds that PPG did not have a mixing zone for Mercury at outlet 009. Therefore, it was reasonable for DEP to deny PPG a mixing zone for Mercury per Section VI of ORSANCO's Pollution Control Standards which prohibit a mixing zone for BCCs, except under certain circumstances, which do not apply here.

#### **Analytical Detection Method**

24. The Permit requires PPG to use an analytical method known as "Method 245.1" to determine whether its mercury discharges are in compliance with applicable discharge limits. Method 245.1 is approved by EPA and can detect concentrations of mercury down to 200 ppt. [Tr., pp. 29, 38]. While this method is appropriate for determining compliance with discharge limitations set at or above 200 ppt, such as the Permit's interim discharge limitation of 914 ppt, it is simply useless for determining compliance with discharge limitations set below 200 ppt, like the final discharge limit of 12 ppt. [Tr., pp 43, 211].

25. EPA approved method "method 1631" is capable of detecting mercury concentrations as low as .0002 micrograms per liter, or 0.2 ppt. [Tr., pp 29, 37]. At the time the Permit was reissued, there were only two laboratories certified in West Virginia to perform Method 1631. [Tr., p. 210]

26. Shortly after the Permit was reissued, WVDEP approved another laboratory to perform

Method 1631. [Tr., pp. 34-35]. The laboratory has been analyzing samples for mercury since 1974, and has utilized Method 1631 since 2000. [Tr., p. 23]. The Board finds that although Method 1631 may cost more than Method 245.1, the additional cost is not an unreasonable expense to PPG. The Board modifies the Permit to require the use of Method 1631 to detect Mercury rather than Method 245.1.

### **Storm Water Outlets**

27. The Permit establishes interim and final discharge requirements for the Storm Water Outlets. During the interim period, August 13, 2005 to July 13, 2007, there is no requirement to comply with any discharge limitation. PPG is required only to monitor the discharges for certain pollutants and submit a report of the results to the WVDEP. [Tr., p. 134]. The frequency of monitoring varies from once every quarter to once every six months depending on the pollutant. [CR, pp. 54, 579, 581, 584, 586, 588, 590].

28. The discharge limitations for TSS and iron were derived from benchmark values established by EPA and adopted by West Virginia for storm water discharges. [Tr., pp. 16, 142-143].

29. PPG discharge data reveal that discharges from the Storm Water Outlets have consistently exceeded the benchmark values for TSS and iron by significant margins over the past ten years. [Tr., pp. 138-139, 151, 329; CR, p. 69].

30. There appears to be no conclusive data or study from PPG or any other source indicating whether or not PPG is contributing to the TSS and iron load being discharged from the Storm Water Outlets. [Tr. 151, 332, 439]. However, the appropriate consideration is whether the Outlets are conveying pollutants to the Ohio River. It is clear that the Storm Water Outlets convey pollutants, including TSS and iron, to the Ohio River. [Tr., pp. 150-151, 328, 388-393; DEP Exhibit No. 2]. Therefore, the Storm Water Outlets must be permitted under an NPDES permit.

31. Permits must contain discharge limitations for pollutants that cause or contribute to or have a reasonable potential to cause a violation of applicable water quality criteria. [Tr., p. 14; See also 40 CFR 122.44(d)(1)(iii); 47 CSR § 10-3.6.a; *W.Va. Code* § 22-11-8(a)]. However, the Board finds that EPA uses benchmark values for establishing monitoring requirements, but there is no regulatory

provision for setting effluent limitations that allows the use of benchmark values for limits. 60 Federal Register 50825, September 29, 1995. Therefore, the Board finds that the benchmark values should not have been used. Consequently, the Board modifies the permit to remove the discharge limits for TSS and Iron in the storm water until the WVDEP develops effluent limits for TSS and Iron consistent with 40 CFR § 125.3 and modifies the permit appropriately.

### **Monitoring of Groundwater Migration**

32. Under Condition C.04 of the Permit, the WVDEP required reporting the migration of contaminated groundwater as a release of contaminants. NPDES permits are not intended to regulate groundwater; they are to regulate discharges of pollutants to navigable waters. According to PPG it monitors the groundwater monthly and takes other actions to ensure that it is maintaining hydraulic control under its Resource Conservation and Recovery Act ("RCRA") permit. Any additional monitoring or reporting to the WVDEP under the NPDES permit is unnecessary. The Board modifies the Permit to remove the requirement to report the migration of contaminated groundwater under the NPDES Permit.

### **Conclusions of Law**

1. The Board has jurisdiction to decide this appeal pursuant to *W.Va. Code* §§ 22-11-21 and 22B-1-7.
2. The Board also has the jurisdiction to make and enter a written order affirming, modifying or vacating the decision of the WVDEP, or to make and enter an order as the WVDEP should have made. *W.Va. Code* § 22-11-7(b).
3. West Virginia NPDES permits which discharge to the Ohio River are subject to ORSANCO regulations governing mixing zones and water quality criteria for mercury. The ORSANCO regulations prohibit all mixing zones for mercury except those that existed on or before October 16, 2003, and establish 12 ppt as the water quality standard for mercury. The Appellant PPG did not have a mixing zone for mercury at Outlet 009 in October 2003, and therefore does not legally qualify for one under the current ORSANCO mixing zone regulation.
4. West Virginia regulations for mixing zones provide that "[m]ixing zones shall not. . .

overlap one another.” 47 CSR § 2-5.2.h.5. The Board concludes that this regulation prohibits mixing zones from overlap of other discharge points, even for dissimilar pollutants.

5. A request for a mixing zone or discharge limits which implement a mixing zone is a permit modification which cannot be lawfully approved without a permit application and the preparation of a draft permit which is available for public review and comment pursuant to applicable public notice requirements. *W.Va. Code* 22-11-8(a); 47 CSR §§ 10-9.2.b., 10, 12.1.

6. The West Virginia Water Pollution Control Act and promulgated Rules associated with the Act authorize the WVDEP to issue NPDES permits with compliance schedules that specify a reasonable time for discharges to achieve compliance with water quality standards or criteria. *W.Va. Code* §§ 22-11-6, 11(b); 4 CSR § 10-8. However, the compliance schedule associated with the reissuance of the PPG NPDES Permit exceeds a reasonable amount of time. In essence WVDEP has granted PPG a variance to the ORSANCO water quality standards.

7. ORSANCO and the state of West Virginia have specific provisions for obtaining a variance and PPG has never requested or applied to ORSANCO or the State for such a variance. [Tr. 504]. It was inappropriate for the WVDEP to attempt to grant a variance to the water quality standards through the use of a compliance extension.

8. West Virginia Rules require that monitoring and analysis of pollutants be performed according to test procedures approved in accordance with 40 CFR Part 136. 47 CSR §§ 10-5.10.a, 6.3.h.1.D. The EPA has approved Method 245.1 and Method 1631 pursuant to 40 CFR Part 136. Since Method 245.1 cannot determine compliance with the discharge limits for mercury as modified by this Board then Method 1631 must be used.

9. An NPDES permit is required for a point source whether or not the source generates or adds to the pollutants being discharged to the waters of the State. A point source need only convey pollutants to waters of the State to be subject to the requirement of an NPDES permit. *South Florida Water Management District v. Miccosukee Tribe of Indians, et al.*, 541 U.S. 95, 104-105, 124 S.Ct. 1537, 1542-1543 (2004). The Storm Water Outlets convey pollutants to the Ohio River. Accordingly, they are

subject to the requirements of the NPDES permit program and must be covered under the Permit.

10. Permits must contain discharge limits for pollutants that cause, contribute to or have a reasonable potential to cause a violation of Water quality standards. 40 CFR 122.44(d)(1)(iii); *W.Va. Code* § 22-11-4(a)(1). Therefore, the WVDEP must develop discharge limits for storm water that are consistent with 40 CFR §125.3 and the WVDEP must utilize its best professional judgment to determine the appropriate technology based effluent limits.

#### **Conclusion**

It is hereby ORDERED that NPDES Permit No. WV0004359 be modified to require the use of Method 1631 to detect Mercury, vacate the two-year compliance extension for mercury at outlet 009, remove the requirement to report the migration of contaminated groundwater, and to require the WVDEP to modify the existing storm water discharge limits in Section A and Section C for iron and TSS for the storm water outlets 002, 005, 014, 015, 017, 019, 021, 022, 023 using a best professional judgment analysis. Otherwise, NPDES Permit No. WV0004359 is affirmed.

It is so ORDERED this 24th day of July 2006.

**ENVIRONMENTAL QUALITY BOARD**

  
Edward M. Snyder, Chair