

**PUBLISHED**

**UNITED STATES COURT OF APPEALS**

**FOR THE FOURTH CIRCUIT**

UNITED STATES OF AMERICA,

Plaintiff-Appellee.

v.

SMITHFIELD FOODS, INCORPORATED;

SMITHFIELD PACKING COMPANY,

INCORPORATED; GWALTNEY OF

SMITHFIELD, LTD.,

Defendants-Appellants.

MICHIGAN CHAMBER OF COMMERCE;

PENNSYLVANIA CHAMBER OF

No. 97-2709

BUSINESS AND INDUSTRY; COLORADO

ASSOCIATION OF COMMERCE AND

INDUSTRY; AMERICAN AUTOMOBILE

MANUFACTURERS ASSOCIATION;

AMERICAN MEAT INSTITUTE;

AMERICAN PETROLEUM INSTITUTE;

INDEPENDENT PETROLEUM ASSOCIATION

OF AMERICA; INTEGRATED WASTE

SERVICES ASSOCIATION; NATIONAL

ASSOCIATION OF MANUFACTURERS,

Amici Curiae.

Appeal from the United States District Court  
for the Eastern District of Virginia, at Norfolk.

Rebecca B. Smith, District Judge.

(CA-96-1204-2)

Argued: October 26, 1998

Decided: September 14, 1999

Before ERVIN and HAMILTON, Circuit Judges,  
and G. Ross ANDERSON, Jr., United States District Judge  
for the District of South Carolina, sitting by designation.

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Affirmed in part, reversed in part, and remanded with instructions by  
published opinion. Judge Ervin wrote the opinion, in which Judge  
Hamilton and Judge Anderson joined.

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## **COUNSEL**

**ARGUED:** John G. Roberts, Jr., HOGAN & HARTSON, L.L.P.,  
Washington, D.C., for Appellants. Joan M. Pepin, UNITED STATES  
DEPARTMENT OF JUSTICE, Washington, D.C., for Appellee. **ON**  
**BRIEF:** Patrick M. Rahe, James T. Banks, Audrey J. Anderson, Pat-  
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## OPINION

ERVIN, Circuit Judge:

Smithfield Foods, Inc. ("Smithfield") appeals a grant of summary judgment in favor of the United States finding Smithfield liable for multiple Clean Water Act violations. Smithfield also challenges the court's imposition of a corresponding \$12.6 million civil penalty.

Smithfield alleges that the court committed two errors with respect to liability. First, Smithfield claims that the district court erred when it found that Orders issued by the Virginia State Water Control Board did not condition, revise, or supercede Smithfield's obligations under its 1992 water discharge permit. Second, Smithfield asserts that the district court erred in its finding that this suit was not (1) precluded by the Supreme Court's holding in Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc., 484 U.S. 49 (1987), or § 510 of the Clean Water Act ("CWA"), 33 U.S.C.A. § 1370 (West 1986); or (2) barred by § 309 (g)(6)(A)(ii) of the CWA, 33 U.S.C.A. § 1319(g)(6)(A)(ii) (West 1986 & Supp. 1999). On the penalty issue, Smithfield contends that the district court erred in calculating the penalty, especially with respect to its determination of economic benefit and the denial of "good-faith" credit to Smithfield for its compliance efforts.

For the reasons that follow, we affirm the district court's grant of summary judgment on liability. We remand the penalty determination to the district court with instructions to recalculate the civil penalty as directed by this opinion.

I.

The facts of this case are undisputed and are comprehensively set out in the district court's published opinion, United States v. Smithfield Foods, Inc., 965 F. Supp. 769, 772-81 (E.D. Va. 1997). To properly analyze this case, however, the major events bear repeating. Smithfield owns and operates two swine slaughtering and processing plants, Smithfield Packing Co. and Gwaltney of Smithfield, Ltd. Both plants are located on the Pagan River, a tributary of the James River,

in Isle of Wight County, Virginia. The wastewater discharged from these plants is treated in two of Smithfield's facilities, Outfall 001 and Outfall 002. From at least August 1991 to August 1997, treated wastewater was discharged from Outfall 001 into the Pagan River. From at least August 1991 until June 1996, treated wastewater was discharged from Outfall 002 into the Pagan River. Smithfield stopped discharging wastewater into the Pagan River when it successfully connected its plants to the Hampton Roads Sanitation District ("HRSD") system.

A.

Smithfield's wastewater discharges contained numerous pollutants that were regulated under the CWA and thus, could not be discharged into the waters of the United States unless specifically authorized by permit. Permits are governed by the National Pollutant Discharge Elimination System ("NPDES"), under which polluters obtain an NPDES permit to discharge lawfully certain pollutants in specific amounts. See 33 U.S.C.A. § 1342 (West 1986 & Supp. 1999). Regulation of NPDES permits is overseen by the Environmental Protection Agency ("EPA"), see 33 U.S.C.A. § 1342(a), but locally administered by the Commonwealth of Virginia through its agent, the Virginia State Water Control Board ("the Board"). See 33 U.S.C.A. §§ 1251(b), 1342(b) (West 1986 & Supp. 1999). The Board is authorized to enforce the CWA subject to the guidance and approval of the EPA. See 33 U.S.C.A. § 1319.

Smithfield's discharges were authorized by an NPDES permit ("the Permit") issued in 1986, modified in 1990, and reissued in 1992. The Permit placed restrictions on the amount and concentration of certain pollutants allowed in wastewater released to the Pagan River and required Smithfield to monitor, sample, analyze, and issue reports concerning its discharges. The results of Smithfield's wastewater sampling program were periodically compiled into Discharge Monitoring Reports ("DMRs") and submitted to the Board.

In response to elevated levels of nitrogen and phosphorus in the Chesapeake, the Commonwealth of Virginia promulgated regulations requiring, among other things, that NPDES permits for facilities discharging into nutrient-rich waters like the Pagan River be modified to

allow a monthly average phosphorus effluent limitation of 2.0 mg/l. The new regulations represented a considerable reduction in the amount of phosphorus permittees like Smithfield could discharge. To comply, Smithfield would have had to upgrade significantly its wastewater treatment facilities, which the company contended was an insurmountable obstacle under the required deadline. As a result, on June 3, 1988, Smithfield filed suit challenging Virginia's new phosphorus limitation as technologically infeasible.

Notwithstanding the pending legal challenge, the Board reopened Smithfield's Permit on January 4, 1990 and modified it to apply the new, more restrictive phosphorus limitation. The modified Permit ("1990 Permit") also contained a compliance schedule requiring Smithfield to take steps to comply with the new phosphorus limitation within three years of the Permit modification. Smithfield contested this action by appealing the modification. Because these new phosphorus limitations were not required in other states, Smithfield also began to talk publicly about moving its operations out of Virginia rather than complying.

Negotiations between Smithfield and Virginia ensued and to settle the dispute, each of the parties agreed to various accommodations. The agreement was documented in an Order issued by the Board on March 21, 1990 ("the 1990 Order"), in which Smithfield agreed to study the costs and feasibility of solving its wastewater treatment problem by connecting its present wastewater treatment system to the HRSD. In addition, Smithfield pledged to report the results of these studies to the Board by November 13, 1990, by which time Smithfield would decide whether it intended to connect to HRSD or to upgrade its own facilities to comply with the new phosphorus limitations. In return, the Board resolved to defer the commencement of the 1990 Permit compliance schedule until December 1, 1990.

On November 6, 1990, the Board amended the 1990 Order by extending by three months the date by which Smithfield was to report its decision whether to connect to HRSD. The Board also agreed to further defer commencement of the compliance schedule for the new phosphorus limitations.

On May 9, 1991, the Board amended the 1990 Order a second time ("May 1991 Order") granting Smithfield another extension. The May 1991 Order included the following amendments:

(1) Smithfield now had until June 15, 1991 to notify the Board of its commitment to connect to HRSD or upgrade its own facilities to comply with the new phosphorus discharge standard. If Smithfield decided to connect to HRSD, it was required to do so within three months of notification by HRSD that the necessary sewer line was completed and operational. If Smithfield decided not to connect to HRSD, it was required to upgrade its own treatment facilities to comply with all discharge limitations according to the scheduled deadline.

(2) Smithfield had to comply with the interim effluent limitations listed in Appendix A of the May 1991 Order until it connected to HRSD or completed the necessary upgrades to its facilities. Appendix A set out new discharge limitations and monitoring requirements for a pollutant other than phosphorus, but reiterated that required effluent limitations for all other substances remained as listed in the 1990 Permit.

(3) Smithfield was required to dismiss its legal challenge to the phosphorus standard pending in Virginia state court.

At the end of the May 1991 Order, the Board stated that "[n]othing herein shall be construed as altering, modifying, or amending any term or condition contained in the [1990] Permit." Within a month of receiving the May 1991 Order, Smithfield determined that connecting to HRSD would be the best long-term solution and notified the Board of its decision on June 7, 1991.

In the meantime, in May 1991, Smithfield's original Permit, issued in 1986 and modified in 1990, expired. The Board submitted a draft permit ("Draft Permit") for Smithfield's facilities to the EPA for review and public comment. Part I.B. of the Draft Permit contained the same compliance schedule as in the modified 1990 Permit, giving Smithfield until January 4, 1993 to comply with the phosphorus discharge limitations. Part I.C. of the Draft Permit listed the effluent lim-

itations that would be in effect after the completion of the compliance schedule in Part I.B. The EPA approved the Draft Permit.

Smithfield submitted comments on the Draft Permit to the Board. In its comments, Smithfield expressed concern that the Draft Permit contained the same effluent requirements as in the 1990 Permit, which it believed were inconsistent with the terms of the May 1991 Order. Smithfield asked the Board for clarification of this alleged discrepancy, suggesting that the Board agree that "alternate compliance will be maintained with Smithfield's agreement to connect to HRSD as soon as it becomes available regardless of the time frame in which this occurs." Debra Thompson, an environmental engineer with the Board, responded to Smithfield's concerns in an October 10, 1991 letter stating that "[a]ny special order agreements relative to compliance with water quality standards, the Permit regulation and associated studies that have been approved by the Board take precedence over the . . . Permit." The EPA received a copy of this letter.

Despite Smithfield's comments and concerns, on January 3, 1992, the Board finalized and issued Smithfield's new permit ("1992 Permit"). Part I.C. of the 1992 Permit retained the phosphorus discharge limitations listed in the 1990 Permit, and Part I.B. contained the same deadline for achieving phosphorus compliance, January 4, 1993. Smithfield never challenged the 1992 Permit conditions nor sought a modification.

In response to a February 1992 letter from Smithfield to the Board indicating that Smithfield intended to comply with effluent limitations for substances other than phosphorus as listed in the 1992 Permit by connecting to the HRSD system, the Board responded as follows:

These "plans" are acceptable as submitted. The remainder of the schedule requires submittal of quarterly progress reports. These reports should indicate construction progress and other issues which may effect completion of the project. Also note that the deadline for achieving final effluent limitations [for substances other than phosphorus] is May 13, 1994. Should construction be delayed such that this deadline may be missed, a modification to the existing Consent Order should be requested.

Smithfield met neither the January 4, 1993 compliance deadline for phosphorus discharges, nor the May 13, 1994 compliance deadline for the other regulated substances. There is no evidence that Smithfield sought or received a permit modification challenging these deadlines before failing to adhere to required compliance schedules.

In November 1994 the Board amended the May 1991 Order, stating that Smithfield could achieve compliance with the final effluent limitations for the substances other than phosphorus by connecting to HRSD and agreed to hold the compliance deadline scheduled for May 13, 1994 in abeyance. In addition, however, the Board and Smithfield agreed that the amendment did not alter, modify, or amend any other term or condition of the May 1991 Order or of the 1992 Permit.

Before Smithfield could connect to HRSD, three things needed to occur: (1) Smithfield needed to upgrade its own wastewater treatment system to pre-treat its waste before discharging it to HRSD, (2) a new pipeline had to be built to connect Smithfield with HRSD, and (3) HRSD needed to upgrade its facilities to treat Smithfield's wastewater. HRSD's original completion schedule was February 1995 for the pipeline, and December 1996 for the facility upgrade. The pipeline was not completed until March 1996 and Smithfield's Outfall 002 was connected to HRSD in June 1996. Outfall 001 could not be connected until HRSD completed its facility upgrades. The facility upgrades were not completed until June 1997 and Outfall 001 was connected to HRSD in August 1997.

Under the NPDES program as administered by EPA, permit holders who are not in compliance with the terms of their permits are listed in the EPA's Quarterly Noncompliance Report ("QNCR"). Although it had been out of compliance for months, Smithfield's Permit violations did not appear in the QNCRs until the third quarter of 1994. The EPA cited Smithfield's false and inaccurate reporting and the Board's willingness to permit Smithfield to continue to exceed its 1992 Permit limits as the reason why Smithfield's violations did not appear in the QNCRs. If a state does not achieve compliance, the CWA authorizes the EPA to step in and initiate its own enforcement action. Once Smithfield appeared in the QNCR, EPA began to closely track Virginia's efforts to bring Smithfield into compliance.

In 1995 state and federal agencies began a criminal investigation into the illegal activities of Terry Rettig ("Rettig"), chief operator of Smithfield's wastewater treatment plant. Rettig was charged with falsifying records and DMRs submitted to both state and federal regulatory agencies. When Rettig's actions came under suspicion, he destroyed presumably incriminating records from Smithfield's wastewater treatment operations. At the beginning of the criminal investigation, federal investigators asked Virginia authorities to refrain from pursuing an enforcement action against Smithfield for its Permit violations until after the criminal investigation into Rettig's conduct was underway. In February 1996, the United States notified Virginia that there was no longer any need to delay pursuing an enforcement action against Smithfield, but the Commonwealth took no action.

In April 1996, the Virginia Department of Environmental Quality informed the Board that it had evidence of Smithfield's numerous CWA violations and recommended that legal action be initiated. At their meeting in May 1996, the Board decided to do nothing until it was sure Smithfield was aware of the violations.

When it became apparent to the EPA that Virginia did not intend to initiate legal action against Smithfield for its CWA violations, the EPA filed its own action. The EPA invited Virginia to join the suit, but the Commonwealth declined, electing instead to file its own enforcement action in the Circuit Court of the County of Isle of Wight. Virginia's enforcement action alleged that Smithfield violated its 1992 Permit discharge limits on other substances, but did not include claims for violations of the phosphorus limitations, false reporting, or late reporting.

B.

The government filed suit in the United States District Court for the Eastern District of Virginia on December 16, 1996, seeking injunctive relief and penalties for a range of effluent limit violations, submission of false DMRs, submission of late reports, and destruction of records. On March 10, 1997, the United States moved for summary judgment on liability arguing that there were no disputes of material fact and the evidence proved that Smithfield had (1) violated the CWA by discharging pollutants into the Pagan River at levels above

the allowable limits of its 1992 Permit, and (2) submitted false DMRs late on numerous occasions.

Smithfield countered that it did not violate the phosphorus limitations in the 1992 Permit because the Board's Orders superseded and revised the 1992 Permit limitations. In the alternative, even if it violated the terms of its 1992 Permit, Smithfield argued that the EPA's claim was barred by § 309(g)(6)(A) of the CWA and the doctrines of estoppel and waiver. The district court granted summary judgment for the United States on liability and claims of false reporting and document destruction, but decided to calculate the exact number of violations and the penalty amount at trial.

The district court held a bench trial on the remaining issues in July 1997. The court reviewed evidence and heard from both sides' experts who opined on the proper calculations for each of the factors to be considered under the CWA's penalty statute. In the end, the district court found Smithfield liable for 6,982 days of violations and, after weighing the mitigating and aggravating circumstances, assessed a penalty of \$12.6 million.

Meanwhile, the Commonwealth's enforcement action against Smithfield continued to proceed in state court. On July 9, 1997, the state court declared that Smithfield's obligations under the 1992 Permit were circumscribed by the May 1991 Order, and therefore Smithfield was required to comply with the phosphorus limits only by connecting to HRSD within three months of availability.

Based on this decree, Smithfield filed a motion to dismiss or for summary judgment in this federal action. Arguing that the imposition of the phosphorus limitation was imposed solely as a matter of state law, Smithfield contended that the federal court must give substantial weight to the Virginia court ruling in a state enforcement action. On that basis, Smithfield asked the district court to reverse its liability finding. The district court declined to do so.<sup>1</sup> Smithfield now appeals the district court's ruling.

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<sup>1</sup> The Commonwealth appealed the Circuit Court's decision to the Supreme Court of Virginia. The action was pending when the parties

## II.

Smithfield's initial challenge is to the district court's grant of summary judgment in favor of the United States on the issue of liability. We review the grant of summary judgment de novo, viewing all evidence in the light most favorable to the non-movant. See Sempione v. Provident Bank of Maryland, 75 F.3d 951, 954 (4th Cir. 1996). The district court allegedly made three distinct errors.

First, Smithfield contends that the district court erred in finding that the May 1991 Order did not take precedence over or alter the terms of the 1992 Permit. Smithfield admits that the May 1991 Order explicitly states that "[n]othing herein shall be construed as altering, modifying, or amending any term or condition contained in [the] Permit," but argues that the May 1991 Order was incorporated into, and therefore took precedence over, the 1992 Permit. In the alternative, Smithfield insists that the EPA was bound by the terms of the May 1991 Order when it failed to object to it during the permitting process.

The district court rejected these arguments, holding that the 1992 Permit could not have incorporated any of the Board's Orders. See Smithfield, 965 F. Supp. at 790. After an extensive analysis of the Board's post-1992 Permit correspondence, the court reasoned that "because [Smithfield] did not follow the procedures required for the modification of a permit, and none of the Board's Special Orders and letters were issued in accordance with the permit modification procedures, [Smithfield] cannot support [its] argument that the Special Orders or letters issued by the Board after the 1992 Permit modify the terms of the Permit . . ." Id. at 787-88.

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filed their briefs to this Court. On June 5, 1998, the Supreme Court of Virginia reversed and vacated the judgment below. Based on the Commonwealth's continued agreement with Smithfield that the May 1991 Orders modified the phosphorous limitations set out in the 1992 Permit, the Virginia Supreme Court found that Smithfield was not entitled to a declaratory judgment because it failed to demonstrate a justiciable controversy between the parties. See Treacy v. Smithfield Foods, Inc., 500 S.E.2d 503, 507 (Va. 1998).

With respect to the Board's Orders pre-dating the 1992 Permit, the court found it illogical that correspondence written before the 1992 Permit was finalized could change the terms of a subsequently-issued document. See id. at 788. Finally, regarding Smithfield's assertion that the EPA was bound to abide by the Board's Orders because the agency failed to object contemporaneously, the court found that the agency's "silence with regard to the agreement between Smithfield and the Board does not indicate its approval, especially when the EPA was not asked to review and approve of Smithfield's agreement with the Board." Id.

Second, Smithfield argues that the district court erred when it found that the EPA's suit was not barred by CWA § 309(g)(6)(A)(ii). See 33 U.S.C.A. § 1319(g)(6)(A)(ii). Section 309(g)(6) of the CWA provides in part that any violation of the CWA "which a State has commenced and is diligently prosecuting an action under a State law comparable to this subsection" shall not be the subject of a federal civil enforcement action. See id. Because Smithfield believes that since 1990 Virginia has been diligently prosecuting Smithfield through the issuance of Orders and enforcing a state statutory scheme that is sufficiently comparable to the CWA, Smithfield asserts that the EPA's enforcement action should have been barred.

Examining this argument, the district court found that Virginia's enforcement scheme was not sufficiently comparable to § 309(g) to bar the EPA's suit. Because Virginia's enforcement scheme did not give the Commonwealth authority to assess administrative penalties without the violator's consent,<sup>2</sup> and did not provide adequate proce-

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<sup>2</sup> In 1996, Virginia amended its enforcement scheme to allow the Commonwealth to impose administrative penalties without the permission of the violator. See Va. Code Ann. § 62.1-44.32 (Michie 1998). Smithfield argues that, because the law was amended before the filing of this suit, comparability should be judged based on the amended version of the statute. The basis of Smithfield's argument, however, is that Virginia had been "diligently prosecuting" the case by issuing Orders since 1990. The only Orders relevant to this case were issued in 1990, 1991, and 1994 and during that time, the Commonwealth could have imposed penalties only with Smithfield's consent. We decline to accept Smithfield's argument here. Because the amendment was not in effect when the relevant Orders were issued, it is not applicable to our inquiry of whether Virginia's law was comparable to § 309(g) at the time of the Commonwealth's enforcement action.

dures for notice and public participation,<sup>3</sup> the district court found that the Commonwealth's statutory structure was not sufficiently comparable to CWA § 309(g). See Smithfield, 965 F. Supp. at 795.<sup>4</sup>

Third, Smithfield challenges the district court's finding that this suit was not precluded by the Supreme Court's holding in Gwaltney, 484 U.S. at 60-61. In Gwaltney, the Court recognized that there would be cases under the CWA in which it would be counter-productive to assess penalties against violators who had agreed to take corrective actions not otherwise required. See id. Smithfield asserts that is exactly what happened here. The Board and Smithfield reached a compromise in which Smithfield agreed to take non-mandatory corrective actions, and the company argues that for the district court to allow the EPA to assess administrative penalties after the fact violates Gwaltney.

For the same reasons, Smithfield contends, the EPA's enforcement action violates CWA § 510, which allows states to adopt more stringent effluent limits than those required under the CWA. See 33 U.S.C.A. § 1370. Smithfield argues that the Commonwealth's ability to adopt more stringent standards as provided by § 510 is rendered useless if it cannot implement those effluent limits in the manner it finds most directly serves the public interest. On these two grounds, Smithfield asserts that the district court erred in failing to hold that the EPA's enforcement action was precluded.

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<sup>3</sup> As noted by the district court, the Commonwealth amended its public participation statutes in 1996 to allow citizens to obtain judicial review of an Order of the Board. See Smithfield, 965 F. Supp. at 795 n.37. For the same reasons given above, see supra note 2, we agree with the district court that the timing of this amendment renders it irrelevant to this inquiry.

<sup>4</sup> Because the district court held that Virginia's enforcement scheme was not sufficiently comparable to § 309(g), the court found it unnecessary to address the issue of whether the Commonwealth was diligently prosecuting an administrative action against Smithfield. See Smithfield, 965 F. Supp. at 795. Smithfield did not challenge this ruling on appeal and, because we agree with the district court's ruling that the Commonwealth's scheme is not comparable to § 309(g), we similarly decline to address this issue.

Acknowledging the Supreme Court's holding in Gwaltney, the district court found that Smithfield's alleged corrective actions did not preclude the EPA's enforcement action here because the chosen enforcement methods were not achieving compliance. See Smithfield, 965 F. Supp. at 790 n.29 (citing Gwaltney, 484 U.S. at 61). Further, the court found that the text of CWA § 510 did not support Smithfield's argument. Besides allowing states to enforce more stringent standards, the CWA act also provides that the EPA has the authority to enforce these more stringent state effluent standards once they are incorporated into a polluter's permit. See CWA §§ 309(a)(1), (3), 33 U.S.C.A. §§ 1319(a)(1), (3). The district court agreed that Virginia adopted more stringent phosphorus standards than under the CWA and that these elevated standards were included in Smithfield's 1992 Permit. Once incorporated into the Permit, however, the district court found that the CWA requires the EPA to enforce a state's more stringent effluent standards. On that basis, the court ruled that § 510 did not preclude the EPA's enforcement action.

Having had the benefit of oral argument and the parties' briefs, and after careful consideration of the record and the applicable law, we conclude that the district court correctly decided the issue of liability. We concur with the district court that (1) the Board's Orders were not incorporated into nor changed the terms of the 1992 Permit;<sup>5</sup> (2) Virginia's enforcement scheme is not sufficiently comparable to § 309(g) to bar the EPA from bringing its own independent penalty action; and (3) neither the Supreme Court's ruling in Gwaltney, nor § 510 of the CWA preclude the EPA from bringing this enforcement action. Rejecting Smithfield's claims of error, we affirm the district court's reasoning and ruling on liability. See Smithfield, 965 F. Supp. at 784-96.

### III.

Smithfield's second major challenge is to the district court's assessment of a \$12.6 million penalty. We review the factual findings that formed the basis of the district court's penalty calculation for

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<sup>5</sup> Because we agree with the district court's ruling that the May 1991 Order did not change the terms of the Permit, we find it unnecessary to consider whether the EPA was bound by the terms of that Order.

clear error, see Sierra Club, Lone Star Chapter v. Cedar Point Oil Co., Inc., 73 F.3d 546, 573 (5th Cir. 1996), but the highly discretionary calculations necessary to award civil penalties are reviewed for abuse of discretion. See id. See also Chesapeake Bay Found., Inc. v. Gwaltney of Smithfield, Ltd., 791 F.2d 304, 316-17 (4th Cir. 1986), rev'd on other grounds, 484 U.S. 49 (1987).

The CWA sets out six factors intended to assist courts in determining the appropriate civil penalty. See CWA § 309(d), 33 U.S.C.A. § 1319(d) (Supp. 1999). Section 309(d) provides that "the court shall consider the seriousness of the violation or violations, the economic benefit (if any) resulting from the violation, any history of such violations, any good-faith efforts to comply with the applicable requirements, the economic impact of the penalty on the violator, and such other matters as justice may require." Id.

These factors are designed to give district courts direction in fashioning penalties for CWA violations, but once applied in a specific case, we have given and will continue to give the district court's final penalty calculation wide discretion. See Stoddard v. Western Carolina Reg'l Sewer Auth., 784 F.2d 1200, 1208 (4th Cir. 1986) ("The amount of the penalty to be levied is, of course, discretionary with the court."); Atlantic States Legal Found., Inc. v. Tyson Foods, Inc., 897 F.2d 1128, 1142 (11th Cir. 1990) (same). Because of the difficulty of determining an appropriate penalty in a complex case such as this one, we give deference to the "highly discretionary calculations that take into account multiple factors [that] are necessary in order to set civil penalties under the Clean Water Act." Tull v. United States, 481 U.S. 412, 427 (1987).

Although Smithfield contests several of the district court's discretionary decisions, such as the method used to count each violation and the alleged trebling of the penalty, Smithfield's major allegations of error relate to the court's economic benefit calculation and its refusal to grant Smithfield good-faith credit for its compliance efforts. We consider each of these arguments in turn.

A.

Smithfield argues that the district court "double counted" its violations by counting separately its exceedances of daily maximum limits

when it had already imposed thirty days of violations for exceedances of the monthly average limit for the same substance. In the opinion below, the district court reaffirmed our holding in Chesapeake Bay Found., 791 F.2d at 313-15, that each violation of a monthly average limit shall be treated as a violation for every day in the month in which the violation occurred, rather than as a single violation for that month. See United States v. Smithfield Foods, Inc., 972 F. Supp. 338, 340 (E.D. Va. 1997). The court went on to hold, however, that "if multiple violations of the Permit occur on the same day, defendants are liable for a separate day for each violation of the Permit, including the daily maximum, monthly average concentration, and monthly average loading limits for each pollutant." Id. at 340.

In coming to this conclusion, the district court reasoned that the two limits are included in the Permit for different reasons and serve distinct purposes: daily maximum effluent limits protect the environment from the acute effects of large, single releases, and monthly averages protect against chronic effects occurring at lower levels. See id. at 340-42. Acknowledging that there was no Fourth Circuit precedent for this counting method, the district court found that the different pollutants and their daily maximum and monthly average loading limits are separate requirements listed in the Permit and therefore represent distinct violations. See id. at 341.

We find the district court's opinion persuasive here. It is clear from the language of § 309(d) of the CWA that such a penalty structure was anticipated. See 33 U.S.C.A. § 1319(d) (providing for a "civil penalty not to exceed \$25,000 per day for each violation" rather than a statutory maximum of \$25,000 per day) (emphasis added). The specific limitations of Smithfield's 1992 Permit support this conclusion as well. The daily maximum limits in the 1992 Permit were set at double its monthly average limits. As a result, a violation of one did not automatically result in the violation of the other, further supporting the notion that the different limits were included in the Permit to protect against distinct environmental effects. See Smithfield, 972 F. Supp. at 340-41.

Far from double counting, the district court's decision to treat each violation of the 1992 Permit as a separate infraction for purposes of penalty calculation makes sense. This structure gives courts consider-

able flexibility to tailor penalties to the unique facts of each case. As noted by the district court, a permittee who violates a single effluent limit one time is less culpable than one who violates the limits of several different pollutants in one day. See id. Such a structure is reasonable considering the first violator causes less overall harm to the environment. In the same vein, a permittee who violates a monthly average limit is less culpable and causes less harm than a permittee who violates daily maximum and monthly average limits in the same month. See id.

Furthermore, this method of counting violations creates the proper incentives for polluters to comply. For example, if the maximum penalty that could be levied against a violator on a single day was \$25,000, no matter how many different Permit effluent limitations were violated, the permittee would have a strong disincentive to comply with the other permit limitations. Once one effluent limit was violated, there would be no reason for the permittee to heed the rest of the permit limits for that day.

We agree with the district court's decision to treat each of Smithfield's permit violations as a separate and distinct infraction for purposes of penalty calculation. We feel this approach is consistent with the language of § 309(d) of the CWA and Smithfield's 1992 Permit and join the other courts which have interpreted the CWA in the same manner.<sup>6</sup>

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**6 See Public Interest Research Group of New Jersey, Inc. v. Powell Duffryn Terminals, Inc.**, 913 F.2d 64, 78 & n.28 (3d Cir. 1990) (holding that violation calculations should be analyzed "on a parameter by parameter basis" and that each type of effluent limit is "clearly separate" and there is "no reason why [a defendant] should not be penalized separately for violating each limitation"); Natural Resources Defense Council, Inc. v. Texaco Ref. & Mktg., Inc., 800 F. Supp. 1, 21 (D. Del. 1992) (finding that "separate exceedances of weight and concentration limits can constitute separate violations"); Student Pub. Interest Research Group of New Jersey, Inc. v. Monsanto Co., No. CIV.A.83-2040, 1988 WL 156691, at \*11 (D.N.J. Mar. 24, 1988) (concluding that "[e]ach violation of any express limitation in the permit may, of course, be treated as a separate violation for the purposes of assessing a penalty"); United States v. Amoco Oil Co., 580 F. Supp. 1042, 1046 n.1 (W.D. Mo. 1984) (suggesting that the CWA allows for separate penalties for violations of the daily limit of different pollutants). But see Tyson Foods, 897 F.2d at 1140 (declining to interpret § 309(d) as allowing single discharges that violate both daily and monthly limits to constitute distinct violations).

B.

Smithfield next argues that the district court erred as a matter of law by allegedly calculating the penalty by trebling the amount of economic benefit calculated. Pointing to the text of the Act, Smithfield contends that, unlike other federal statutes, the CWA does not provide for trebling and therefore the court committed reversible error by assessing a penalty equal to exactly three times the amount of economic benefit calculated. We see no indication that the district court "simply trebled the amount of economic benefit." Appellant's Br. at 42. On the contrary, we find that the district court correctly applied the CWA in assessing Smithfield's penalty.

In calculating the penalty, the district court properly began by determining that the statutory maximum based on Smithfield's violations was \$174.55 million. See Smithfield, 972 F. Supp. at 353. Thereafter, the court evaluated two different methods used to assess penalties -- the top-down method and the bottom-up method -- and to Smithfield's advantage, chose the bottom-up method.<sup>7</sup> Under the bottom-up method, the court begins with the violator's estimated economic benefit from non-compliance, which here was \$4.2 million, and then adjusts up or down based on the court's evaluation of the six factors set out in § 309(d). See id. at 353-54. After evaluating and discussing the effect of each of the factors, the court found a \$12.6 million penalty appropriate. See id. at 354.

When calculating Smithfield's penalty, the district court took into account all six of the statutorily mandated factors and sufficiently detailed its findings as to whether the evidence in each area had a mitigating or aggravating impact on the total penalty. See id. at 354. The

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<sup>7</sup> As noted by the district court, the CWA does not require the use of either method, however, courts have applied both. See, e.g., Tyson Foods, 897 F.2d at 1142 (using top-down method in which a court begins with the statutory maximum and adjusts downward based on its evaluation of § 309(d) factors); Hawaii's Thousand Friends v. City & County of Honolulu, 821 F. Supp. 1368, 1395 (D. Haw. 1993) (same). But see United States v. Municipal Auth. of Union Township, 150 F.3d 259, 265 (3d Cir. 1998) (applying the bottom-up method) (known as "Dean Dairy"); Monsanto, 1988 WL 156691, at \*16 (same).

court properly exercised its discretion in weighing the evidence and determining the credibility of key witnesses and, in doing so, made several decisions that were highly favorable to Smithfield. In the end, however, the court found that Smithfield's thousands of CWA violations warranted a penalty far in excess of the economic benefit calculation.

We find that the court's analysis was complete and in line with what is required under the statute. It is clear from its opinion that the court's exhaustive examination of the facts formed the basis of its final penalty calculation, rather than simply multiplying the economic benefit by three as Smithfield contends.

But even if the court had simply trebled the economic benefit to determine the appropriate penalty, that was within its discretion, as long as it was below the statutory maximum of \$174.55 million. As mentioned, the Supreme Court has emphasized that under the CWA, the highly discretionary calculations necessary to assess civil penalties are particularly within the purview of trial judges, see Tull, 481 U.S. at 426-27, and we have continually given these determinations wide deference, reviewing them only for abuse of discretion. See Sierra Club v. Simkins Indus., Inc., 847 F.2d 1109, 1116 (4th Cir. 1988). The government asked for a \$20 million penalty, but based on its analysis of the relevant factors, the district court determined that \$12.6 million was more appropriate, which is approximately 7.2% of the maximum penalty that could have been assessed. Finding that the court did not abuse its discretion in calculating the penalty, we reject Smithfield's contention that the district court erred as a matter of law in determining the penalty. Accord Dean Dairy, 150 F.3d at 265 (affirming a penalty that was calculated by doubling the economic benefit amount and intended to serve the goal of punishment and deterrence).

C.

Smithfield also argues that the district court erred as a matter of law by failing to give Smithfield credit for certain capital costs incurred and user fees paid when calculating economic benefit.

As one of the six factors the court must use to calculate CWA penalties, economic benefit is assessed to keep violators from gaining an unfair competitive advantage by violating the law. This is accomplished by including as part of the penalty an approximation of the amount of money the violator has saved by failing to comply with its permit. See Powell Duffryn, 913 F.2d at 80. The rationale for including this measure as part of the violators' fine is "to remove or neutralize the economic incentive to violate environmental regulations." Dean Dairy, 150 F.2d at 264.<sup>8</sup> As noted in the Senate Report accompanying the 1987 amendment adding the economic benefit factor to § 309(d), and as recognized by courts, the precise economic benefit a polluter has gained by violating its effluent limits may be difficult to prove, so "[r]easonable approximations of economic benefit will suffice." Id. (referring to S. Rep. No. 50, 99th Cong., 1st Sess. 25 (1985)).<sup>9</sup>

The statute does not define economic benefit and courts have applied different methods to determine the appropriate amount.<sup>10</sup> The district court used the common "cost-avoided" method here whereby economic benefit is measured by determining "the avoided and/or delayed cost of compliance, . . . [using] the weighted average cost of capital (WACC) as a discount/interest rate."<sup>11</sup> Smithfield, 972 F. Supp. at 349 (footnote omitted). The rationale behind this method is that

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<sup>8</sup> See also Powell Duffryn, 913 F.2d at 80 ("Violators should not be able to obtain an economic benefit vis-a-vis their competitors due to their noncompliance with environmental laws.") (citation omitted).

<sup>9</sup> See also Cedar Point Oil, 73 F.3d at 576 ("[A] court need only make a 'reasonable approximation' of economic benefit when calculating a penalty under the CWA.").

<sup>10</sup> In Dean Dairy, the Third Circuit calculated a violator's economic benefit by determining that the company would have lost \$417,000 per year in revenues from a customer it would have had to drop in order to reduce production enough to comply with its permit. 150 F.3d at 262-67. In most cases, however, the court applies the cost-avoided method applied by the district court in the instant case. See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc., 890 F. Supp. 470, 481 (D.S.C. 1995).

<sup>11</sup> The weighted average cost of capital method was chosen by the district court as a means by which to calculate the present value of the costs avoided.

"[w]hen a company delays or avoids certain costs of capital and operations and maintenance necessary for compliance, the company is able to use those funds for other income-producing activities, such as investing that money in their own company." Id.

The cost-avoided method has been utilized elsewhere, see, e.g., Laidlaw, 890 F. Supp. at 481, and was chosen by the district court in its discretion in part based on the court's evaluation of the credibility of the government's expert witness. The cost-avoided method is not in conflict with the CWA or basic economic principles. On the contrary, it represents a logical method by which a violator in Smithfield's position can be disgorged of any profits it attained through its non-compliance. Finding no fault with the district court's choice to apply the cost-avoided method in this case, we reject Smithfield's claim that its application was in error.

Smithfield further alleges that even under the cost-avoided method, the district court should have given Smithfield credit for (1) capital expenses incurred to build a pretreatment facility and to modify a sludge lagoon in preparation for connecting to HRSD, and (2) future user fees paid that Smithfield claims allowed HRSD to construct the necessary facilities for Smithfield's connection. In support of this argument, Smithfield repeatedly asserts that these are expenses it would have gotten credit for had it built its own direct-discharge treatment system.

Smithfield decided to connect to HRSD in 1991 and, from that time until HRSD became available in 1996 and 1997, Smithfield was responsible for complying with its 1992 Permit requirements. Its decision to ignore these requirements in the interim certainly benefitted Smithfield financially because, by failing to comply with the 1992 Permit limits, Smithfield avoided the costs of pollution control its competitors were simultaneously incurring by complying with the law. It is these costs that constitute Smithfield's economic benefit.

These capital expenses and user fees can reduce the economic benefit that Smithfield experienced from 1991 to 1996 or 1997 only in so far as they are duplicative of costs Smithfield should have incurred for interim compliance. The building of its pretreatment facility and the paying of user fees for future HRSD use were not costs Smithfield

incurred to aid in compliance from 1991 to 1996 or 1997 and, therefore, should not have been credited to Smithfield during the district court's economic benefit calculation.

The final allegation of error with respect to economic benefit is Smithfield's contention that the district court erred in using the WACC to calculate the present value interest rate. In a footnote, Smithfield apparently thinks that the court's error was in accepting the testimony of the government's expert witness, Robert Harris ("Harris") -- who persuaded the court to apply the WACC rate -- rather than accrediting its own expert who advocated application of a "risk-free" rate.

As part of calculating economic benefit, the court must apply an interest rate to determine the present value of the avoided or delayed costs. Harris advocated the use of the WACC rate which represents "the average rate of return a company expects to make for its investors, in order to maintain its current level of investors and its current level of business operations." Smithfield, 972 F. Supp. at 349 n.18. Smithfield's expert used the "risk-free" rate, or the rate on short-term U.S. Treasury bills. The district court found Harris' approach to be the most appropriate and his testimony the most credible and, on that basis, decided to apply the WACC rate to determine the present value of Smithfield's economic benefit. See id. at 349 & n.17. Smithfield argues that the district court chose to rely on Harris' testimony solely on the basis of credibility and failed to examine the differences in the suggested procedures.

We find this argument meritless. The district court is licensed to determine the credibility of expert witnesses and its assessments on such questions are entitled to deference by this Court. See League of United Latin American Citizens, #4552, v. Roscoe Indep. School Dist., 123 F.3d 843, 846 (5th Cir. 1997). There is no indication from the evidence that the district court committed clear error in choosing to accredit Harris' testimony, nor that it accepted the WACC rate without examining the differences between the two methods. Given that Smithfield's argument is essentially that the district court accredited the wrong expert, we reject this assertion and affirm the district court's application of the WACC rate to determine the present value of Smithfield's avoided costs.

We do find troubling, however, the district court's summary finding that Harris' admitted WACC calculation error of approximately 4% was insignificant. See Smithfield, 972 F. Supp. at 349 n.19. While it is true that, compared to \$12.6 million dollars, a miscalculation of between \$100,000-\$200,000 seems immaterial, we see no reason that an admitted error should stand uncorrected in a judicial opinion. On this basis, we remand the penalty to the district court with instructions to recalculate the penalty solely to correct Harris' approximately 4% error.

D.

Finally, Smithfield alleges that the district court erred when it failed to give Smithfield credit for its good-faith efforts to comply by connecting to HRSD. Specifically, Smithfield argues that it should have received credit for its efforts to connect to HRSD because, even if it was mistaken, Smithfield believed that connecting to HRSD was the only applicable requirement in the interim.

Section 309(d) of the CWA requires a district court to consider "any good-faith efforts to comply with the applicable requirements" as a mitigating factor in the penalty calculation. 33 U.S.C.A. § 1319(d). In practice, a court evaluates the evidence to determine whether the permittee took any actions to reduce the number of violations or attempted to lessen the impact of their discharges on the environment. See Atlantic States Legal Found., Inc. v. Universal Tool & Stamping Co., Inc., 786 F. Supp. 743, 751 (N.D. Ind. 1992).

In its opinion, the district court began by acknowledging that Smithfield should receive credit for its decision to connect to HRSD when available, a decision that would eventually reduce its discharges to zero. The court went on, however, to focus its inquiry on whether there were any good-faith efforts to comply with the requirements set out in Smithfield's Permits during the relevant period -- from 1991 until 1996 or 1997 when Smithfield connected to HRSD. In evaluating the facts presented at trial, the court found little evidence that the defendants made any good-faith efforts to comply because Smithfield did not facilitate its connection to HRSD or mitigate its discharges by treating its wastewater or decreasing its releases of pollutants in the interim. See Smithfield, 972 F. Supp. at 350.

The court looked beyond these obvious facts, however, for other signs that Smithfield might have tried to mitigate its violations by evaluating Smithfield's other business practices. In doing so, the court found that during the relevant period Smithfield cut back on the number of times it curtailed production to achieve compliance, ignored the advice of its own consultants who pointed out serious deficiencies in the operation and maintenance of Smithfield's existing wastewater treatment plant, and dismissed evidence that its treatment plant employees were inadequately trained. Other than agreeing to connect to HRSD, the court found that Smithfield "apparently believed they could discharge as much and as frequently as they wanted into the Pagan River . . . ." See id. at 351.

The district court's finding of liability, with which we agree, was based on the notion that Smithfield impermissibly ignored its explicit obligations under its 1992 Permit by failing to comply with effluent limitations for the entire period between its decision to connect to HRSD and the time the connection was made. It is only reasonable, therefore, that Smithfield's efforts towards connecting to HRSD would not suffice as good-faith efforts to comply with its applicable permit requirements since, during this entire interim period, Smithfield made no effort to heed the specific limits established by its 1992 Permit.

Furthermore, the evidence supports the district court's ruling. The testimony presented at trial and the documentary evidence on which the court relied in making these factual findings illustrate that Smithfield did not make efforts to decrease its violations and, instead, relied on the unreasonable notion that as long as it connected to HRSD within three months of availability, it was unnecessary to comply with the specific effluent limitations listed in its 1992 Permit during the five year interim. Finding that the district court's factual determinations regarding Smithfield's lack of good-faith efforts to comply with applicable requirements were not clearly erroneous, we affirm its findings on this issue.

IV.

For the foregoing reasons, we affirm the district court's grant of summary judgment on liability. We reverse and remand the penalty

determination to the district court with instructions to recalculate the civil penalty to the extent required by this opinion.

AFFIRMED IN PART, REVERSED IN PART,  
AND REMANDED WITH INSTRUCTIONS