

No. 19-3220

UNITED STATES COURT OF APPEALS
FOR THE EIGHTH CIRCUIT

UNITED STATES OF AMERICA and SIERRA CLUB,
Plaintiffs/Appellees,

v.

AMEREN MISSOURI,
Defendant/Appellant.

Appeal from the United States District Court for the Eastern District of Missouri
No. 4:11-cv-00077 (Hon. Rodney W. Sippel)

BRIEF FOR APPELLEE UNITED STATES OF AMERICA

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SUMMARY OF THE CASE AND REQUEST FOR ORAL ARGUMENT

After a 12-day liability trial, the district court concluded that Defendant/Appellant Ameren Missouri (Ameren) violated the Clean Air Act when it substantially rebuilt two old coal-powered electric units without obtaining the necessary permits and implementing the necessary pollution-control measures. The court's legal conclusions are supported by extensive fact-finding, which demonstrates that Ameren tripped two legal triggers for a permit and modern pollution controls: (1) Ameren should have expected the expensive projects to lead to an increase in pollution, and (2) the projects actually did increase pollution. The court rejected Ameren's argument that emissions increased because of an increase in demand, finding that Ameren's own documents established that overhauling the boilers (not system demand) would lead to and did lead to more emissions.

After a 6-day remedy trial, the court ordered Ameren to apply for the required permit prescribing an emissions rate based on installing a wet scrubber, which is the industry standard for sulfur dioxide pollution control from large coal power plants. Moreover, the court carefully calculated the excess pollution emitted as a result of Ameren's failure to apply for a permit and to control the coal-fired units when it should have—more than 200,000 tons of sulfur dioxide and counting—and required Ameren to offset that pollution ton-for-ton at a nearby Ameren plant.

The United States believes that oral argument would be helpful and suggests that the Court set argument for 30 minutes per side.

TABLE OF CONTENTS

SUMMARY OF THE CASE AND REQUEST FOR ORAL ARGUMENT	i
TABLE OF AUTHORITIES	iv
GLOSSARY	xi
INTRODUCTION	1
STATEMENT OF JURISDICTION	3
STATEMENT OF THE ISSUES.....	4
STATEMENT OF THE CASE.....	5
A. Statutory and regulatory background.....	5
1. Clean Air Act	5
2. Federal regulations and Missouri’s State Implementation Plan	7
B. Factual background	9
C. Proceedings below	13
1. Liability	13
2. Remedy	17
SUMMARY OF ARGUMENT.....	20
STANDARD OF REVIEW	22
ARGUMENT.....	23
I. The Missouri SIP plainly incorporates the federal regulation’s definition of “major modification.”	23

A.	The relevant PSD rules plainly provide that a “major modification” triggers the PSD requirements.	23
B.	Ameren’s potential-to-potential test is inconsistent with the text of the Clean Air Act and the case law.....	29
C.	EPA has consistently rejected the potential-to-potential test.	34
II.	The district court correctly concluded that Ameren’s projects constituted “major modifications.”.....	35
A.	The government disclosed that its experts would testify about actual emission increases.	36
B.	The district court correctly placed on Ameren the burden to prove that the demand-growth exclusion applies.	39
C.	The district court did not apply new or incorrect legal standards for causation.	41
D.	The district court did not improperly superimpose a “reasonable power plant operator” standard.....	43
III.	The injunction directed at Labadie is remedial, not punitive, and it is fully consistent with the Clean Air Act and <i>Otter Tail</i>	47
IV.	There is no Article III or other jurisdictional defect that bars all injunctive relief.....	56
V.	The district court had jurisdiction over the Title V claims.	61
	CONCLUSION	62

TABLE OF AUTHORITIES

Cases

<i>Alabama Power v. Costle</i> , 636 F.2d 323 (D.C. Cir. 1979)	30, 32, 43
<i>Anderson v. City of Bessemer City</i> , 470 U.S. 564 (1985)	22
<i>Calzone v. Summers</i> , 942 F.3d 415 (8th Cir. 2019)	23
<i>eBay Inc. v. MercExchange, LLC</i> , 547 U.S. 388 (2006)	49
<i>Environmental Defense v. Duke Energy Corp.</i> , 549 U.S. 561 (2007)	4, 5, 28, 30, 31
<i>Ford Motor Co. v. United States</i> , 405 U.S. 562 (1972)	58
<i>Franklin v. Gwinnett County Public Schools</i> , 503 U.S. 60 (1992)	48
<i>Frost v. Sioux City, Iowa</i> , 920 F.3d 1158 (8th Cir. 2019)	60
<i>FTC v. Security Rare Coin & Bullion Corp.</i> , 931 F.2d 1312 (8th Cir. 1991)	5, 48, 59
<i>Hecht Co. v. Bowles</i> , 321 U.S. 321 (1944)	48
<i>Hillesheim v. Holiday Stationstores, Inc.</i> , 903 F.3d 786 (8th Cir. 2018)	60
<i>Jackson v. Allstate Insurance Co.</i> , 785 F.3d 1193 (8th Cir. 2015)	37

<i>Johnson v. James Langley Operating Co.</i> , 226 F.3d 957 (8th Cir. 2000)	40
<i>Johnson v. SEC</i> , 87 F.3d 484 (D.C. Cir. 1996).....	49
<i>Kisor v. Wilkie</i> , 139 S. Ct. 2400 (2019)	28
<i>Kokesh v. SEC</i> , 137 S. Ct. 1635 (2017)	53, 54
<i>Louisiana Generating v. Illinois Union Insurance</i> , 831 F.3d 618 (5th Cir. 2016)	50
<i>Mitchell v. Robert DeMario Jewelry, Inc.</i> , 361 U.S. 288 (1960)	48, 59
<i>National Cable & Telecommunications Ass’n v. Gulf Power Co.</i> , 534 U.S. 327 (2002)	28
<i>New York v. EPA</i> , 413 F.3d 3 (D.C. Cir. 2005).....	4, 25, 30, 35, 40, 41
<i>NLRB v. Kentucky River Community Care, Inc.</i> , 532 U.S. 706 (2001)	4, 40
<i>NRDC v. Southwest Marine, Inc.</i> , 236 F.3d 985 (9th Cir. 2000)	50
<i>Porter v. Warner Holding Co.</i> , 328 U.S. 395 (1946)	5, 48, 59
<i>Rogers v. Scurr</i> , 676 F.2d 1211 (8th Cir. 1982)	48
<i>Schaub v. VonWald</i> , 638 F.3d 905 (8th Cir. 2011)	22, 23
<i>Sierra Club v. Otter Tail Power Co.</i> , 615 F.3d 1008 (8th Cir. 2010)	55, 56, 61

<i>Smith v. Tenet Healthsystem SL, Inc.</i> , 436 F.3d 879 (8th Cir. 2006)	38
<i>Swann v. Charlotte-Mecklenburg Board of Education</i> , 402 U.S. 1 (1971).....	58
<i>U.S. Public Interest Research Group v. Atlantic Salmon of Maine, LLC</i> , 339 F.3d 23 (1st Cir. 2003)	50, 58
<i>United States v. Alabama Power</i> , 730 F.3d 1278 (11th Cir. 2013).....	8
<i>United States v. Cinergy</i> , 582 F. Supp. 2d 1055 (S.D. Ind. 2008).....	59
<i>United States v. Cinergy</i> , 623 F.3d 455 (7th Cir. 2010)	32
<i>United States v. Cumberland Farms</i> , 826 F.2d 1151 (1st Cir. 1987).....	50
<i>United States v. Deaton</i> , 332 F.3d 698 (4th Cir. 2003)	49, 50
<i>United States v. EME Homer City Generation</i> , 727 F.3d 274 (3d Cir. 2013)	5, 57, 58, 61
<i>United States v. Gurley</i> , 43 F.3d 1188 (8th Cir. 1994)	40
<i>United States v. Luminant Generation Co.</i> , 905 F.3d 874 (5th Cir. 2018), <i>reh'g en banc granted and vacated</i> , 929 F.3d 316 (5th Cir. 2019)	54
<i>United States v. Midwest Generation, LLC</i> , 720 F.3d 644 (7th Cir. 2013)	58
<i>United States v. Northeastern Pharmaceutical & Chemical Co.</i> , 810 F.2d 726 (8th Cir. 1986)	40, 41

<i>United States v. Oakland Cannabis Buyers' Co-op.</i> , 532 U.S. 483 (2001)	5, 48, 49
<i>United States v. O'Laughlin</i> , 934 F.3d 840 (8th Cir. 2019)	28
<i>United States v. Oregon State Medical Society</i> , 343 U.S. 326 (1952)	59
<i>United States v. Santee Sioux Tribe of Nebraska</i> , 135 F.3d 558 (8th Cir. 1998)	60
<i>United States v. Telluride Co.</i> , 146 F.3d 1241 (10th Cir. 1998)	5, 49
<i>Webb v. Missouri Pacific Railroad</i> , 98 F.3d 1067 (8th Cir. 1996)	60
<i>Weinberger v. Romero-Barcelo</i> , 456 U.S. 305 (1982)	48, 49
<i>Wisconsin Electric Power Co. v. Reilly</i> , 893 F.2d 901 (7th Cir. 1990)	30

Statutes and Court Rules

28 U.S.C. § 1291	4
28 U.S.C. § 1331	3
28 U.S.C. § 1345	3
29 U.S.C. § 152(3).....	40

Clean Air Act

42 U.S.C. §§ 7401 et seq.	3
42 U.S.C. § 7401(b)(1).....	5
42 U.S.C. § 7410.....	8
42 U.S.C. § 7410(a)(2)	8
42 U.S.C. § 7411(a)(4)	6, 29
42 U.S.C. § 7413.....	6, 8, 59
42 U.S.C. § 7413(b).....	5, 17, 18, 57
42 U.S.C. § 7413(b)(2).....	7, 57
42 U.S.C. § 7416.....	31
42 U.S.C. § 7470.....	5, 6
42 U.S.C. § 7471.....	6, 8
42 U.S.C. § 7475(a)	6, 29, 57
42 U.S.C. § 7475(a)(1)	6
42 U.S.C. § 7475(a)(3)	6
42 U.S.C. § 7475(a)(4)	6
42 U.S.C. § 7479(2)(C)	6, 29
42 U.S.C. § 7479(3).....	6
Fed. R. App. P. 4(a)(1)(B)	4

Regulations

40 C.F.R. § 50.4.....	11
40 C.F.R. § 50.5.....	12
40 C.F.R. § 50.7.....	12
40 C.F.R. § 50.13	12
40 C.F.R. § 51.166(a).....	8
40 C.F.R. § 51.166(b)	31
40 C.F.R. § 52.21	8, 13, 23, 25-27, 33, 35
40 C.F.R. § 52.21(a)(2).....	4, 24
40 C.F.R. § 52.21(a)(2)(ii)	24
40 C.F.R. § 52.21(a)(2)(iii)	24
40 C.F.R. § 52.21(a)(2)(iv)	8, 24
40 C.F.R. § 52.21(b)	24, 27
40 C.F.R. § 52.21(b)(2).....	4
40 C.F.R. § 52.21(b)(2)(i).....	7, 14, 24, 27, 31, 39
40 C.F.R. § 52.21(b)(2)(iii).....	7
40 C.F.R. § 52.21(b)(3).....	24
40 C.F.R. § 52.21(b)(23)(i).....	7
40 C.F.R. § 52.21(b)(41)(ii).....	7, 41, 44
40 C.F.R. § 52.21(j).....	24
40 C.F.R. § 52.21(r)(6)(iii).....	28

40 C.F.R. § 52.1320(c).....	26, 35
44 Fed. Reg. 51,924 (Sept. 5, 1979)	34
45 Fed. Reg. 52,680 (Aug. 7, 1980).....	8, 35
57 Fed. Reg. 32,314 (July 21, 1992)	8
67 Fed. Reg. 80,816 (Dec. 31, 2002).....	34, 35
71 Fed. Reg. 36,486 (June 27, 2006)	13, 25, 27, 33, 35
73 Fed. Reg. 28,321 (May 16, 2008)	12
10 C.S.R. § 10-6.020(2)(A)(23).....	27
10 C.S.R. § 10-6.020(2)(M).....	27
10 C.S.R. § 10-6.020(2)(M)(1)(A)	27
10 C.S.R. § 10-6.020(2)(M)(10).....	26, 29, 31
10 C.S.R. § 10-6.060(1)(A)(3).....	24
10 C.S.R. § 10-6.060(1)(A)(4).....	27
10 C.S.R. § 10-6.060(1)(C).....	26
10 C.S.R. § 10-6.060(2)(B)(3)	25
10 C.S.R. § 10-6.060(2)(B)(5)	25
10 C.S.R. § 10-6.060(8)	4, 8, 24, 26

GLOSSARY

BACT	Best available control technology
EPA	Environmental Protection Agency
NAAQS	National Ambient Air Quality Standards
PM _{2.5}	fine particulate matter, with diameters that are generally 2.5 micrometers and smaller
PSD	Prevention of Significant Deterioration
SIP	State Implementation Plan
SO ₂	sulfur dioxide

INTRODUCTION

The Clean Air Act Amendments of 1977 imposed state-of-the-art pollution control requirements on major new facilities. The Act grandfathered existing facilities such as Ameren's Rush Island coal-powered units. But that exemption was not open-ended: if Ameren later modified the units in a manner that increased air pollution above a certain threshold, the Act required Ameren to implement modern protections at that time.

Over the next forty years, the electric industry took great strides in reducing air pollution. Most of the industry added scrubbers to coal-powered plants, which cut sulfur dioxide (SO₂) pollution by ninety percent or more. But Ameren did not install pollution controls on its grandfathered Rush Island units. As a result, the plant became one of the top ten emitters of SO₂ pollution in the country.

By 2005, the Rush Island units were nearly forty years old, approaching the end of their design life. For a decade they had been burning a type of coal that they were never designed to burn. The units were plugging, fouling, and generally struggling with performance limitations. Something changed in 2008: the reported generating capacity at Unit 1 jumped up almost 20 megawatts, and the unit's operations set company records. Three years later, Unit 2 saw even bigger gains in capability and performance. These facts were uncontested at trial and accepted by the district court. The trial instead focused on this question: what led to these categorical increases in Rush Island's reliability and production?

The district court discovered the answer in Ameren’s documents and the testimony of Ameren’s witnesses. In 2007, Ameren assigned more than 1,000 workers to rebuild huge swaths of Unit 1’s boiler, replacing failing parts with redesigned components during an outage that lasted 100 days. In 2010, it did the same at Unit 2. These projects—among the most extensive Ameren had ever performed—aimed not only to repair the chronic problems with the units’ operations and capacity, but also to upgrade their performance. In the end, the rebuilt units performed better than when they were brand new.

It was clear that Ameren’s Rush Island refurbishments would result in electricity-production increases, as the district court found as a matter of fact. But increasing generating capacity and adding hours of operation result in more than just electricity. It means burning more coal and emitting more pollution. The Rush Island boiler upgrades unquestionably expanded the units’ production capacity. Ameren touted the projects’ performance benefits in the boardroom, but it failed to apply for a permit or to implement the pollution controls required by the Clean Air Act for this “major modification” as defined by regulation. Ameren’s failure to modernize Rush Island’s pollution reduction capability resulted in the release of more than 200,000 tons of excess SO₂—pollution that endangered lives and affected air quality across a massive swath of the country.

To remedy these violations, the district court crafted a common-sense solution tailored to the evidence presented at a separate remedy trial. The court first directed

Ameren to go through the permitting process that it had ignored and to apply pollution controls at Rush Island. Those measures will bring the Rush Island plant into compliance when the permitting is completed and the controls are installed and first operated in a couple of years. But they will do nothing to remedy the harm from the decade-plus of excess emissions that resulted from Ameren's failure to install the required pollution controls when Ameren modified the plant.

Accordingly, based on the factual record established at trial (which Ameren does not contest on appeal), the district court concluded that the consequences of Ameren's non-compliance should be remedied through additional injunctive relief. In particular, the court ordered Ameren to reduce emissions ton-for-ton at a similar Ameren facility just 40 miles from Rush Island to offset the excess emissions caused by Ameren's violations at Rush Island. The court found that these reductions will, over time, cost-effectively benefit the same populations in equal proportion to the harms caused by Rush Island's excess emissions.

STATEMENT OF JURISDICTION

(A) The district court had subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1345 because the United States' claims arose under the Clean Air Act, 42 U.S.C. §§ 7401 et seq. Ameren Appendix 1138-39.¹

¹ Ameren filed both a lengthy "Addendum" and a multi-volume "Appendix," which we cite as such. We cite the appendix filed with the present brief as "U.S. Appendix."

(B) This Court has jurisdiction under 28 U.S.C. § 1291 because the district court entered a final judgment. Ameren Addendum 1455-56.

(C) That judgment was entered on September 30, 2019. *Id.* Ameren timely filed its notice of appeal on October 2, 2019, or two days later. Ameren Appendix 1111; *cf.* Fed. R. App. P. 4(a)(1)(B).

(D) The appeal is from a final judgment that disposes of all parties' claims.

STATEMENT OF THE ISSUES

1. Whether the definition of major modification in the federal regulation applies where the Missouri State Implementation Plan plainly incorporates it.

10 C.S.R. § 10-6.060(8); 40 C.F.R. § 52.21(a)(2), (b)(2); *New York v. EPA*, 413 F.3d 3 (D.C. Cir. 2005); *Environmental Defense v. Duke Energy Corp.*, 549 U.S. 561 (2007).

2. Whether the district court correctly applied that definition, including whether the court abused its discretion in allowing the government's experts to testify about actual increases in emissions.

New York v. EPA, 413 F.3d 3 (D.C. Cir. 2005); *NLRB v. Kentucky River Community Care, Inc.*, 532 U.S. 706 (2001).

3. Whether the district court abused its discretion in requiring Ameren to reduce emissions at a nearby Ameren plant to offset the excess emissions at the Rush Island facility.

United States v. Oakland Cannabis Buyers' Co-op., 532 U.S. 483 (2001); *FTC v. Security Rare Coin & Bullion Corp.*, 931 F.2d 1312 (8th Cir. 1991); *United States v. Telluride Co.*, 146 F.3d 1241 (10th Cir. 1998).

4. Whether the district court had jurisdiction under the Clean Air Act and Article III to issue an injunction that remedied Ameren's violation of the Act.

42 U.S.C. § 7413(b); *FTC v. Security Rare Coin & Bullion Corp.*, 931 F.2d 1312 (8th Cir. 1991); *Porter v. Warner Holding Co.*, 328 U.S. 395, 398 (1946).

5. Whether the district court had jurisdiction to enforce Ameren's Title V permit.

United States v. EME Homer City Generation, 727 F.3d 274 (3d Cir. 2013).

STATEMENT OF THE CASE

A. Statutory and regulatory background

1. Clean Air Act

This enforcement action concerns the Act's provisions for Prevention of Significant Deterioration (PSD), which were added in 1977 after Congress determined that earlier programs "did too little" to achieve air quality goals. *Environmental Defense v. Duke Energy Corp.*, 549 U.S. 561, 567-68 (2007); *see also* Ameren Addendum 1020-21 (summarizing statutory background); 42 U.S.C. § 7470 (purposes of PSD program). The PSD program directly addresses the impact on ambient air quality from new construction of, and modifications to, pollutant-emitting facilities in certain geographic regions known as "attainment" or "unclassifiable" areas. 42 U.S.C.

§§ 7470, 7471, 7475(a)(3). The core PSD command is that “[n]o major emitting facility . . . may be constructed in any area to which [the PSD provisions] appl[y] unless” various requirements are met. *Id.* § 7475(a). Those requirements include obtaining a permit setting forth emission limitations and applying “best available control technology” (BACT). *Id.* §§ 7475(a)(1) and (4), 7479(3).

The PSD provisions apply to “construct[ion]” of facilities, and the “term ‘construction’ . . . includes the modification (as defined in Section 7411(a) of this title) of any source or facility.” 42 U.S.C. § 7479(2)(C). The cited Section 7411(a) defines the crucial term “modification” as “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source.” *Id.* § 7411(a)(4). Thus, determining whether a planned activity is a “modification” generally involves a two-step process: (1) determining whether a project is a physical or operational change; and (2) determining whether the change will (or did) increase the amount of pollution emitted.

The Act provides for “Federal enforcement” in 42 U.S.C. § 7413 and for “Civil judicial enforcement” in subsection (b) thereof. That subsection authorizes the United States to seek “a permanent or temporary injunction” against “any person” who “has violated, or is in violation of any other requirement or prohibition of this subchapter.” *Id.* § 7413(b)(2). Section 7413 and the PSD provision (Section 7475(a)) are both located in “subchapter I.” Section 7413(b) provides that the district court

“shall have jurisdiction to restrain such violation, to require compliance, to assess such civil penalty, . . . and to award any other appropriate relief.”

2. Federal regulations and Missouri’s State Implementation Plan

The U.S. Environmental Protection Agency (EPA) promulgated regulations to implement the statutory PSD program in 1978, and it significantly revised those regulations in 1980, 1992, and 2002. The regulations have always provided a specific definition of modification—called a “major modification”—for PSD purposes. Specifically, the regulations now define a “major modification” that triggers PSD permitting and pollution-control requirements to be—

- (1) “any physical change”
- (2) that “would result”
- (3) in a “significant” net increase in emissions.

40 C.F.R. § 52.21(b)(2)(i); *see also id.* § 52.21(b)(2)(iii) (providing that “physical change” does not include “routine maintenance”). An increase of 40 tons or more per year of SO₂ is “significant.” *Id.* § 52.21(b)(23)(i); *see also id.* § 52.21(b)(41)(ii)(c) (providing that net increase does not include any increases that a unit could have accommodated and that are also unrelated to the physical change).

There are two ways to show that a project would result in projected emissions increases satisfying the foregoing trigger. First, the United States can prove that an operator “expected, or should have expected” an emissions increase to result from the

project (the “projected-actuals” approach). Ameren Addendum 1044 (quoting *United States v. Alabama Power*, 730 F.3d 1278, 1282 (11th Cir. 2013)). Second, the United States can prove a project did in fact result in a significant increase in emissions (the “confirmed-actuals” approach). *Id.* at 1042; 40 C.F.R. § 52.21(a)(2)(iv)(b), (c). As EPA explained, “without appropriate safeguards[,] increases in future actual emissions that in fact resulted from the physical or operational change could go unnoticed and unreviewed.” 57 Fed. Reg. 32,314, 32,325 (July 21, 1992). Under the regulations, therefore, if “the source’s emissions have in fact increased significantly over baseline levels as a result of the change, the source would become subject to [New Source Review, which includes PSD] requirements at that time.” *Id.*

A state implements the Clean Air Act (including the PSD program) by developing a federally enforceable State Implementation Plan (SIP). 42 U.S.C. §§ 7410(a)(2), 7413, 7471; 40 C.F.R. § 51.166(a). EPA reviews and approves SIPs, which must comply with (and be at least as stringent as) the federal regulations. 42 U.S.C. § 7410. Missouri expressly incorporated the federal regulatory definition (or “test”) of modification into its SIP, which applies to Rush Island, no later than 2002. 10 C.S.R. § 10-6.060(8) (Ameren Addendum 2020) (citing 40 C.F.R. § 52.21). Because Ameren’s modifications occurred in 2007 and 2010, that definition applies to the Rush Island units at issue.

B. Factual background

The district court found the following facts in two lengthy opinions following the liability and remedy trials. Ameren Addendum 1078-1272 (liability opinion), 1294-1454 (remedy opinion).

Ameren's Rush Island units went into service in 1976 and 1977. *Id.* at 1086. The 600-megawatt powerhouses were designed and operated as "baseload" units to "run basically whenever they are available." *Id.* at 1090, 1100, 1142-43, 1152-53, 1192. As relatively inexpensive sources of electricity capable of running for long stretches without interruption, the Rush Island units were "workhorses," *id.* at 1090, 1149, that "ran hard throughout the day and ramped down somewhat at night," *id.* at 1258. In fact, "they were usually fully-loaded during 'on peak' [daytime] hours when system demand was at its highest." *Id.* at 1250. Ameren's computer models of its generating fleet revealed that Rush Island's production was "insensitive to variations in system load." *Id.* at 1194. Since "the units were generally maxed out anyway, increases in system demand would have little effect on unit operations." *Id.* at 1250.

Around 1990, Ameren switched coal types and began burning Powder River Basin coal, the cheapest coal available. Ameren Addendum 1099-1100. The switch took a toll on the Rush Island units, which were already approaching the end of their design-life. *Id.* at 1097-1102. By 2005, the degraded condition of the units began to cut into production. *Id.* at 1100-21. For instance, accumulated liquid ash (slag) and fly ash clogged and plugged the boiler and related components, limiting airflow and

reducing the amount of electricity that the plant could produce even when running as hard as it could. *Id.* at 1100-15. Ameren’s engineers at one time estimated that the decreased production cost \$25,000 per day. *Id.* at 1121. The units’ fans strained to push the ashy air through the boiler, corroding boiler tubes. *Id.* at 1095-96, 1105-15. As the tubes wore thin, they would sometimes burst, venting steam directly into the boiler. *Id.* at 1097, 1102-03. Other times, slag boulders as big as a car would break free and fall through the furnace onto low-lying components, cracking more steam tubes. *Id.* at 1104. Those myriad problems forced the unit offline for days at a time. *Id.* at 1099-1102, 1113-21.

To address these performance problems, Ameren took each unit offline—Unit 1 in 2007 and Unit 2 in 2010—and rebuilt the worn-out boilers with new, upgraded components. Ameren Addendum 1128-31. These overhauls took years to plan and months to execute. *Id.* at 1128, 1135-38. Each project cost more than \$20 million. *Id.* at 1126-27. Ameren considered the overhauls to be major projects requiring approval by the CEO (Unit 1) and CEO and Board of Directors (Unit 2). *Id.* at 1127. As the district court summarized:

The Rush Island boiler refurbishments at issue were the most expensive boiler projects ever performed on an Ameren boiler. They involved the redesign and replacement of major boiler components that were intended to improve the performance of the units and enable them to burn coal they were not originally intended to burn. They were the first such replacements in the history of each unit, are rarely done at any unit in the industry, and the combination of boiler replacements has rarely, if ever, been done in the industry.

Id. at 1239-40; *see also id.* at 1124-38.

Ameren got what it paid for. After its overhaul, Unit 1 enjoyed an “all-time record run” of continuous operations without maintenance interruptions. Ameren Addendum 1158. The rebuild eliminated outages caused by tube leaks in the upgraded components in both units, which saw increases in their gross production capabilities. *Id.* at 1158-61, 1165-67, 1172-78. By increasing both hours of operation and generating capacity, the units were able to and did produce more electricity. *Id.* at 1141-42, 1158-61, 1165-67. But in so doing, they produced more SO₂ pollution notwithstanding that Powder River Basin coal is low-sulfur. *Id.* Importantly, a rising, system-wide demand for electricity did not cause the increases. As Ameren’s witnesses explained, the electric industry has its own measure of system demand as experienced at an individual generating unit called the “utilization factor.” *Id.* at 1195. As the district court found, demand on the Rush Island units remained relatively constant during the years before and after the boiler projects, but emissions rose and fell in lockstep with the units’ availability. *Id.* at 1195-97.

The Rush Island units—now more than forty years old and still without any SO₂ pollution controls—are among the ten largest sources of SO₂ emissions in the country. Ameren Addendum 1313 (ranking as of 2017). SO₂ transforms in the atmosphere into fine particulate matter, or PM_{2.5}. *Id.* at 1361-62.² Concentrations of

² EPA has identified SO₂ and PM_{2.5} as criteria pollutants and has promulgated National Ambient Air Quality Standards (“NAAQS”) for both. 40 C.F.R. §§ 50.4,

fine particulate matter can lead to adverse health effects, including increased risks of asthma, heart disease, and premature mortality. *Id.* at 1362-67, 1384-87, 1393-94.

Modern pollution controls can achieve 95%-plus reductions in SO₂ emissions from facilities like Rush Island. Ameren Addendum 1310. Such controls are technically and economically feasible at the Rush Island facility. *Id.* at 1316-22. In fact, Ameren undertook an engineering study that explored in detail the cost suitability of the same technology later ordered by the district court. *Id.* at 1319-24, 1332. Moreover, scrubbers are “currently installed on hundreds of coal-fired electric generating units, including approximately 84% of coal-fired power plants in the United States.” *Id.* at 1312; *see also id.* at 1332-34. Of those, the vast majority of scrubbers were added to existing coal-fired plants. *Id.* at 1313. Had Ameren installed and operated modern pollution controls at the Rush Island units when they were upgraded, they would have emitted 200,000 fewer tons of SO₂ in the ensuing years. *Id.* at 1355. As the parties’ experts agreed, modeling shows that fine particulate matter resulting from Rush Island’s SO₂ pollution impacts air quality from Western Kansas to the Atlantic Coast. *Id.* at 1380.

50.5, 50.7, 50.13. SO₂ is regulated directly and as a precursor to PM_{2.5}. 40 C.F.R. § 52.21(23)(i); 73 Fed. Reg. 28,321, 28,327 (May 16, 2008).

C. Proceedings below

The district court bifurcated proceedings into a liability phase and a remedy phase. The court resolved summary judgment motions in each phase and held separate liability and remedy trials.

1. Liability

Before the liability trial, the court resolved the parties' motions for summary judgment. In its first summary judgment opinion, the court rejected Ameren's argument—also its first argument in this appeal—that the “major modification” test set forth in EPA's regulations and incorporated into Missouri's SIP did not provide the relevant PSD liability test because the SIP elsewhere separately defined “modification.” Ameren Addendum 1010-16.

The court explained that “the PSD rules impose their own independent, stand-alone applicability provisions in Section (8) of the Missouri SIP (incorporating EPA's PSD rules set out at 40 C.F.R. 52.21).” Ameren Addendum 1011. That “PSD-specific applicability language should trump the general applicability language” on which Ameren relied. *Id.* Moreover, “the regulatory and statutory history of the PSD rules is well-established and there can be no doubt that the federal PSD rules are focused on ‘major modifications’ which are based on actual emissions determinations,” not on potential emissions. *Id.* at 1012. If there were any remaining doubt, the court explained that “EPA's approval of the SIP provided that the [Act] and the program requirements as set out in 40 C.F.R. 52.21 would supersede any

conflicting provisions in the state SIP.” *Id.* at 1012 (citing 71 Fed. Reg. 36,486, 36,489 (June 27, 2006)). Finally, the district court explained that Ameren’s proposed interpretation was similar to one that the Supreme Court rejected in *Duke Energy*. *Id.* at 1012-13.

In its second summary judgment opinion, the district court addressed the “demand growth exclusion” and causation. Ameren Addendum 1034-42. As the court explained, “there are two main criteria that determine whether a major source of pollution must obtain a PSD permit. First, there must be a physical change, and second, that change would be expected to cause a significant net increase in actual emissions.” Ameren Addendum 1034 (citing 40 C.F.R. § 52.21(b)(2)(i)). The demand-growth exclusion is relevant to the second criterion—“how to determine whether the physical changes would have caused a significant net emissions increase, and if so, whether any of the increased emissions may be excluded from review under the ‘demand growth exclusion.’” *Id.* The court rejected Ameren’s proposed interpretation of the demand-growth exclusion as applying to “any emissions increases a unit could have accommodated at baseline.” *Id.* at 1035. Rather, for the exclusion to apply, the increase must be “unrelated to the particular project.” *Id.* The court held that it was Ameren’s burden to prove that any increases in emissions qualified for the demand-growth exclusion. *Id.* at 1038-39.

The district court also rejected several of Ameren’s other arguments relevant to the appeal. First, the court held that at trial, EPA could proceed on the theory that

Ameren should have expected emissions to increase. Ameren Addendum 1042-53. Second, the court accepted EPA’s argument that the Act and “the PSD regulations themselves will guide the factfinder’s determination” of the reasonableness of Ameren’s failure to comply with PSD, rejecting Ameren’s argument that additional “standard of care” evidence is required. *Id.* at 1054-56. Finally, the court rejected the argument that it lacked jurisdiction over EPA’s Title V claim. *Id.* at 1065-71.

After discovery closed, the district court held a 12-day trial on the merits. In a thorough opinion setting forth its factual findings, Ameren Addendum 1089-1215, and conclusions of law, *id.* at 1215-67, the court concluded that Ameren violated the PSD provisions of the Clean Air Act when it modified Rush Island Units 1 and 2 without a permit.

Based on that trial, the district court concluded that Ameren’s “unprecedented” Rush Island overhauls were major modifications that triggered PSD pollution-control requirements. Ameren Addendum 1215-39. The court explained that the projects made physical changes that “would result in a significant net emissions increase.” *Id.* at 1218; *see also id.* at 1219-39. The court found that four independent lines of evidence established that the Rush Island overhauls “would result” in more than 40 tons of extra SO₂ pollution over a year—the regulatory threshold for a “significant emissions increase” that triggers PSD permitting and pollution control obligations. *Id.* at 1237-38.

- First, Ameren’s own engineering proposals and cost-benefit analyses demonstrated that the projects were designed to boost performance, increasing available hours and increasing generating capacity. *Id.* at 1128-35.
- Second, as described by the government’s expert Dr. Ezra Hausman, Ameren’s fleet-wide generation modeling showed the Rush Island units’ production was inextricably tied to their availability and generating capacity. Moreover, Ameren’s contemporaneous modeling anticipated increases in performance immediately following the overhauls. *Id.* at 1181-90.
- Third, the government’s expert Mr. Robert Koppe independently evaluated the units’ condition. He established that Ameren was right to expect that the upgrades would eliminate the problems that repeatedly drove the units offline, and that the projects would lead to an increase in generating capacity. *Id.* at 1154-58, 1161-65, 1168-72.
- Fourth, post-project operations confirmed the performance increases that Ameren anticipated. Both units were available more, and they operated every hour they were available. Both units increased their maximum generating levels. As a result, both units increased their SO₂ pollution. *Id.* at 1158-61, 1165-67, 1172-78.

As the district court found, all four lines of evidence “establish that there is a significant net SO₂ increase of more than 40 tons that was caused by the projects.” *Id.* at 1237-38. “Based on the known facts that the Rush Island units are low-cost, baseload units, common sense compels the same conclusion: improving availability or capacity at baseload units like Rush Island will result in additional operations and pollution.” *Id.*

The district court rejected Ameren’s argument that the Rush Island overhauls were “routine maintenance” projects that do not rise to the level of a “physical modification” under the liability test. Ameren Addendum 1239-47. “The 2007 and

2010 major boiler outages were unprecedented events for Rush Island Units 1 and 2—they were the centerpieces of the ‘most significant’ outages in plant history.” *Id.* at 1247.

The court also rejected Ameren’s argument that any increases in production and pollution were merely the result of “demand growth” that should be excluded from the liability assessment. The court examined the extensive record and concluded that Ameren’s own documents and operations refuted its argument:

PSD requires sources to consider “all relevant information” in analyzing whether emissions will increase; it does not contemplate sources ignoring known, relevant information just because it might be unfavorable. Ameren had the relevant information, and that information showed that the Rush Island units’ performance would improve, resulting in increased generation and emissions.

Id. at 1259.

In sum, the court concluded that Ameren “violated the requirements of the PSD program by failing to obtain a preconstruction permit and install best available pollution control technology, among other requirements.” Ameren Addendum 1271.

2. Remedy

After the liability trial and opinion, the district court proceeded to the remedy phase. The court first addressed the parties’ summary judgment motions. Ameren Addendum 1273-93. The court rejected Ameren’s argument that “the Clean Air Act does not authorize injunctions as a remedy for past violations,” explaining that the “plain language of [42 U.S.C.] § 7413(b)” authorizes injunctive relief for past

violations—i.e., “whenever a person ‘*has* violated or is in violation’” of the Act. *Id.* at 1276 (quoting Section 7413(b)). The court also rejected Ameren’s argument that it could not, after the trial, order injunctive relief that required pollution reductions at Ameren’s Labadie Energy Center, which is located about 40 miles from Rush Island. *Id.* at 1283-88.

After a 6-day remedy trial, the district court again made extensive findings of fact and conclusions of law, culminating in a two-pronged remedy. That remedy aimed (1) to bring the Rush Island plant into compliance with PSD requirements and (2) to remediate the years of excess emissions from Ameren’s failure to obtain a permit and install pollution controls. Ameren Addendum 1294-1454.

As to compliance, the district court ordered Ameren to apply to the Missouri Department of Natural Resources for a PSD permit and to propose that it use wet scrubbers—an SO₂ pollution control technology—as BACT. Ameren Addendum 1453. The court found that wet scrubbers at Rush Island were both technically and economically achievable, and they could cut emissions by more than 95%. *Id.* at 1310, 1423-27. “[O]ther plants adopted [the] technology en masse [while] Rush Island has lagged behind.” *Id.* at 1424.

To remediate the harm from the excess emissions at Rush Island, the district court ordered Ameren to reduce emissions ton-for-ton at Labadie. Ameren Addendum 1453-54. Labadie consists of four coal-burning electric units much like the Rush Island units and is located 35 miles west of St. Louis. Ameren Addendum

1392. The court found that, had scrubbers been installed at Rush Island at the time of the modifications, the units would have emitted some 162,000 fewer tons of SO₂ emissions by 2016 and an expected “275,000 tons by the time Rush Island finally complies with the PSD program.” *Id.* at 1392. The court found that Rush Island’s post-overhaul emissions increased the risks of adverse health effects in the areas downwind of the facility. *Id.* at 1361-92, 1435-39. In light of these findings, the court ordered Ameren “to account for the total amount of excess emission released by Ameren, a remedy that is more than a decade late, but which is closely tailored to the harm suffered by these communities.” *Id.* at 1306-07. In particular, the court directed Ameren to reduce SO₂ emissions from its Labadie plant. *Id.* at 1392-97, 1444-49, 1453-54.

Ameren again argued that any relief that involved a facility other than Rush Island was “extreme,” Ameren Addendum 1446, but the district court disagreed. The relief ordered by the court was premised on the conclusion that Ameren’s boiler refurbishment constituted a major modification, that Ameren should have applied for permits and installed BACT but did neither—resulting in more than 200,000 tons of SO₂ emissions that should not have occurred. *Id.* at 1414-15, 1444-49. As the court concluded, “[t]here is a tight geographic nexus between the harms Rush Island caused and the benefits gained through reducing Labadie’s emissions. Pollution from Labadie affects the same communities as those affected by Rush Island, and to the same degree.” *Id.* at 1447. As such, the court concluded, ton-for-ton offset relief

from Labadie is “narrowly tailored to remedy specific harm shown.” *Id.* (internal quotation marks omitted).

The record established several options for Ameren to reduce SO₂ emissions from Labadie in order to offset the excess SO₂ emissions from Rush Island, and the district court selected a relatively modest approach. Ameren Addendum 1392-97, 1410-12, 1448-49. Ameren can use less effective dry sorbent injection (DSI) technology to reduce emissions at Labadie, which requires a smaller capital investment. “Ameren can therefore install DSI on Labadie’s four units, operate DSI for as many years as necessary to remediate Rush Island’s excess emissions, and terminate its use of DSI without suffering significant lost capital assets.” *Id.* at 1448. The DSI option will take Ameren more time to comply with the order, but it “ensure[s] that any relief at Labadie does not surpass the damage caused by Rush Island.” *Id.* at 1448; *see also id.* at 1455-56 (requiring Ameren to “install a pollution control technology at least as effective as dry sorbent injection at the Labadie Energy Center”).

SUMMARY OF ARGUMENT

1. The district court correctly concluded that the trigger for the PSD requirements is a “major modification” as that term is defined in the *federal* regulation. Missouri’s SIP expressly incorporates the federal regulation, including the definition of “major modification,” and the SIP itself states that relevant definitions are found in that regulation. When EPA approved Missouri’s SIP, it explained that the SIP

incorporated the federal definition. Ameren mistakenly relies on another provision in the Missouri SIP that provides a general regulatory definition of modification, not a definition that is specifically tailored to the PSD program. Moreover, the Act itself makes clear that the focus is on *actual* emissions, consistent with the test in the federal regulations.

2. Applying the test in the federal regulation, the district court correctly concluded that Ameren's projects constitute major modifications. The government disclosed that its experts would address actual emissions, and the court did not abuse its discretion in admitting the expert testimony at trial. While the United States was required to prove—and did prove—that the projects caused an emissions increase, the district court properly placed the burden on Ameren to prove the asserted exception for emissions that increased due to demand rather than to the projects. The court properly addressed the facts and applied the law, concluding that Ameren did not make the required projection about the impact of the boiler rebuilds; and that if it had, it could not have reasonably expected no increase in emissions.

3. The injunction directed to a nearby plant (Labadie) is not punitive; it is remedial. Because Ameren failed to comply with PSD, Rush Island has emitted more than 200,000 additional tons of SO₂ than it would have emitted had Ameren complied at the proper time; and Rush Island will continue to emit 16,000 excess tons of SO₂ each year until Ameren installs the control technology required by the district court.

The emissions from Labadie affect the same populations as the emissions from Rush Island, and Ameren only has to offset the same amount of pollution.

4. There is no jurisdictional bar to all injunctive relief in this case. The plain text of the Clean Air Act authorizes an injunction for past violations—i.e., when a source “has violated” the Act, and such an injunction is consistent with the district court’s general equitable authority. And there is no “mismatch” between the violation and the remedy ordered: in addition to the SO₂ offset described above, the remedy merely requires Ameren to apply for the permit and to install BACT, as it should have *before* modifying Rush Island.

5. The district court had jurisdiction to enforce an express term of Ameren’s Title V permit. The contrary cases cited by Ameren address instances where the Title V permit was defective or incomplete, not where the company violated an express term of the permit.

The judgment of the district court should be affirmed.

STANDARD OF REVIEW

After a bench trial, this Court reviews the district court’s findings of fact for clear error and its legal conclusions de novo. *Schaub v. VonWald*, 638 F.3d 905, 923 (8th Cir. 2011). Factual findings are “clearly erroneous” when the reviewing court “is left with the definite and firm conviction that a mistake has been committed.” *Anderson v. City of Bessemer City*, 470 U.S. 564, 573 (1985). “If the district court’s account of the evidence is plausible in light of the entire record,” reversal is

inappropriate even if the reviewing court “would have weighed the evidence differently if sitting as the trier of fact.” *Schaub*, 638 F.3d at 923. Although this Court reviews legal issues de novo, the “ultimate decision of whether to grant or deny a permanent injunction, however, lies within the district court’s discretion.” *Calzone v. Summers*, 942 F.3d 415, 420 (8th Cir. 2019) (en banc).

ARGUMENT

I. **The Missouri SIP plainly incorporates the federal regulation’s definition of “major modification.”**

Ameren argues that the district court erred in applying the wrong test to determine whether Ameren’s projects triggered the PSD provisions. According to Ameren, the district court should have first examined only *potential* emissions—that is, the court should have compared each unit’s pre-project potential emissions with its post-project potential emissions. According to Ameren, the Missouri SIP established that the PSD provisions are triggered only if this “potential-to-potential” test is satisfied. As elaborated below, Ameren is wrong, and the district court is right.

A. **The relevant PSD rules plainly provide that a “major modification” triggers the PSD requirements.**

The district court correctly held that Ameren’s “potential-to-potential” test is contrary to the plain language of the applicable PSD rule. Ameren largely ignores the key provision of the Missouri SIP, which expressly incorporates the federal regulation’s test for determining whether PSD requirements are triggered. That trigger consists of the definition of “major modification” and its “actual-to-projected-

actual” test. Specifically, the SIP provides that “[a]ll of the subsections of 40 C.F.R. § 52.21 other than (a) Plan disapproval, (q) Public participation, (s) Environmental impact statements, and (u) Delegation of authority are incorporated by reference.” 10 C.S.R. § 10-6.060(8) (Ameren Addendum 2020); *see also id.* (providing that the relevant version of 40 C.F.R. § 52.21 is the one promulgated as of July 1, 2003). Moreover, the SIP reiterates that the relevant definitions are found in the federal regulation. *See id.* § 10-6.060(1)(A)(3) (definitions “may be found in 40 CFR 52.21(b)”) (Ameren Addendum 2018).

The plain terms of the federal PSD regulation, in establishing “Applicability procedures” specifically for PSD, applies the procedures to “any project at an existing major stationary source” that is located in a PSD area. 40 C.F.R. § 52.21(a)(2)(ii). The regulation then establishes that any project that is a “major modification” must comply with the PSD provisions. *Id.* § 52.21(a)(2)(iii). The federal regulation thus establishes that a “major modification” triggers the PSD requirements.

To assess whether a “major modification” occurred, the incorporated federal regulation provides for an “actual-to-projected-actual” test that compares a plant’s actual annual pre-change emissions to its expected post-change emissions. *Id.* § 52.21(a)(2)(ii) (“The requirements of paragraphs (j) through (r) of this section apply to . . . the major modification of any existing major stationary source”); *id.* § 52.21(a)(2)(iv)(c) (describing major modification test); *id.* § 52.21(b)(2)(i) (defining major modification); *id.* § 52.21(b)(3) (defining net emissions increase); *id.* § 52.21(j)

(providing that a “major modification shall meet” specified emission limits and “shall apply” BACT); *see also New York v. EPA*, 413 F.3d 3, 16 (D.C. Cir. 2005) (explaining history of PSD test).

The SIP confirms that the federal definition of “major modification” is the relevant PSD trigger by using the term in its definition of BACT. The SIP makes clear that a “major modification” triggers the BACT requirement:

5. Best available control technology (BACT)—An emission limitation (including a visible emission limit) based on the maximum degree of reduction for each pollutant which would be emitted from any proposed installation or *major modification* which the director on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable for the installation or *major modification* through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of the pollutant.

10 C.S.R. § 10-6.060(2)(B)(5) (emphasis added) (Ameren Addendum 2003); *see also id.* § 10-6.060(2)(B)(3) (referring, in the definition of “[b]aseline concentration,” to “modifications” and “major modifications” as separate concepts).

When EPA approved Missouri’s SIP, moreover, it explained that the SIP incorporates 40 C.F.R. § 52.21. 71 Fed. Reg. at 36,487. Thus, EPA approved the relevant part of Missouri’s SIP, i.e., the Construction Permits rule, precisely because the rule “incorporates by reference the Federal Prevention of Significant Deterioration (PSD) program in 40 CFR 52.21.” *Id.* Therefore, the district court correctly concluded that “the PSD rules impose their own independent, stand-alone

applicability provisions in Section (8) of the Missouri SIP (incorporating EPA’s PSD rules set out at 40 C.F.R. 52.21).” Ameren Addendum 1011.

Ameren’s brief (at 13, 36) barely addresses this key provision in the Missouri SIP. Ameren thus fails to address the central flaw in its argument: the SIP expressly incorporates the definition of major modification in the federal regulations. By glossing over this incorporation, Ameren fails to rebut the district court’s reasoning.³

Ameren’s argument depends entirely on a distinct provision of the Missouri SIP that provides a general regulatory definition of “modification.” 10 C.S.R. § 10-6.020(2)(M)(10) (Ameren Addendum 2008). According to Ameren, that provision along with 10 C.S.R. § 10-6.060(1)(C) (Ameren Addendum 2018) impose a threshold “potential-to-potential” test that must be met before one even considers the PSD definition of “major modification.” Ameren Brief 34-35. Ameren’s theory is patently incorrect, as the district court concluded. Ameren Addendum 1010-16; *supra* p. 13.

As an initial matter, nowhere does the SIP provide that PSD is triggered only by changes that first qualify as a “modification” as defined under Section 10-6.020(2)(M)(10), as Ameren argues. That definition is not part of Missouri’s PSD program regulation, which is set forth at 10 C.S.R. § 10-6.060(8) and 40 C.F.R. § 52.21. *See* 40 C.F.R. § 52.1320(c) (2007) (codifying Missouri’s incorporation of 40

³ Ameren claims that the government argued that “the SIP cannot mean what it says.” Ameren Brief 34 (citing Ameren Addendum 1015). But Ameren is actually quoting a passage of the district court’s opinion summarizing *Ameren’s* (inaccurate) description of the government’s argument. Ameren Addendum 1015.

C.F.R. § 52.21). Rather, it is a general definition in the SIP, which contains *all* of Missouri’s air pollution regulations, many of which have nothing to do with PSD. Some of those non-PSD provisions even use the general definition of “modification.” *See, e.g.*, 10 C.S.R. § 10-6.020(2)(A)(23) (using “modification” to define “Alternate site analysis”) (Ameren Addendum 2001); *id.* § 10-6.020(2)(M)(1)(A) (using “modifications” to define “MACT,” or “Maximum achievable control technology”) (Ameren Addendum 2007). Because this is a PSD case, it is the Missouri *PSD rules* that establish the PSD-specific requirements for “major modifications.” Moreover, the very provision that Ameren cites, 10 C.S.R. § 10-6.060(1)(A)(4) (Ameren Addendum 2018), makes clear that it does not apply to phrases that are defined in 40 C.F.R. § 52.21. That is, the general definitions in 10 C.S.R. § 10-6.020(2)(M), including the definition of “modification” on which Ameren relies, apply only to “words or phrases . . . other than those defined in this rule section or in 40 CFR 52.21(b).”

In addition, the district court correctly concluded that “the specific PSD rules trump the general SIP rules.” Ameren Addendum 1013. As the court explained, “[t]hat is especially true where, as here, the final SIP rule expressly provides that the specific PSD rules set out in 40 C.F.R. 52.21 should do just that, and the alternate interpretation would render a portion of the PSD rules’ definition of ‘major modification’ superfluous.” *Id.* (citing 71 Fed. Reg. at 36,489). The regulatory term “major modification” is defined to mean “any physical change in or change in the

method of operation of a major stationary source that would result in . . . a significant net emissions increase.” 40 C.F.R. § 52.21(b)(2)(i). As the Supreme Court recognized in rejecting a similar attempt to graft a “modification” pre-test into PSD’s “major modification” provisions, the entire first half of the “major modification” definition would be rendered superfluous if a separate “modification” first had to be found, because “modification” likewise requires a physical or operational change. *Duke Energy*, 549 U.S. at 581.

The district court’s conclusion is also supported by the cases establishing this general principle of statutory and regulatory construction. *National Cable & Telecommunications Ass’n v. Gulf Power Co.*, 534 U.S. 327, 335 (2002) (explaining that “specific statutory language should control more general language when there is a conflict between the two”); *United States v. O’Laughlin*, 934 F.3d 840, 841 (8th Cir. 2019) (relying on “the well-established rule of statutory interpretation that specific statutory language controls over more general provisions”); *Kisor v. Wilkie*, 139 S. Ct. 2400, 2415 (2019) (explaining that courts should apply “all the ‘traditional tools’ of construction” in interpreting regulations).

The PSD regulation’s record-keeping requirements further undermine Ameren’s argument. In particular, 40 C.F.R. § 52.21(r)(6)(iii) imposes a five-year post-construction reporting requirement for projects that do not increase a source’s potential to emit and a ten-year reporting requirement for projects that do. If (as Ameren argues) a project would have to increase a facility’s potential to emit before it

would be subject to Section 52.21, then no projects would ever be subjected to the five-year post-project reporting requirements.

Accordingly, Ameren has it backwards when it argues that the government's interpretation renders the definition of modification in Section 10-6.020(2)(M)(10) meaningless. Ameren Brief 36-38. It is Ameren's argument that renders meaningless the more specific PSD definition of "major modification." And as explained above (p. 27), the general definition of "modification" continues to apply in other contexts.

B. Ameren's potential-to-potential test is inconsistent with the text of the Clean Air Act and the case law.

The Clean Air Act and the uniform case law foreclose Ameren's argument. The Act defines "modification" in a way that is inconsistent with Ameren's potential-to-potential test. It imposes PSD obligations whenever a plant owner constructs a "modification," 42 U.S.C. §§ 7475(a), 7479(2)(C), which is defined as "any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant *emitted* by such source or which results in the emission of any air pollutant not previously emitted," *id.* § 7411(a)(4) (emphasis added). The definition thus focuses on actual emissions, not potential emissions.

As the D.C. Circuit has explained, Congress was fully aware of the difference between "potential" emissions and "actual" emissions when it defined "modification":

If Congress had intended for "increases" in emissions to be measured in terms of potential or allowable emissions, it would have added a reference to "potential to emit" or "emission limitations." . . . Moreover, even if the word "emitted" does not by itself refer to actual

emissions, the phrase “the *amount* of any air pollutant *emitted* by [the] source” plainly refers to actual emissions.

New York, 413 F.3d at 40 (emphasis and alteration by court); *see also id.* at 39 (concluding, after applying “traditional tools of statutory interpretation,” that the Act’s definition of “modification” itself “unambiguously defines ‘increases’ in terms of actual emissions”). Under Ameren’s theory, a project that the Act itself defines as a “modification” would impermissibly escape PSD permitting.

Even before the *New York* decision, the D.C. Circuit explained while reviewing EPA’s first PSD rules that “major modification” is “EPA’s Regulatory Definition of ‘Modification.’” *Alabama Power v. Costle*, 636 F.2d 323, 399-400 (D.C. Cir. 1979). In *Alabama Power*, the court struck down EPA’s initial 1978 definition of modification, which was based on *potential* emission rates, because that definition was inconsistent with the text of the statute. The Seventh Circuit has likewise held that a “major modification” is the trigger for the PSD requirements. *Wisconsin Electric Power Co. v. Reilly*, 893 F.2d 901, 915 (7th Cir. 1990).

In reviewing a PSD enforcement action, the Supreme Court rejected a similar argument to the one Ameren makes here. In *Duke Energy*, a defendant power company attempted to graft a threshold “modification” pre-test onto the PSD “major modification” analysis. Specifically, that defendant argued that “before a project can become a ‘major modification’ under the PSD regulations . . . it must meet the

definition of ‘modification’ under [other New Source Performance Standards] regulations.” 549 U.S. at 581 n.8. As the Court explained:

That sounds right, but the language of the regulations does not support it. For example, it would be superfluous for PSD regulations to require a “major modification” to be a physical change in or change in the method of operation . . . if they presupposed that the NSPS definition of ‘modification,’ which contains the same prerequisite . . . had already been satisfied.

Id. The Court concluded that the PSD definition of “major modification” is an independent requirement and that the terms “modification” and “major modification” are “not related as set to subset.” *Id.* So too here: the “modification” definition in 10 C.S.R. § 10-6.020(2)(M)(10) and the “major modification” definition in 40 C.F.R. § 52.21(b)(2)(i) are “not related as set to subset.” Allowing “modification” to control the definition of “major modification” would render part of the definition of “major modification” superfluous, just as in *Duke Energy*. Rather, a PSD “major modification” is the distinct regulatory concept that triggers PSD obligations.

Ameren’s potential-to-potential interpretation not only impermissibly deviates from the Clean Air Act’s definition of “modification,” it also violates the requirement that SIP provisions be as stringent as federal rules. *See* 42 U.S.C. § 7416; 40 C.F.R. § 51.166(b) (providing that state PSD rules must be “at least as stringent” as EPA’s PSD rules). Ameren’s test would mean that a source does not trigger the PSD requirements so long as it does not increase potential emissions. That would be impermissibly less stringent than the federal PSD regulation, which does not include

such favorable treatment. In adopting the PSD regulation, EPA requires sources to calculate PSD baselines using actual emissions, as required by the Act itself.

Ameren also incorrectly interprets *United States v. Cinergy*, 623 F.3d 455 (7th Cir. 2010). Ameren Brief 35-36. As the district court recognized, Ameren Addendum 1014-16, the Indiana SIP in *Cinergy* was completely different from the Missouri SIP. The Indiana SIP contained none of the actual-emissions-based “major modification” provisions that are unquestionably part of the Missouri SIP. 623 F.3d at 457-58; Ameren Addendum 1015-16. That was because the Indiana SIP was based on PSD regulations that were promulgated before the D.C. Circuit established in *Alabama Power*, 636 F.2d at 399-400, that the PSD “major modification” analysis must focus on actual-emission baselines rather than on potential-emission baselines. 623 F.3d at 457-58. In contrast, the Missouri SIP at issue here specifically incorporated EPA’s “major modification” regulations.

Thus, as the district court put it, “unlike here, the Indiana SIP did not adopt and incorporate by reference EPA’s PSD rules, nor does it appear that the PSD section of the Indiana SIP contained independent applicability language.” Ameren Addendum 1015-16. Unlike in *Cinergy*, Missouri’s SIP and EPA’s regulations establish that the “major modification” provisions adopted into the Missouri SIP would apply, and the “express terms of Ameren’s Title V Permit” made clear that the PSD provisions applied to “major modification of any installation subject to this rule.” *Id.* at 1016.

Ameren is also wrong that the district court’s ruling functions as a collateral attack on Missouri’s SIP. Ameren Brief 38-41. That argument is based on the same misreading of the SIP rebutted above—the SIP simply does not provide that only potential emissions count; it expressly incorporates the federal definition of “major modification” that is based on actual emissions. That EPA approved the SIP three times does not help Ameren, *see id.* at 40, because the SIP expressly incorporated the federal definition of major modification, as explained above (pp. 23-25). *See also* 71 Fed. Reg. at 36,487-89. Moreover, Missouri never said that its SIP or its general non-PSD definition of “modification” controlled instead of the federal “major modification” trigger established in 40 C.F.R. § 52.21. Ameren relies on Missouri’s statement in favor of “regulatory certainty,” Ameren Brief 42 (citing Ameren Addendum 2221), but that general statement does not specifically address the issue here. Neither EPA nor Missouri ever endorsed Ameren’s interpretation of the SIP. Accordingly, there is no support for Ameren’s argument that the district court has failed to properly account for the State’s role within the system of cooperative federalism established by the Act.

Finally, Ameren’s proposed potential-to-potential test would build a huge carve-out from the regulatory structure. Companies with aging malfunctioning power plants (or other sources) would be able to completely refurbish their plants—without triggering PSD requirements—so long as they did not increase the plant’s capacity. *See* Ameren Brief 58 (“The threshold question is whether a project would increase

potential emissions.”). Even if that refurbishment would lead to an actual increase in emissions, the plant would not be required to add pollution controls. The courts have correctly rejected this idea, as explained above.

C. EPA has consistently rejected the potential-to-potential test.

Ameren’s potential-to-potential theory conflicts not only with the Missouri SIP, the federal PSD regulation, the statutory language, and the case law, but also with EPA’s repeated statements in the Federal Register. From the very beginning of the PSD program, EPA has made clear that PSD applicability for changes to existing major sources is determined solely by reference to the “major modification” definition standing alone, without regard to any separate regulatory definition of “modification.” As EPA explained, the “term ‘major modification’ serves as the definition of ‘modification’ or ‘modified’ when used in the Act in reference to a major stationary source.” Proposed Rule, 44 Fed. Reg. 51,924, 51,952 (Sept. 5, 1979). EPA made the same point when it adopted revisions to the PSD rules. *See, e.g.*, 67 Fed. Reg. 80,816 80,186 (Dec. 31, 2002) (2002 “revisions include changes in [New Source Review] applicability requirements for modifications”). Thus, EPA has repeatedly made clear that there is no threshold “modification” analysis, but rather that “major modification” is the definition of “modification” for PSD purposes.

Additionally, EPA has repeatedly rejected industry’s calls for a potential-to-potential test for PSD. Indeed, EPA did so in the context of promulgating the very 2002 regulations that Missouri adopted by reference for PSD purposes. EPA

explained that such a test would impermissibly allow a source to “modernize [its] aging facilities . . . without undergoing preconstruction review.” 67 Fed. Reg. at 80,205; *see also id.* at 80,206 (“we do not believe that a potential-to-potential approach is acceptable for major [New Source Review] applicability as a general matter”); 45 Fed. Reg. 52,680, 52,699-700 (Aug. 7, 1980) (explaining earlier promulgation of actual emissions test rather than potential-to-potential test). Moreover, EPA specifically relied on the incorporation of EPA’s PSD regulations when it approved Missouri’s PSD rules. 71 Fed. Reg. at 36,487; 40 C.F.R. § 52.1320(c) (2007) (codifying Missouri’s incorporation of 40 C.F.R. § 52.21). This is not a “litigation argument,” as Ameren claims (at 34), but the agency’s longstanding, consistent position.⁴

II. The district court correctly concluded that Ameren’s projects constituted “major modifications.”

Ameren argues that the district court erred in a variety of ways in applying the “major modification” test set forth in the federal regulation and incorporated in the

⁴ Before this litigation, Ameren was fully aware of EPA’s rejection of a potential-to-potential test. In challenges to the PSD rules that were later adopted by Missouri, Ameren (then known as AmerenUE) joined an industry brief claiming that the 2002 rules impermissibly eliminated a supposed “first step of the [New Source Review] analysis” under which only those changes that increased “capacity to emit . . . could be deemed a ‘modification.’” Joint Brief of Industry Petitioners, *New York v. EPA*, No. 02-1387, 2004 WL 5846387, at *28-29 (D.C. Cir. Oct. 26, 2004). The D.C. Circuit rejected industry’s argument, reiterating that the Act unambiguously requires PSD review for changes expected to result in an increase over an actual emissions baseline, not a potential baseline, and confirming EPA’s authority to set the methodology for calculating baselines for PSD purposes. *New York*, 413 F.3d at 21, 39-40. Having unsuccessfully made the argument in the D.C. Circuit, Ameren cannot plausibly claim that it was unaware of EPA’s interpretation.

Missouri SIP. Ameren Brief 45-57. None of the arguments demonstrates any legal error by the court, and some of the arguments are improper backdoor attempts to demonstrate that the court made fact-finding errors without establishing clear error.

Most fundamentally, Ameren fails to grapple with the entirety of the district court's fact-finding and legal analysis. The court concluded:

The core facts of this case show that before Ameren performed the challenged projects, problems with the components at issue were limiting the units' performance. Replacing those components would improve performance and result in additional use and pollution. That was what Ameren should have expected before the work began. The evidence shows that is what Ameren did expect. The evidence also shows that is exactly what happened.

Ameren Addendum 1220. The district court's rulings are clearly supported by detailed findings of fact, *id.* at 1093-1215, and careful and thorough legal analysis, *id.* at 1215-67, 1271-72. Ameren's arguments fail to dent either.

A. The government disclosed that its experts would testify about actual emission increases.

A modification can trigger PSD obligations where the operator should have expected that the upgrades would result in emissions increases *or* where the upgrades *did* increase emissions. *Supra* p. 8. Ameren does not challenge the district court's finding that the Rush Island projects enabled the plants to run more hours and at higher load levels, and that they resulted in significant increases in SO₂ pollution. Rather, Ameren briefly argues that the district court abused its discretion in admitting testimony from two of the government's experts, Mr. Koppe and Dr. Sahu, with

respect to those actual post-project emissions increases. Ameren Brief 56-57. This court reviews the district court's decision to admit that testimony only for abuse of discretion. *See Jackson v. Allstate Insurance Co.*, 785 F.3d 1193, 1203 (8th Cir. 2015).

The district court thoroughly addressed Ameren's argument and did not abuse its discretion in rejecting it. Ameren Addendum 1267-69. The court explained that "there is no dispute that both Mr. Koppe and Dr. Sahu (1) analyzed the actual post-project data in their reports, the attachments, and their work papers, and (2) stated that the projected increases actually materialized." *Id.* at 1268. Therefore "[b]oth Mr. Koppe and Dr. Sahu disclosed in their reports that they analyzed post-project actual data." *Id.* The experts' opinions were "not 'new opinions,'" and "Ameren had sufficient notice of both the United States' actual emissions case and of Mr. Koppe and Dr. Sahu's opinions." *Id.* at 1269.

The district court's conclusion is fully supported by the experts' reports, the substance of which Ameren ignores. Ameren instead baldly asserts that the reports "focused entirely on what Ameren should have expected" with a citation to Ameren's motion and an excerpt from Mr. Koppe's expert report. Ameren Brief 56 (citing Ameren Appendix 1300-67). Mr. Koppe's expert report disclosed his opinion on operational improvements and the emission increases that actually resulted at Rush Island Units 1 and 2, and Ameren's counsel asked him about actual emissions at his deposition. For example, Mr. Koppe stated that he "looked at the actual availabilities of the units post-upgrade" as part of his efforts to confirm the reasonableness of his

predictions. Ameren Appendix 1497; *see also, e.g., id.* at 1471, 1485; U.S. Appendix 15-16.

Ameren’s argument about Dr. Sahu is likewise unfounded. For instance, after explaining that he had looked at post-project emissions and stating that Ameren’s expected emission increases “actually materialized” after the projects, Dr. Sahu’s report specifically identified the post-project equivalent availabilities that Ameren actually achieved at Units 1 and 2 following the boiler upgrades. Ameren Appendix 1728. Similarly, as Dr. Sahu explained at trial, his work papers also showed that lost generation due to the replaced components was reduced to zero. U.S. Appendix 11-12.

Finally, Ameren’s argument runs straight into the district court’s unchallenged fact-finding. The court found that actual emissions increased because of the projects based on Ameren’s own documents and testimony. Ameren Addendum 1158-61, 1165-67, 1172-78. Because Ameren does not contest those facts, the debate about the United States’ experts is wholly academic. *See Smith v. Tenet Healthsystem SL, Inc.*, 436 F.3d 879, 889 (8th Cir. 2006) (rejecting argument that district court should have disallowed expert testimony “because any error would be harmless”). As the court explained, “Ameren cannot show that it was prejudiced by the challenged testimony or the admission of the exhibits.” Ameren Addendum 1269.

B. The district court correctly placed on Ameren the burden to prove that the demand-growth exclusion applies.

Ameren is incorrect that the district court “improperly . . . shifted EPA’s burden of proof on causation to Ameren.” Ameren Brief 45. The court did no such thing. In fact, the court reviewed and summarized four independent lines of evidence presented by the Plaintiffs, some of which Ameren has not even challenged on appeal. The court found that each line provided proof that Ameren’s Rush Island projects would—or did—result in emissions increases. Ameren’s own engineering and accounting documents reflected that very expectation, credible expert engineering assessments concurred, sophisticated fleet-wide generation modeling further tied the projects to increases in generation, and post-project data confirmed the overhauls led to enhanced production and increased pollution. Ameren Addendum 1128-90; *see also supra* pp. 15-16 (detailing this evidence). The court required *the United States* to prove causation, that is, to establish by a preponderance of the evidence that the Rush Island overhauls “would result” in a significant emissions increase. 40 C.F.R. § 52.21(b)(2)(i). And the United States did so.

What Ameren mischaracterizes as an improper “shifting” of the burden of proof was actually the district court’s entirely correct recognition that the burden of establishing the benefit of a regulatory *exception* lies with Ameren. As explained below, it is settled law that the burden of proof to prevail on such a defense lies with the party claiming its benefit. Specifically, the court concluded that it was Ameren’s

burden to demonstrate that some portion of Rush Island’s projected actual emissions should be excluded from the PSD liability test by application of the “demand-growth exclusion.” Ameren Addendum 1034-42. As the D.C. Circuit has explained, the demand-growth provision “establishes two criteria [that] *a source* must meet before excluding emissions from its projection.” *New York*, 413 F.3d at 33 (emphasis added, internal quotation marks omitted).

The demand-growth provision is no different from any number of other statutory and regulatory exclusions that the courts have held must be established by the party claiming their benefit. In *NLRB v. Kentucky River Community Care, Inc.*, 532 U.S. 706, 711 (2001), the Supreme Court held that the burden of proving “the applicability of the supervisory exception . . . should thus fall on the party asserting it.” The exception at issue included language similar to the demand-growth exclusion; it provided that the “term employee . . . shall not include . . . any individual employed as a supervisor.” *Id.* at 718 (quoting 29 U.S.C. § 152(3)). The language of the demand-growth exclusion closely parallels that language: “Projected actual emissions . . . shall exclude . . . that portion of the unit’s emissions following the project” that meet two explicit requirements. 40 C.F.R. § 52.21(b)(41)(ii)(c). This Court has likewise long recognized the precept. *See, e.g., Johnson v. James Langley Operating Co.*, 226 F.3d 957, 963 n.4 (8th Cir. 2000); *United States v. Gurley*, 43 F.3d 1188, 1199 (8th Cir. 1994) (applying principle that party seeking the benefit of an exclusion bears the burden of proof); *United States v. Northeastern Pharmaceutical & Chemical Co.*, 810 F.2d 726, 747 (8th

Cir. 1986) (same). The district court did not err in placing the burden of proving that the demand-growth exclusion applied on Ameren.

C. The district court did not apply new or incorrect legal standards for causation.

As explained above, the district court required the United States to establish that the project resulted in an increase in emissions, and it required Ameren to show (if it could) that any increase was actually caused by demand growth.

Ameren incorrectly suggests that the government switched theories on how the district court should consider increased demand and in effect promulgated a new standard without following notice-and-comment rulemaking. Ameren Brief 47-49. According to Ameren, simply pointing out that market demand for electricity was expected to increase should be sufficient for the company to exclude projected emissions increases under the demand-growth exclusion. To the contrary, the demand-growth exclusion has always been based on facility-specific considerations. As the district court explained, “two criteria a source must meet before excluding emissions from its projection: (1) [t]he unit could have achieved the necessary level of utilization during the consecutive 24-month period [that the source] selected to establish the baseline actual emissions; and (2) the increase is not related to the physical or operational change(s) made to the unit.” Ameren Addendum 1036–37 (quoting *New York*, 413 F.3d at 33, and discussing 40 C.F.R. § 52.21(b)(41)(ii)(c)). Ameren’s argument would replace the regulation’s facility-specific considerations with

a generic statement about the surrounding market. As the district court recognized, logic and law dictate that the demand-growth exclusion focuses—as the text requires—on whether a project enabled the facility to increase its market share, lest the exclusion swallow the rule. *Id.* at 1037-38 & n.17.

Moreover, because the Rush Island units operated as baseload “workhorse” plants, the units’ operations (and consequent emissions) did not vary in response to system-wide demand shifts. The district court found specific facts in this regard based on Ameren’s own documents and testimony, as well as on the government’s expert testimony. *Supra* p. 9. Ameren makes no effort to challenge the district court’s factual findings, and so it has not established any error—let alone any clear error—by the court.⁵

Nor did the district court fail to consider either how the electricity market works or the fact that there is an interconnected grid for electricity. Ameren Brief 48.

⁵ The district court adopted EPA’s analogy of Ameren’s Rush Island units to a busy restaurant. By increasing generating capacity at Rush Island—just as a restaurant owner might add tables to her dining room—Ameren enabled its units to serve more people when demand was high. Ameren Addendum 1037 n.17, 1258. By avoiding maintenance outages—like a restaurant deciding to stay open additional days each week—Ameren kept Rush Island’s production up more often. The Rush Island units may have had some “unused capacity” in the low-demand, off-peak hours just as the most popular restaurants might have open tables between rushes. But the production and pollution increases seen at Rush Island after the upgrades had little to do with the units’ unused midnight capacity, when demand for electricity drops, and everything to do with being better equipped to run more often—and at higher levels—during the day. *Id.* Therefore, Ameren cannot satisfy the second prong of the demand-growth test, which requires excluded emissions to be “unrelated” to the projects.

The court fully considered those points and explained why Ameren’s demand-growth argument failed as a matter of fact. Ameren Addendum 1190-97; *see also id.* at 1247-59.

Finally, Ameren’s argument would allow power plant operators simply to ignore PSD requirements so long as demand across the entire system was increasing. According to Ameren, even if refurbishment of an old plant were expected to and did increase emissions at that plant, the plant would be off the proverbial PSD hook so long as the system-wide demand increased for reasons wholly unrelated to the project (e.g., a growing economy, population growth, or a new factory in the system area). But relatively inexpensive electricity production, like at Rush Island, serves as the baseload of the grid, and it is nearly always in demand. *Supra* pp. 9, 15-16. If baseload plant operators could simply point to system demand in order to exclude overhauls that expand generating capacity or increased operating hours from PSD review, the grandfathering provision would be a dead letter. *Cf. Alabama Power Co.*, 636 F.2d at 400 (“The statutory scheme intends to ‘grandfather’ existing industries; but the provisions concerning modifications indicate that is not to constitute a perpetual immunity.”).

D. The district court did not improperly superimpose a “reasonable power plant operator” standard.

Ameren incorrectly argues that the district court required Ameren to do more than comply with the regulatory language. Ameren Brief 50. The regulations require

sources to make projections by comparing pre-project actual emissions to a post-project projection of actual emissions. *Supra* pp. 7-8. In making the projection of post-project emissions, the source must consider “all relevant information, including but not limited to, historical operational data, the company’s own representations, the company’s expected business activity and the company’s highest projections of business activity, the company’s filings with the State or Federal regulatory authorities, and compliance plans under the approved State Implementation Plan.” 40 C.F.R. § 52.21(b)(41)(ii); *see also* Ameren Addendum 1053-54. There are two basic problems with Ameren’s argument.

First, because Ameren failed to perform the requisite analysis before the overhauls, Ameren cannot show that it complied with the regulation. For its 2007 overhaul of Rush Island Unit 1, Ameren did not perform *any* “numerical calculation” to assess projected emissions. Ameren Addendum 1262. As the district court found, the undocumented, “qualitative” analysis Ameren claimed at trial to have performed “did not even rise to the back-of-an-envelope level” and did not “comply with [New Source Review] requirements” or attend to the necessary considerations, and it was therefore “not reasonable under the law.” *Id.* at 1263. The company’s assessment of the Unit 2 overhaul was “an afterthought analysis,” *id.* at 1265, that was riddled with “procedural flaws” and was performed by employees without “a meaningful understanding of the facts of the projects,” *id.* at 1262. As the district court concluded, any post-hoc emissions analysis that Ameren did perform “provide[d] no

basis for finding that Ameren could have reasonably expected the project would not significantly increase emissions.” *Id.* Moreover, Ameren relied on its flawed, post-hoc analysis even though the standard for assessing PSD applicability was “well-established,” and even though it was “well-known” that the types of projects that it undertook risked triggering PSD requirements. *Id.* at 1401-02. Ameren left the legal and environmental review boxes on its approval forms unchecked, and the plant manager never considered seeking any kind of permit even though he was in charge of compliance. *Id.* at 1198-1200, 1261-62. Ameren was generally aware that EPA enforcement action was possible, but it viewed delaying scrubber construction as economically valuable. *Id.* at 1402-06.

Second, Ameren has not demonstrated any error in the district court’s analysis, which fully comported with the regulation. The court looked at all of this evidence—along with the project documents prepared by Ameren engineers, the modeling performed by Ameren employees, and the testimony from Ameren experts—and assessed what a reasonable power plant operator would conclude, consistent with the case law. Ameren Addendum 1154-78, 1181-90, 1215-39, 1264, 1267. Ameren neither explains why considering reasonableness was inappropriate nor offers a workable alternative. Should the court have assessed the evidence from the perspective of an unreasonable power plant operator? Or based on Ameren’s subjective perspective? Ameren does not suggest any alternative that makes sense.

Ameren's argument would make it functionally impossible for district courts to try PSD cases or cases under other complicated statutes. Neither a statute nor its implementing regulations can address every possible factual scenario. The task of applying the law to the facts is necessarily left to trial courts, with the parties arguing for their respective interpretations of law and presenting their factual evidence.

The district court did not err in rejecting the argument that it should not have permitted the government's experts to address what Ameren should have reasonably expected "without any standard-of-care evidence against which reasonableness could be measured." Ameren Brief 51. The court thoroughly addressed and rejected Ameren's argument, Ameren Addendum 1055-56, and Ameren does not attempt to show how the district court erred. The court explained that the "legal standards supplied by the PSD rules are sufficient to guide the analysis." *Id.* at 1055. The court then went on to carefully weigh the evidence against the standard, making factual findings that Ameren does not challenge, *id.* at 1154-90, and an ultimate legal conclusion that Ameren ignores, *id.* at 1215-39.

Contrary to Ameren's argument, this issue was not too complicated to be resolved by the district court. Ameren Brief 54-55 (discussing opinion of government expert). The court explained why and how it relied on the government's experts and the problems with Ameren's experts. Ameren Addendum 1086-87, 1142-90, 1209-15,

1221-38, 1267-70. The court’s clear and thorough exploration of what Ameren should have expected from the projects fully rebuts Ameren’s argument.⁶

* * *

In sum, the district court did not err in its application of the legal test for determining whether Ameren modified the units or in its consideration of expert testimony on that issue.

III. The injunction directed at Labadie is remedial, not punitive, and it is fully consistent with the Clean Air Act and *Otter Tail*.

The injunction directed at Labadie requires Ameren to reduce future SO₂ emissions by the same estimated amount that its SO₂ emissions have exceeded BACT at Rush Island. After Ameren modified the Rush Island units, the two units emitted about 16,000 tons of SO₂ per year more than they would have had Ameren applied for a permit and had implemented the BACT-determined limitation. Ameren Addendum 1355. Ameren has already emitted more than 200,000 tons of excess SO₂, and the total will exceed 275,000 tons by the time Ameren starts to control emissions at Rush Island. *Id.* at 1355, 1392. Because emissions from the Rush Island and Labadie plants affect populations in closely overlapping areas, the public health benefits from

⁶ Ameren cites a memorandum from the EPA Administrator in 2017. Ameren 50-51 (with link to memorandum). The memorandum addressed how EPA would exercise its enforcement discretion moving forward, and so it had no application to this case. In any event, the memorandum put greater emphasis on post-project actual emissions, which is consistent with the district court’s approach here. And it addressed the situation in which a source actually projected emission before undertaking a project, which Ameren did not do. *Supra* pp. 44-45.

reducing Labadie’s emissions will accrue to the same populations harmed by Rush Island’s excess emissions, as the district court found. *Id.* at 1392-97, 1444-49. The injunction is thus plainly remedial.

As the Supreme Court has explained, it “goes without saying that an injunction is an equitable remedy.” *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 311 (1982). From the days of English common law, “courts of equity have enjoyed sound discretion to consider the necessities of the public interest when fashioning injunctive relief.” *United States v. Oakland Cannabis Buyers’ Co-op.*, 532 U.S. 483, 496 (2001) (internal quotation marks omitted); *see also Franklin v. Gwinnett County Public Schools*, 503 U.S. 60, 66-67 (1992). The goal of a remedial injunction is to provide complete relief given the statutory context; courts wield “the historic power of equity to provide complete relief in light of the statutory purposes.” *FTC v. Security Rare Coin & Bullion Corp.*, 931 F.2d 1312, 1315 (8th Cir. 1991) (quoting *Mitchell v. Robert DeMario Jewelry, Inc.*, 361 U.S. 288, 291-92 (1960)). The comprehensiveness of a district court’s “equitable jurisdiction is not to be denied or limited in the absence of a clear and valid legislative command.” *Porter v. Warner Holding Co.*, 328 U.S. 395, 398 (1946).

Of course, a district court’s equitable authority is not unbounded. Any injunction must be “mould[ed] . . . to the necessities of the particular case.” *Oakland Cannabis*, 532 U.S. at 496 (quoting *Hecht Co. v. Bowles*, 321 U.S. 321, 329-30 (1944)). “An injunction must be tailored to remedy specific harm shown.” *Rogers v. Scurr*, 676 F.2d 1211, 1214 (8th Cir. 1982). As the United States itself often argues, an injunction

is an “extraordinary remedy,” *Oakland Cannabis*, 532 U.S. at 496 (quoting *Romero-Barcelo*, 456 U.S. at 312), and a plaintiff “must satisfy a four-factor test before a court may grant such relief,” *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006); *see also* Ameren Addendum 1419-21, 1434-48 (court’s analysis of the four factors).

An injunction is considered impermissibly “punitive” (as opposed to properly “remedial”) only if it “goes beyond remedying the damage caused to the harmed parties by the defendant’s action.” *Johnson v. SEC*, 87 F.3d 484, 488 (D.C. Cir. 1996). Mitigating the harm caused by a defendant and restoring the status quo are hallmarks of a remedial injunction, not a punitive one. *See, e.g., United States v. Telluride Co.*, 146 F.3d 1241, 1246 (10th Cir. 1998). The test is whether the relief “bears an equitable relationship to the degree and kind of wrong it is intended to remedy.” *United States v. Deaton*, 332 F.3d 698, 714 (4th Cir. 2003).⁷

The courts of appeals have uniformly upheld injunctions in pollution-control cases so long as the injunction does not go beyond remedying the harm directly caused by the violation of law. For example, in an action enforcing the Clean Water Act, the Tenth Circuit has held that so long as the injunction does not go “beyond compensation for the injury caused by the defendant,” it is not a “penalty.” *Telluride Co.*, 146 F.3d at 1246. The First Circuit has reached the same conclusion in a case in

⁷ In the district court, Ameren conceded that restoring the status quo was a proper goal of a remedial injunction: “equitable remedies include ‘those intended simply to extract compensation or restore the status quo.’” U.S. Appendix 3.

which the defendant failed to obtain a Clean Water Act permit. The court of appeals held that a district court could remediate prior violations by entering an injunction that was more stringent than the applicable permit requirements because it was “remedying harm caused by their past violations.” *U.S. Public Interest Research Group v. Atlantic Salmon of Maine, LLC*, 339 F.3d 23, 31 (1st Cir. 2003). “Injunctive remedies for past harm commonly dictate future conduct so as to mitigate past harm.” *Id.* at 33; *accord NRDC v. Southwest Marine, Inc.*, 236 F.3d 985, 1000 (9th Cir. 2000) (affirming injunction under the Clean Water Act and holding that district courts have “broad latitude in fashioning equitable relief when necessary to remedy an established wrong”); *Deaton*, 332 F.3d at 713-14 (affirming injunction under Clean Water Act that required defendants to restore the damaged wetlands); *United States v. Cumberland Farms*, 826 F.2d 1151, 1164-65 (1st Cir. 1987) (same).

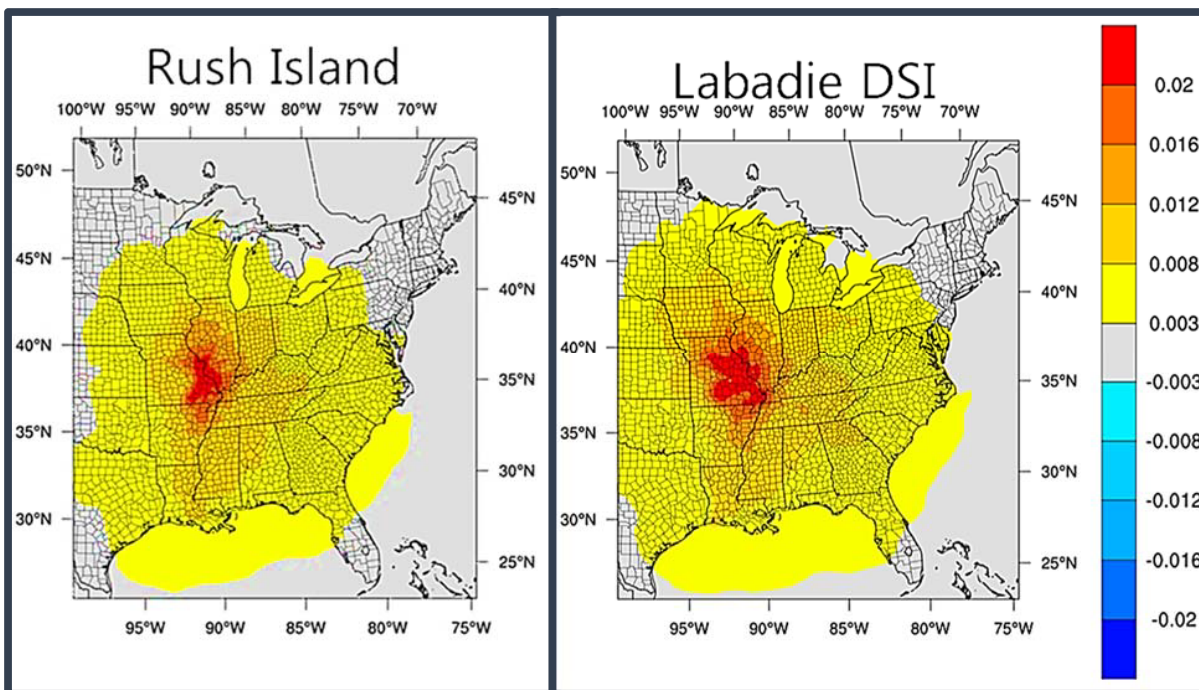
The Fifth Circuit addressed the meaning of “remedial” in the context of an insurance dispute that arose following a Clean Air Act consent decree. The court succinctly described how pollution reductions under the Act can remediate harm from past excess emissions:

Because of [the plant’s] past emissions, there are today more pollutants and pollutant byproducts in the region’s air, and more pollution-related damage to natural resources, than there would be absent the past emissions. Future emissions contribute to this geographically diffuse, intermingled body of harm exactly the same way. And crucially, future emissions reductions accelerate the diminution of that body of harm Therefore, the upgrades mitigate past pollution.

Louisiana Generating v. Illinois Union Insurance, 831 F.3d 618, 630 (5th Cir. 2016).

The district court's injunction is remedial and not punitive under these standards. The injunction requires Ameren to reduce emissions at Labadie in order to remedy the excess SO₂ emissions from nearby Rush Island. These are the same type of power plants, owned and operated by the same company, in the same area. *Supra* pp. 18-20.

The court also found that such a reduction in emissions would benefit nearly the same population that was affected by increased pollution and its attendant health risks, as can be seen in the air quality modeling results presented at trial and credited by the district court. Ameren Addendum 1393-95, 1446-47. There is thus a tight geographic nexus between where the excess emissions occurred (Rush Island) and where the injunction's offsetting reductions will be accomplished (Labadie). As a result, the populations that were harmed by Rush Island's excess emissions will be concomitantly benefitted by the injunction, thus ensuring that the injunction is molded to address the harm. Indeed, the district court found that the SO₂ emissions from Labadie affect the same communities as those from Rush Island and—on a ton-for-ton basis—to the same degree. *Id.* at 1392-97, 1444-49. Ameren does not challenge these factual findings on appeal. The following maps illustrate that using Labadie molds the injunction to remedy the uncontested harm from Rush Island's excess emissions:



Id. at 1383, 1386; U.S. Appendix 29-30.⁸

Moreover, the district court ensured that the cost to Ameren of compliance was commensurate with—in fact far exceeded by—the public health benefits. The court allowed Ameren to use the cheapest option, one that Ameren may cease using once the ton-for-ton reduction has been achieved “without suffering significant lost capital assets.” Ameren Addendum 1448. The court explained that the health benefits will far exceed the costs of the injunction. In the atmosphere, SO₂ turns into PM_{2.5}, which “leads to increased risk of high blood pressure, hardened arteries, heart attacks, strokes, asthma attacks, and premature mortality.” *Id.* at 1364. The “social

⁸ Specifically, the maps depict the area harmed by Rush Island’s excess emissions and the area that will benefit from Labadie’s reduced pollution once Ameren complies with the district court’s order. Red zones illustrate more concentrated impacts than the yellow areas. *Id.*

benefits” of reducing the health impacts from Rush Island’s excess emissions by offsetting those emission at Labadie would “far surpass the costs of any control technology used.” *Id.* at 1397 (citing Schwartz Testimony, U.S. Appendix 25-27); *see also id.* (other modeling demonstrates that “benefits estimates are even higher,” citing Schwartz Testimony, U.S. Appendix 27).

Against the backdrop of the district court’s unchallenged fact-finding and careful analysis, Ameren points to the fact that the government’s complaint did not allege that Ameren was violating the law at Labadie. According to Ameren, this makes the injunction punitive or otherwise improper, and the United States waived any punitive remedies. Ameren Brief 59-60, 64-66. But that is not the correct legal test for whether an injunction is or is not punitive. As explained above, courts look to whether the injunction goes too far—that is, whether it goes beyond remedying the harm caused by a defendant’s action. For all the reasons discussed above, it does not. The cases cited above reject this argument and uphold remedial relief that is not limited to the exact place where the defendant violated the law.

Ameren incorrectly claims that the Supreme Court’s decision in *Kokesh v. SEC*, 137 S. Ct. 1635 (2017), supports its argument that the injunction constitutes a penalty. Ameren Brief 64. *Kokesh* held that a particular claim by the Securities and Exchange Commission seeking disgorgement under federal securities laws was a “penalty” within the meaning of the relevant statute of limitations, *id.* at 1642, but it did not address any sort of environmental remediation. Moreover, the relevant issue in *Kokesh*

was whether the particular disgorgement at issue, money paid to the U.S. Treasury, was sought for the purposes of “punishment” and “to deter others from offending in like manner.” *Id.* at 1643-44. Here, in contrast, the district court ordered Ameren to offset the *same* type of emissions causing the *same* health risks to the *same* population—all factual findings that Ameren does not challenge on appeal. Because the benefits of the order accrue to the very population affected by the violation of law, and not to the U.S. Treasury as in *Kokesb*, the injunction is remedial.⁹

Ameren argues that the injunction here “circumvents statutory prerequisites for PSD enforcement actions.” Ameren Brief 59 (capitalization altered). But this argument is based on the fiction that the government was attempting to “prove a violation at Labadie.” *Id.* It was not. Ameren violated the Clean Air Act at Rush Island. The injunction directed at Labadie provides a ton-for-ton SO₂ pollution reduction to address the Rush Island violation, as explained above. That injunction is fully consistent with the court’s equitable authority (as well as its statutory authority, discussed below in Part IV).

Nor is Ameren correct that the government “expanded its claims” during the remedy phase to seek offsetting pollution reductions. Ameren Brief 58. The

⁹ Ameren also cites a dissenting opinion in *United States v. Luminant Generation Co.*, 905 F.3d 874, 889-91 (5th Cir. 2018), *reh’g en banc granted and vacated*, 929 F.3d 316 (5th Cir. 2019). *See* Ameren Brief 65, 71. Not only is that a dissenting opinion, but the Fifth Circuit granted rehearing en banc, effectively vacating the panel opinions. In any event, the panel majority correctly concluded that injunctive relief is available under the Act to remedy a PSD violation. 905 F.3d at 887-88.

operative complaint plainly sought remedial relief to offset the excess SO₂ emissions from Rush Island. Ameren Appendix 1162; *see also* U.S. Appendix 7 (U.S. reply on jury issue, explaining that redressing harm could include efforts to “reduce[e] pollution from other units to offset the excess pollution Rush Island has already emitted”). Once this case entered the remedy phase, the government detailed the relief that it sought, and Ameren argued against that relief during the remedy summary judgment phase and at trial. Ameren Addendum 1273-88 (remedy phase summary judgment opinion, rejecting Ameren’s arguments); *id.* at 1414-54 (remedy phase post-trial opinion conclusions of law, rejecting Ameren’s arguments).

Finally, Ameren misreads this Court’s decision in *Sierra Club v. Otter Tail Power Co.*, 615 F.3d 1008 (8th Cir. 2010). Ameren Brief 60-64. Ameren argues that there were no excess Rush Island SO₂ emissions because those emissions “did not violate the law.” Ameren Brief 60. In Ameren’s opinion, the PSD program is a paper tiger, a fleeting permit requirement that accrues and then evaporates before it can affect air quality. But this Court did not so hold in *Otter Tail*.

Otter Tail rather concluded that, for purposes of the statute of limitations, PSD obligations first accrue when a facility is constructed or modified, and they do not give rise to “ongoing” violations. 615 F.3d at 1018. Ameren incorrectly reasons that because (under *Otter Tail*) PSD imposes discrete, single-accrual requirements, violations of those requirements have no ongoing effect. Nothing in *Otter Tail* says that PSD violations have no ongoing effects. On the contrary, the Court explicitly

recognized “that PSD permits establish emission limits and thus regulate *operation*.” *Id.* at 1017 (emphasis added). Moreover, the government here sued within the statute of limitations period, unlike the private plaintiff in *Otter Tail*. And the requirements that Ameren shirked would have “establish[ed] obligations which continue[d] to govern [its] facility’s operation after” Rush Island was modified. *Id.* The inevitable consequence of these violations—Rush Island’s continued operation without a permit or appropriate pollution controls—unquestionably resulted in substantial excess emissions and heightened risks to the health and welfare of downwind communities. As explained above, nothing about the scope of remedial injunctive relief or the Clean Air Act suggests that should be overlooked.

IV. There is no Article III or other jurisdictional defect that bars all injunctive relief.

Ameren argues that the district court “lacked jurisdiction under Article III and statutory authority under the [Clean Air] Act” to grant the injunction at issue. Ameren Brief 66. But the Act authorizes remedial injunctions, including in circumstances in which a defendant “has violated” the Act. Ameren’s invocation of Article III adds nothing to its argument: because the Act authorizes the relief the United States sought, there is no Article III issue.

Ameren reiterates its argument based on *Otter Tail* and the incorrect notion that an injunction may not be based on emissions that directly resulted from Ameren’s

unpermitted and illegal modification. Ameren Brief 66-67, 69. We have rebutted that argument, including its erroneous reading of *Otter Tail*, in Part III above.

Ameren ignores the statutory language that directly and plainly authorizes an injunction in this circumstance. The Clean Air Act authorizes injunctions, including injunctions to remedy past violations. Specifically, it authorizes the government to “commence a civil action for a permanent or temporary injunction,” or seek penalties, “or both,” whenever a person “*has violated, or is in violation of*” a requirement of Title I of the Act. 42 U.S.C. § 7413(b)(2) (emphasis added); *cf. id.* § 7475(a) (PSD requirements are within Title I); *see also id.* § 7413(b) (district court “shall have jurisdiction to restrain such violation, to require compliance, to assess such civil penalty, . . . and to award any other appropriate relief”). Because an injunction is authorized whenever a person “has violated” the Act, an injunction is available against Ameren for the violation that occurred at the time of the modifications. *See also* Ameren Addendum 1277, 1419. Ameren asserts that the Act “does not authorize injunctions for wholly past violations,” Ameren Brief 72, but it fails to discuss Section 7413(b). Because Ameren has failed to offer any response to the district court’s legal conclusion on this issue, it has failed to make even a prima facie showing that the district court erred.

The Clean Air Act cases cited by Ameren (at 67-68) provide no support; they instead state that injunctive relief is available even after the modification has occurred. In *United States v. EME Homer City Generation*, 727 F.3d 274 (3d Cir. 2013), the court

held that injunctive relief was not available because of a *change in ownership*. *Id.* at 282, 291-96. Indeed, *Homer City* opined that the statute authorized injunctive relief for a past violation where (as here) there was *no* change in ownership: if the government “does not object within five years of the . . . modification, then it loses the right to seek civil penalties [because of the statute of limitations], *but can still obtain an injunction requiring the owner or operator to comply with the PSD requirements.*” *Id.* at 289 (emphasis added).

Similarly, there was a change in ownership in *United States v. Midwest Generation, LLC*, 720 F.3d 644 (7th Cir. 2013), and the Seventh Circuit recognized that the government may obtain injunctive relief for a PSD violation after the modification is complete. *Id.* at 646 (explaining that the original owner “could have needed to undertake a further round of modifications to get the permit” if suit had been brought within the statute of limitations). Moreover, the Clean Air Act’s express authorization for remedial injunctions for past violation of law is fully supported by case law underscoring the reach of courts’ equitable authority. Courts have long recognized that injunctions for past statutory violations are a proper remedial tool: “Once a right and a violation have been shown, the scope of a district court’s equitable powers to remedy past wrongs is broad.” *Swann v. Charlotte-Mecklenburg Board of Education*, 402 U.S. 1, 15 (1971); *see also, e.g., Ford Motor Co. v. United States*, 405 U.S. 562, 573 n.8 (1972) (endorsing injunctive relief that will “cure the ill effects of the illegal conduct”); *Atlantic Salmon*, 339 F.3d at 31 (“[A] court’s equitable power to enforce a statute

includes the power to provide remedies for past violations—an area in which the courts have settled authority and competence.”).

The default is that a statute authorizing equitable relief provides courts with comprehensive equitable jurisdiction, which “is not to be denied or limited in the absence of a clear and valid legislative command.” *Porter*, 328 U.S. at 398; *accord Mitchell*, 361 U.S. at 291-92. This Court has held that in an enforcement action “all the inherent equitable powers of the district court are available for the proper and complete exercise of the court’s equitable jurisdiction” unless limited by statute. *Security Rare Coin*, 931 F.2d at 1314; *see also United States v. Cinergy*, 582 F. Supp. 2d 1055, 1058-65 (S.D. Ind. 2008) (discussing cases and holding that 42 U.S.C. § 7413 authorizes remedial injunctions, including retrospective mitigation). While the district court must mold its relief to the violation and resulting harm as well as analyze the four predicate factors established by the Supreme Court, the district court did that here. *Supra* pp. 17-20, 49.

Ameren cites plainly inapposite cases. In *United States v. Oregon State Medical Society*, 343 U.S. 326, 333-34 (1952), *cited in* Ameren Brief 72, the Supreme Court addressed the availability of an injunction under antitrust law, where no ongoing restraint of trade was shown to exist and where the challenged conduct and the impacts from it had ceased seven years earlier. In contrast, there are ongoing emissions here to be addressed both by the injunction requiring Ameren to apply for a permit and satisfy BACT and by the injunction requiring reduced SO₂ emissions

at Labadie. Ameren Addendum 1355, 1434-48. Thus, this is not a case where a purely retrospective order would effectively remedy the harm. Nor is it a case where either the violation of law or harm are distant in time; the violations here occurred in 2007 and 2010, shortly before the United States filed suit in 2011, and the uncontrolled emissions that resulted from the violations are continuing today.

The other cases cited by Ameren address situations in which there was neither ongoing harm nor the possibility that an injunction would remedy a past harm, or there was a holding that an injunction was indeed available. *See Frost v. Sioux City, Iowa*, 920 F.3d 1158, 1160-61 (8th Cir. 2019) (addressing standing, not the availability of an injunction, and concluding that plaintiffs had not established the need for an injunction to challenge an ordinance banning certain dogs when they did not own a dog or live in the jurisdiction); *Hillesheim v. Holiday Stationstores, Inc.*, 903 F.3d 786, 792 (8th Cir. 2018) (holding, in case alleging violation of Americans with Disabilities Act, that request for an injunction was moot once the defendant store had fixed access issue); *United States v. Santee Sioux Tribe of Nebraska*, 135 F.3d 558, 563 (8th Cir. 1998) (holding that an injunction was available to enforce a federal statute); *Webb v. Missouri Pacific Railroad*, 98 F.3d 1067, 1068-69 (8th Cir. 1996) (holding that an injunction was not available in class action employment discrimination class action absent any evidence of ongoing discrimination and where court had not yet had remedy trial).

Finally, Ameren's argument that there is a "mismatch between violation and remedy," Ameren Brief 69, is baseless. Ameren violated the PSD provision by

modifying Rush Island without a permit. The injunction requires Ameren to apply for the permit that it failed to secure, to meet the emission standard that it failed to meet, and to address ton-for-ton its excess emissions. There is no mismatch.

V. The district court had jurisdiction over the Title V claims.

Ameren mischaracterizes the United States' Title V claims and the district court's resolution of them. Ameren Brief 73. The court held that Ameren violated Title V because Ameren's Title V permit required it to apply for a PSD permit before undertaking a major modification: specifically, the "Clean Air Act Title V permit for the Rush Island Plant contains a condition restating the requirement that Ameren was prohibited from performing any unpermitted major modifications of Rush Island Units 1 or 2." Ameren Addendum 1215; *see also id.* at 1067-68 (quoting permit). Therefore, because Ameren performed an unpermitted major modification, Ameren violated *an express term* of its Title V permit. *Id.* at 1239. The cases that Ameren cites (at 73) involve claims that a party has violated its Title V permit by operating a plant without complying with a term that *should have been* included in the permit. While the cases are split on what court has jurisdiction to hear those sorts of claims, that issue is not presented by the judgment here, which is based on the violation of an express permit term. Thus, the government did not bring a claim "that the permit 'is not in compliance with the requirements of' the Act, *Otter Tail*, 615 F.3d at 1020, but rather a claim that Ameren violated an express term of its Title V permit. *See, e.g., Homer City*, 727 F.3d at 298 (explaining that such a claim is consistent with the statute).

CONCLUSION

For the foregoing reasons, the judgment of the district court should be affirmed.

Respectfully submitted,

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I hereby certify that on March 27, 2020, I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the Eighth Circuit by using the CM/ECF system. I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

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