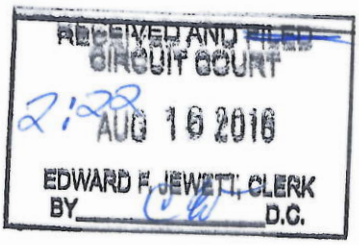
VIRGINIA:

IN THE CIRCUIT COURT FOR THE CITY OF RICHMOND

THE VIRGINIA CHAPTER OF THE SIERRA CLUB, Appellant, **v.** **THE VIRGINIA STATE AIR POLLUTION CONTROL BOARD,** **and** **THE VIRGINIA ELECTRIC AND POWER COMPANY;** Appellees.	**Case No.** _____



PETITION FOR APPEAL OF ADMINISTRATIVE AGENCY DECISION

The Virginia Chapter of the Sierra Club (the Sierra Club), by counsel and pursuant to Rule 2A:4 of the Rules of the Supreme Court of Virginia and the Virginia Administrative Process Act, Virginia Code §§ 2.2-4000 *et seq.*, submits this Petition for Appeal of the State Air Pollution Control Board's June 17, 2016 case decision issuing a Prevention of Significant Deterioration (PSD) permit under the Clean Air Act to the Virginia Electric and Power Company (Dominion). In support of this Petition, the Sierra Club states as follows:

INTRODUCTION

1. This is an appeal requesting review of an air permitting decision under Section 10.1-1318 of the State Air Pollution Control Law, Virginia Code § 10.1-1318, and Section 2.2-4029 of the Virginia Administrative Process Act (VAPA), Virginia Code § 2.2-4029.

2. On June 17, 2016, the State Air Pollution Control Board issued Permit No. 52525-001 to the Virginia Electric and Power Company (Dominion). Permit No. 52525-001 is a Prevention of Significant Deterioration (PSD) permit under the federal Clean Air Act, 42 U.S.C §§ 7401–7515, and the State Air Pollution Control Law, Virginia Code §§ 10.1-1300 through 10.1-1327, authorizing the construction of Dominion's proposed Greensville County Power Station, a "major stationary source" of air pollution under the Clean Air Act.

3. The Sierra Club participated extensively in the permitting process, submitting written comments on the draft permit, requesting direct consideration by the Board of the permitting action, and appearing by counsel before the Board at its June 17, 2016 meeting on the proposed permit.

4. As detailed below, the Sierra Club alleges that the Board issued Permit No. 52525-001 in violation of the Clean Air Act, the State Air Pollution Control Law, and its own regulations implementing those laws. The Sierra Club further alleges that the Board's failure to prepare a written decision explaining its rationale for issuing the permit violated the Virginia Administrative Process Act.

PARTIES TO THE APPEAL

5. The State Air Pollution Control Board (the Board) is a regulatory board established by Section 10.1-1301 of the State Air Pollution Control Law, Virginia Code § 10.1-1301. The State Air Pollution Control Law imbues the Board with authority to promulgate regulations and to consider certain permitting actions—including the issuance of permits appropriately contested under Virginia Code § 10.1-1322.01.

6. The State Air Pollution Control Board is subject to suit under Virginia Code § 10.1-1318 and under the Virginia Administrative Process Act, Virginia Code § 2.2-4000 through 2.2-4032.

7. The Virginia Electric and Power Company (Dominion) is a corporation incorporated and operating in the Commonwealth of Virginia and a subsidiary of Dominion Resources, Inc. At all relevant times, Dominion is a "person" as defined by Virginia Code § 10.1-1300 because it is a corporation and a legal entity.

8. Because Dominion is the applicant and/or permittee whose application for a permit the Board disposed of in the challenged case decision, Dominion is a necessary party to this appeal under Rule 2A:1(c) of the Rules of the Supreme Court of Virginia.

9. The Sierra Club is a nonprofit corporation incorporated in California, with more than 600,000 members and supporters nationwide and approximately 15,000 dues-paying members who reside in Virginia and belong to the Club's Virginia Chapter. The Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass the enjoyment and protection of Virginia's air resources.

10. Sierra Club members, including Charlene Oba and Wynne LeGrow, stand to suffer injuries to their medical, aesthetic, recreational, environmental, and/or economic interests as a result of the proposed Station and other facilities supporting the Station. Sierra Club members live, work, and recreate within the airsheds to be impacted by the Station and its supporting facilities and thus stand to be harmed by pollutants that the Station and its

supporting facilities will emit. Sierra Club members are also very concerned about the impacts of air pollution from the Station and its supporting facilities on their friends and neighbors and on local wildlife. Because the Board issued the permit authorizing these impacts, Sierra Club members' injuries are fairly traceable to the Board's decision. If the impacts on air quality caused by the Station or its supporting facilities were prevented or otherwise mitigated by more demanding permit conditions, the threatened harms to the interests of Sierra Club members could be redressed in part or in whole.

11. At all relevant times, the Sierra Club is a "person" as defined by Virginia Code § 10.1-1300 because it is a corporation and a legal entity.

JURISDICTION AND VENUE

12. This Court has jurisdiction over this appeal under Virginia Code § 10.1-1318(B) (appeal from decision of Air Pollution Control Board) and Virginia Code § 2.2-4026 (appeal from agency case decision).

13. The Sierra Club is a "person" as defined by Virginia Code § 10.1-1300 because it is a corporation and a legal entity.

14. As required by Virginia Code § 10.1-1318(B), the Sierra Club participated, by timely submittal of written comments, in the public comment process related to the final decision of the Board and exhausted all available administrative remedies for review of the Board's decision. A copy of the Sierra Club's written comments are attached hereto as Exhibit A.

15. As required by Virginia Code § 10.1-1318(B), the Sierra Club meets the standard for obtaining judicial review of a case or controversy pursuant to Article III of the United States Constitution, as its members will suffer actual, concrete and particularized invasions

of legally protected interests, which are fairly traceable to the Board's case decision and redressable by a favorable decision of the Court.

16. Sierra Club member Wynne LeGrow, whose affidavit in support of standing is attached hereto as Exhibit B, lives approximately 4.5 miles from the proposed site of the Greensville Station and regularly runs in and around Emporia, Virginia. Because air pollution from the Station will impact the quality of air he breathes in his home and on his regular runs, Dr. LeGrow has a concrete interest in an area proposed to be impacted by the Greensville Station.

17. Sierra Club member Charlene Oba, whose affidavit in support of standing is attached hereto as Exhibit C, lives approximately 1.3 miles from the proposed site of the Buckingham Compressor Station, which is a component of the Atlantic Coast Pipeline and the location of pollutant-emitting activities that must be grouped with the pollutant-emitting activities at the Greensville Station to determine the relevant "source" under 9 VAC 5-80-1605. Because the proposed Buckingham Compressor Station will impact the quality of the air that Ms. Oba breathes—and because the pollutant-emitting activities associated with the Buckingham Compressor Station would, if included in the Greensville Station's permit, be subject to additional procedural and/or substantive requirements—she has a concrete interest in the scope of Permit No. 52525-001.

18. Because the Board issued the permit authorizing the impacts to the concrete interests of Dr. LeGrow and Ms. Oba, the threatened injuries are fairly traceable to the Board's decision to issue Permit No. 52525-001.

19. If the impacts on air quality caused by the Greensville Station or its supporting facilities were prevented or otherwise mitigated by more demanding permit conditions, the

threatened harms to the interests of Dr. LeGrow and Ms. Oba could be redressed in part or in whole.

20. As such, Dr. LeGrow and Ms. Oba would have standing to appeal Permit No. 52525-001 in their individual capacity.

21. The issues raised in this appeal are germane to the Sierra Club's goals of practicing and promoting the responsible use of the Earth's resources and ecosystems and protecting the natural and human environment.

22. Finally, none of the issues raised or relief requested in this appeal require the participation of Dr. LeGrow or Ms. Oba in their individual capacities.

23. The Sierra Club thus has standing to appeal Permit No. 52525-001 on behalf of its members under Article III of the United States Constitution.

24. In the alternative, and distinct from the individual standing of its members, the Sierra Club meets the standard for obtaining judicial review of a case or controversy pursuant to Article III of the United States Constitution in its own right because it is a person aggrieved by an adverse decision before the Board. See Department of Defense v. Federal Labor Relations Authority, 879 F. 2d 1220, 1221–22 (4th Cir. 1989); Oil, Chemical, and Atomic Workers Local Union No. 7-418 v. National Labor Relations Board, 694 F.2d 1289, 1294–95 (D.C. Cir. 1982); Preston v. Heckler, 734 F. 2d 1359, 1363–65 (9th Cir. 1984).

25. The Sierra Club timely filed a Notice of Appeal in accordance with Virginia Code § 2.2-4026 and Rule 2A:2 of the Rules of the Supreme Court of Virginia. The Sierra Club's Notice of Appeal is attached hereto as Exhibit D.

26. Virginia Code § 2.2-4030 entitles any substantially prevailing party to reasonable costs and attorney fees if the Board's position is not substantially justified.

27. Venue in this Circuit is proper under Virginia Code §§ 2.2-4003, 2.2-4026, and 8.01-261(1)(a) because the Sierra Club regularly and systematically conducts its affairs in the City of Richmond.

28. In the alternative, venue in this Court is proper under Virginia Code §§ 2.2-4003, 2.2-4026, and 8.01-261(1)(c) because the case decision on appeal occurred in the City of Richmond.

STATUTORY AND REGULATORY FRAMEWORK

A. The Clean Air Act

29. As amended, the Clean Air Act is comprised of multiple programs designed to improve or maintain air quality throughout the United States, including the Prevention of Significant Deterioration (PSD) program, 42 U.S.C. §§ 7470–7479, and the Hazardous Air Pollutants (HAPs) program, 42 U.S.C. § 7412, both addressed in further detail below.

30. The Act requires each state develop and adopt a state implementation plan (SIP) specifying the means by which it will satisfy the substantive requirements of the Act. See 42 U.S.C. § 7410.

31. If the EPA approves a state's SIP, the state may administer the programs implemented by the approved SIP, including the PSD and HAPs programs.

32. The United States Environmental Protection Agency (EPA) may approve a SIP only if it meets certain minimum criteria set out in the Act and in the EPA's implementing regulations.

B. The Prevention of Significant Deterioration Program

i. Overview of the PSD Program

33. The Prevention of Significant Deterioration (PSD) program is a component of the Clean Air Act's "New Source Review" (NSR) program and is designed "to protect public health

and welfare from any actual or potential adverse effect . . . from air pollution or from exposures to pollutants in other media"—in part by ensuring "that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process." See 42 U.S.C. § 7470.

34. The PSD program prohibits construction of any "major emitting facility" without a valid PSD permit. See 42 U.S.C. § 7475(a).

35. An agency administering a PSD program cannot issue a PSD permit if the applicant demonstrates compliance with several "preconstruction requirements." See 42 U.S.C. § 7475(a). Those preconstruction requirements include, among other things:

    a. that the permitting agency has provided "an opportunity for interested persons . . . to appear and submit written or oral presentations on the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations," 42 U.S.C. § 7475(a)(2);

    b. that "emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any . . . applicable emission standard or standard of performance under th[e] Act," 42 U.S.C. § 7475(a)(3);

    c. that "the proposed facility is subject to the best available control technology for each pollutant subject to regulation" under the PSD program, 42 U.S.C. § 7475(a)(4); and

    d. that the owner or operator of the facility "agrees to conduct such monitoring as may be necessary to determine the effect which emissions from any such facility may have, or is having, on air quality in any area which may be affected by emissions from such source," 42 U.S.C. § 7475(a)(7).

36. Virginia's SIP includes regulations implementing the PSD permitting program, see 9 VAC 5-80-1605 through 9 VAC 5-80-1995, and Virginia is authorized to administer the PSD program according to its SIP. See 52 C.F.R. § 52.2451.

37. Virginia's SIP authorizes the Department of Environmental Quality to issue PSD permits—unless the Board determines by a majority vote to directly consider a proposed permit action. See Virginia Code §§ 10.1-1322(A), 10.1-1322.01(D). If the Board agrees to directly consider a proposed PSD permit action, the Board is authorized to issue the permit. See Virginia Code § 10.1-1322.01(N).

ii. Definition of "Major Stationary Source"

38. Virginia's PSD program prohibits the "construction of any new major stationary source . . . without first obtaining from the board a permit to construct and operate such source," 9 VAC 5-80-1625(A), that incorporates "each applicable emissions limitation under the implementation plan," 9 VAC 5-80-1705(A).

39. Virginia's PSD program defines a "major stationary source" as either:

    a. certain "stationary sources" (including "fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input") that "emit[ ], or ha[ve] the potential to emit, 100 tons per year or more" of any criteria pollutant subject to regulation under the PSD program, 9 VAC 5-80-1615 (definition of "Major stationary source"); or

    b. any other "stationary source that emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant," id.

40. Virginia's PSD program defines a "stationary source" as "any building, structure, facility, or installation that emits or may emit" a criteria pollutant subject to regulation under the PSD program. See 9 VAC 5-80-1615 (definition of "Stationary source").

41. Virginia's PSD program defines a "building, structure, facility, or installation" as "all of the pollutant-emitting activities that belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel." See 9 VAC 5-80-1615 (definition of "Building, structure, facility, or installation").

42. Virginia's PSD program further provides that "[p]ollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same 'Major Group' (i.e., that have the same first two-digit code) as described in the Standard Industrial Classification Manual." See 9 VAC 5-80-1615 (definition of "Building, structure, facility, or installation").

43. Therefore, the relevant source under the PSD program includes "all of the pollutant-emitting activities" that: (1) share the same two-digit Major Group code in the Standard Industrial Classification Manual, (2) are located on one or more contiguous or adjacent properties, (3) are under the control of persons under common control and (4) collectively emit at least one criteria pollutant in amounts exceeding the "major source" thresholds in 9 VAC 5-80-1615's definition of "[m]ajor stationary source."

iii. Best Available Control Technology Requirement

44. Virginia's PSD program requires that every "new major stationary source shall apply the best available control technology for each regulated NSR pollutant that it would have the potential to emit in significant amounts." See 9 VAC 5-80-1705(B).

45. Virginia's PSD program defines the "best available control technology" or "BACT" as "an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant that would be emitted from any proposed major stationary source or major modification that the board, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or 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 such pollutant." See 9 VAC 5-80-1615 (definition of "Best available control technology" or "BACT").

46. Virginia's PSD program also provides: "If the board determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means that achieve equivalent results." See 9 VAC 5-80-1615 (definition of "Best available control technology" or "BACT").

47. This definition of BACT mirrors the definition contained in the EPA's regulations implementing the federal PSD program, see 40 C.F.R. § 52.21(b)(12), and is substantially similar to the congressional definition in the Clean Air Act, see 42 U.S.C. § 7479(3).

a. Top-Down BACT Analysis

48. The Board requires BACT analyses proceed according to the "top down" method propounded by the EPA, further developed by the EPA's Environmental Appeals Board,

and upheld by the federal courts. See, e.g., Sierra Club v. Environmental Protection Agency, 499 F. 3d 653 (7th Cir. 2007).

49. The top-down BACT analysis is a five-step process requiring all available control technologies be first ranked in descending order of control effectiveness. The most stringent control technology is then deemed the control necessary to achieve BACT-level emission limits unless the applicant demonstrates (and the permitting authority determines) that other energy, environmental, economic, or technical considerations justify a conclusion that the most stringent technology is not available in that case. See Cash Creek Generation, 2009 WL 7513857, Petition Nos. IV-2008-1, IV-2008-2, slip op. at 6 (E.P.A. 2009) ("Cash Creek I") (citing Prairie State Generation Company, 13 E.A.D. 1, 17–18 (E.A.B. 2006)).

50. Failing to conduct a complete BACT analysis, including the failure to consider all potentially available control alternatives, is an abuse of the permitting authority's discretion. See Louisville Gas & Electric Co., 2009 WL 7698409, 13 (E.P.A. 2009) (citing Prairie State, 13 E.A.D. at 19; Knauf Fiber Glass, 8 E.A.D. 121, 142 (E.A.B. 1999); Masonite Corp., 5 E.A.D. 551, 568-569 (E.A.B. 1994)).

b. Redefining the Source Doctrine

51. The EPA's Environmental Appeals Board has articulated an exception to the BACT requirement known as the "redefinition of the source" doctrine. Under this doctrine, a permitting authority may (but is not required to) eliminate from the BACT analysis an otherwise available control option that would disrupt the basic business purpose of the proposed facility. In order to exercise this discretion, the permitting authority must first take "a 'hard look' at which design elements are 'inherent' to the applicant's purposes and which design elements could possibly be altered to achieve pollutant reductions" while maintaining the facility's basic business purpose.

52. Generally, a "change[ ] to an applicant's proposed primary fuel" constitutes a "redefinition of the source." La Paloma Energy Center, 16 E.A.D. ___, 2014 WL 1066556, slip op. at 24 (E.A.B. 2014). However, a "partial switch or supplementation of the primary fuel with a different type of fuel that the applicant did not initially propose as a secondary fuel" is not of itself a redefinition of the source. Id. at 25 (emphasis in original).

53. If a permitting authority concludes that a control option is not available because it constitutes a "redefinition of the source," it must "clearly state and provide a rationale for that determination." Cash Creek I, slip op. at 8.

54. While state permitting agencies are "not necessarily required to follow the analytical framework used by EPA [and the EAB] to assess whether an option may be excluded from a BACT analysis on 'redefining the source' grounds,'" the state agency, if "intend[ing] to employ a different approach," must "articulate its intent to do so and provide a statutory foundation for any alternative approach." Cash Creek I, slip op. at 9.

iv. Public Notice Requirements

55. Section 165(a)(2) prohibits the issuance of a PSD permit until the permitting agency provides "the opportunity for interested persons . . . to submit written or oral presentations on the air quality impact of [the proposed] source, alternatives thereto . . . and other appropriate considerations." See 16. U.S.C. § 7475(a)(2). In setting the regulatory floor for the PSD program, EPA regulations clarify that the "other appropriate considerations" mentioned in Section 165(a)(2) include, among other things, "the control technology required" of a source. See 40 C.F.R. § 51.166(q)(2)(v).

56. This requirement includes "an obligation by the permitting authority to consider and respond to such comments." Cash Creek I, slip op. at 18 (citing Prairie State, 13 E.A.D. at 40). See also Home Box Office v. F.C.C., 567 F. 2d 9, 35–36 (D.C. Cir. 1977) ("[T]he

opportunity to comment is meaningless unless the agency responds to significant points raised by the public. A response is also mandated by [Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402 (1971)], which requires a reviewing court to assure itself that all relevant factors have been considered by the agency.") (citing Portland Cement Association v. Ruckelshaus, 486 F. 2d 375, 393–94 (D.C. Cir. 1973); Overton Park, 401 U.S. at 416; Duquesne Light Co v. E.P.A., 522 F. 2d 1186, 1193 (3d Cir. 1975), vacated on other grounds, 427 U.S. 902 (1976)).

v. Other PSD Program Requirements

57. In addition to BACT, Virginia's PSD program requires every major stationary source "meet each applicable emissions limitation under the implementation plan and each applicable emission standard and standard of performance under" the HAPs program. 9 VAC 5-80-1705(A).

58. Other requirements include a pre-construction analysis of potential "impairment to visibility, soils, and vegetation . . . associated with the source," 9 VAC 5-80-1755, and a demonstration of compliance with the "PSD increment" system, which is designed to prevent cumulative impacts to air quality in violation of ambient air quality standards, see 9 VAC 5-80-1715.

C. The Hazardous Air Pollutants Program

59. Section 112 of the Clean Air Act, 42 U.S.C. § 7412, establishes a program to control emissions of hazardous air pollutants (HAPs) known to cause cancer or other serious health problems.

60. Virginia's SIP largely incorporates the federal HAP program by reference. See 9 VAC 5-60-92.

61. Virginia is authorized to administer the HAP program according to its SIP. See 9 VAC 5-60-95.

62. The HAPs program treats sources differently depending on whether they are a "major source" or "area source" of HAPs. An "area source" is defined as "any stationary source of hazardous air pollutants that is not a major source." 42 U.S.C. § 7412(a)(2). A "major source" is defined as "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants." 42 U.S.C. § 7412(a)(1).

63. A source's "potential to emit" is defined as its "maximum capacity . . . to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable." 40 C.F.R. § 63.1 (definition of "Potential to emit").

64. Section 112 requires any major source of HAP emissions be subject to the "maximum degree of reduction in emissions of the hazardous air pollutants . . . that the [EPA], taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources," 42 U.S.C. § 7412(d)(2), but such degree of reduction must be at least as "stringent [as] the emission control that is achieved in practice by the best

controlled similar source." 42 U.S.C. § 7412(d)(3). This standard is known as the "maximum achievable control technology," or "MACT."

65. Formaldehyde (CH_2O) is among the pollutants regulated under the HAP program. See 42 U.S.C. § 7412(b).

D. The Minor Source Review Program

66. The Board's regulations also require a review of new minor sources—sources whose aggregate emissions do not reach the major source thresholds specified in 9 VAC 5-80-1615.

67. Among other requirements, the Board's new minor source review program requires certain minor sources "apply best available control technology for each regulated pollutant for which there would be an uncontrolled emission rate equal to or greater than" certain thresholds specified in 9 VAC 5-80-1105(C). See 9 VAC 5-50-260(B).

68. Unlike PSD permits, cf. 9 VAC 5-80-1625(D), minor new source permits are subject to public notice and comment requirements only when the source either: requires a MACT determination under the HAP program, 9 VAC 5-80-1170(D)(1); also meets the definition of a major source under the NSR program, 9 VAC 5-80-1170(D)(2); would emit more than 100 tons per year of any criteria air pollutant, 9 VAC 5-80-1170(D)(3); has the potential for public interest concerning air quality, as determined exclusively by the Board, 9 VAC 5-80-1170(D)(4); or is subject to certain permit conditions regarding stack height, 9 VAC 5-80-1170(D)(5).

69. Because only permits subject to a "public hearing comment period" are eligible for a request for direct consideration by the Board, see 9 VAC 5-80-25(A), an interested person

may not request direct consideration of a minor new source permit that does not meet any of the categories in 9 VAC 5-80-1170(D).

E. Direct Consideration of Permit Actions by the Board

70. Section 10.1-1322.01 of the Virginia Code provides that "interested persons may request, during the public comment period on [a] permit action, that the Board consider the permit action."

71. If the Board does directly consider the permit action, it "shall, at a regular or special meeting, take final action on the permit." Virginia Code § 10.1-1322.01(N).

72. In deciding on a directly-considered permit action, the Board must consider "(i) the verbal and written comments received during the public comment period made part of the record, (ii) any explanation of comments previously received during the public comment period made at the Board meeting, (iii) the comments and recommendation of the Department, and (iv) the agency files." Virginia Code § 10.1-1322.01(P); 9 VAC 5-80-25(I).

73. Virginia Code § 10.1-1322.01(P) requires the Board "provide in writing a clear and concise statement of the legal basis and justification for the decision reached" on a directly-considered permit action.

74. The Board's own regulations similarly require it "provide in writing a clear and concise statement of the legal basis and justification for the decision reached" on a directly-considered permit action. See 9 VAC 5-80-25(I)

F. Appeal of Permitting Decisions by the Board

75. Section 10.1-1318 of the Virginia Code allows "[a]ny person who has participated, in person or by submittal of written comments, in the public comment process related to a final [permit] decision of the Board . . . and who has exhausted all available administrative

remedies for review of the Board's decision, shall be entitled to judicial review of the Board's decision in accordance with the provisions of the [Virginia] Administrative Process Act (§ 2.2-400 et seq.) if such person meets the standard for obtaining judicial review of a case or controversy pursuant to Article III of the United States Constitution."

76. Section 10.1-1318 clarifies that a person "shall be deemed to meet" the Article III standard "if (i) such person has suffered an actual or imminent injury which is an invasion of a legally protected interested and which is concrete and particularized; (ii) such injury is fairly traceable to the decision of the Board and not the result of the independent action of some third party not before the Court; and (iii) such injury will likely be redressed by a favorable decision by the Court."

G. The Virginia Administrative Process Act

77. The Virginia Administrative Process Act is designed "to supplement present and future basic laws conferring authority on agencies either to make regulations or decide cases as well as to standardize court review thereof." See Virginia Code § 2.2-4000(B).

78. The Virginia Administrative Process Act authorizes "any person affected by and claiming the unlawfulness . . . of a case decision" to seek "direct review thereof by an appropriate and timely court action against the agency." See Virginia Code § 2.2-4026.

79. In an appeal under Virginia Code § 2.2-4026, the appellant must "demonstrate an error of law subject to review by the court." See Virginia Code § 2.2-4027. Such issues of law include:

    (a) accordance with constitutional right, power, privilege, or immunity;

    (b) compliance with statutory authority, jurisdiction limitations, or right as provided in the basic laws as to subject matter, the stated objectives for which regulations may be

made, and the factual showing respecting violations or entitlement in connection with case decisions;

(c) observance of required procedure where any failure therein is not mere harmless error; and

(d) the substantiality of the evidentiary support for findings of fact.

80. In addition to provisions regarding judicial review, the Virginia Administrative Process Act also imposes minimal requirements on agency decisionmaking procedures—including the requirement that agencies inform, briefly and in writing, any party to an informal hearing "of the factual or procedural basis for an adverse decision in any case." See Virginia Code § 2.2-4019.

FACTS

A. The Proposed Greensville County Power Station

81. On November 24, 2014, Dominion submitted an application to the Department requesting a PSD permit for the proposed Greensville County Power Station, a combined-cycle natural gas-fired power plant in Greensville County, Virginia. Dominion submitted an amended PSD permit application on August 26, 2015, and again on February 10, 2016.

82. As stated in the permit application, Dominion intends to both construct and operate the Greensville Station. See Greensville Application at 1-1.

83. As stated in the permit application, the Greensville Station has the potential to emit nitrogen oxides, particulate matter, carbon monoxide, and volatile organic compounds above applicable major source thresholds. See id. at 3-12. As such, the Greensville Station will be a "major stationary source" and each emission units is subject to the requirements of the PSD program for nitrogen oxides, particulate matter, volatile organic compounds, carbon monoxide, sulfur dioxide, sulfuric acid mist, and greenhouse gases. Id. at 4-5.

84. The permit application claims that the Greensville Station has the potential to emit only 15.45 tons per year of hazardous air pollutants and only 6.43 tons per year of formaldehyde. Id. at B-19. As such, Dominion concluded that the Greensville Station was not a major source under the HAPs program. Id. at 4-13.

85. In arriving at the potential to emit calculations for hazardous air pollutants, Dominion relied upon emission factors from the EPA's Compilation of Air Pollutant Emission Factors (also known as the AP-42) for all HAPs except formaldehyde. Instead of the AP-42's formaldehyde emission factor of 7.5×10^{-2}, see Environmental Protection Agency, Compilation of Air Pollutant Emission Factors, Table 1.4-3 (5th ed. 2000), Dominion developed and used its own lower emission factor of 2.2×10^{-4}, purportedly based on information provided by the manufacturer of its natural gas turbines, see Greensville Application at B-19. Dominion did not explain whether this emission factor included the turbines' potential to emit formaldehyde during low or intermediate load operations or during startup, shutdown, malfunctions, or upset events.

86. In the Greensville Application's BACT analysis, Dominion determined that the only available control technologies for abatement of greenhouse gases from natural gas turbines were carbon capture and sequestration (CCS), use of low carbon fuels, and energy efficiency. Id. at 5-12. The Application does not discuss the integration of a solar-powered auxiliary component as an available control technology.

B. The Proposed Atlantic Coast Pipeline

87. As proposed, the Greensville Station will connect to and receive fuel from the proposed Atlantic Coast Pipeline, a project co-owned by Dominion Resources, Inc.; the Duke Energy Corporation; the Piedmont Natural Gas Company; and AGL Resources, Inc.

88. If the Atlantic Coast Pipeline attains regulatory approval, it will be operated by Dominion Transmission, Inc., a subsidiary of Dominion Resources.

89. In filings before the Federal Energy Regulatory Commission (FERC), Dominion acknowledges that various activities associated with the Pipeline will emit air pollutants. See generally Atlantic Coast Pipeline, Resource Report 9 – Air and Noise Quality, FERC Docket No. CP15-554, 4 (September 18, 2016). Those activities include operation of an above-ground compressor station in Buckingham County, Virginia, see id. at 9-15; operation of several above-ground metering and regulating stations, see id. at 9-14; and operations producing fugitive emissions from the above- and below-ground components of the pipeline, see id. at 9-18.

90. However, Dominion concludes in its FERC filings that none of the above- or below-ground components of the Pipeline in Virginia meet the major source thresholds necessitating a PSD or other New Source Review permit. Id. at 9-20.

91. Accordingly, on September 11, 2015, Dominion submitted a minor source permit application for its Buckingham Compressor Station to the Department.

92. Upon information and belief, the Sierra Club alleges that the Department has not yet issued a minor source permit for the Buckingham Compressor Station.

93. Upon information and belief, the Sierra Club alleges that the Department has not determined that the requested minor source permit is subject to public notice requirements under 9 VAC 5-80-1170(D).

94. The Greensville Application did not identify or describe any of the pollutant-emitting activities associated with the Atlantic Coast Pipeline.

C. The Public Notice and Comment Period

95. On or about February 12, 2016, the Department published a notice informing the public of its preliminary determination that the proposal contained in the Greensville Application complied with the requirements of the PSD program and inviting public comments on the proposal. Alongside the public notice, the Department issued a draft PSD permit and a draft Engineering Analysis in support of the preliminary determination of compliance with the requirements of the PSD program.

96. On March 31, 2016, the Sierra Club submitted timely comments on the proposed draft permit and requesting the Board consider the permit directly pursuant to Virginia Code § 10.1-1322.01 and 9 VAC 5-80-25. A copy of the Sierra Club's written comments are attached hereto as Exhibit A.

i. The Sierra Club's Comment Defining the Applicable "Source" for PSD Purposes

97. The Sierra Club's Comment No. 1 stated that any PSD permit for the Greensville Station must also include pollutant-emitting activities associated with the proposed Atlantic Coast Pipeline. See Sierra Club Comments at 4–10. The Sierra Club urged the Department apply the plain language of the operative definitions of "stationary source" and "building, structure, facility, or installation" contained in 9 VAC 5-80-1615. Id. The Sierra Club pointed out that both the Station and the Pipeline entail "pollutant-emitting activities," including various "processes at the Greensville site and at the above-ground pipeline facilities. Importantly, the underground pipeline is itself a 'pollutant-emitting activity' producing methane . . . emissions from component leaks and periodic blowdown activities." See Sierra Club Comments at 5. The Sierra Club then noted that both natural gas transmission pipelines and power plants share the same industrial grouping: SIC Major Group 49. Id. at 6–7. The Sierra Club also pointed out that the pollutant-emitting activities

of the Station and the Pipeline would occur on contiguous properties. Id. at 7. Finally, the Sierra Club pointed out that the two projects would be "under the control of . . . persons under common control," as Dominion Virginia Power and Dominion Transmission are both wholly-owned subsidiaries of Dominion Resources. Id.

ii. The Sierra Club's Comment Identifying Auxiliary Solar as an Available Control Option

98. The Sierra Club's Comment No. 4 argued that installation of solar auxiliary generation was among the "production processes" requiring consideration as an available control technology in the BACT analysis. See Sierra Club Comments at 13–17. As explained in the Comments, auxiliary solar generally uses an array of mirrors to concentrate solar energy and produce steam. Id. at 13–14. This steam then serves as a separate line of input to supply the proposed steam turbine—a component already proposed to accept steam produced from the gas turbines' waste heat. Id. When available, the solar generation eases reliance on fuel combustion, increasing the overall fuel efficiency of the plant and decreasing emissions for all regulated pollutants. Id. at 14. Comment No. 4 identified several combined cycle gas plants that are either currently using this technology or are have announced plans to incorporate it. Id. at 13–14.

99. Comment No. 4 further stated that the EPA's Environmental Appeals Board (EAB) has held that a BACT analysis for a combined cycle gas plant must include solar auxiliary components as a potential control option. Id. at 15 (citing La Paloma Energy Center, 16 E.A.D. ___, 2014 WL 1066556, PSD Appeal No. 13-10 (E.A.B. 2014)). While the EAB has not yet remanded a permit for failing to do so, this is only because the Board has made express findings that site-specific, logistical difficulties at the particular facilities under review would have frustrated integration of a solar component. See Sierra Club Comments at 15–16. Comment No. 4 discussed those logistical difficulties and pointed to facts in the

administrative record showing not only that those barriers were absent at the Greensville site, but that the proposed site was uniquely qualified to host a solar-augmented fossil plant according to specifications developed by the Department of Energy's National Renewable Energy Laboratory. Id. at 16.

100. Finally, Comment No. 4 pointed out that nothing in the record supported a finding that addition of an auxiliary solar component would "frustrate the 'basic business purpose' motivating" the Greensville Station proposal. Id. at 17. The Sierra Club noted that the EPA's Environmental Appeals Board has expressly recognized that "construction of a solar-gas hybrid is entirely consistent with the overarching business purpose of providing 'reliable, baseload' power." Id. (quoting City of Palmdale, 15 E.A.D. 700, 2012 WL 4320533 (E.A.B. 2012)).

iii. The Sierra Club's Comments on Dominion's Formaldehyde Emission Factor

101. The Sierra Club also submitted a comment asserting that the Board could not issue a PSD permit until it conducted additional analysis to determine whether the Greensville Station would be a major source of hazardous air pollutant emissions. See Sierra Club Comments at 45–47.

102. This comment first noted that Dominion's formaldehyde emission factor was not only significantly lower than the factor contained in the EPA's AP-42, but was also significantly lower than those documented in a recent independent analysis of formaldehyde emissions from natural gas-fired turbines. Id. at 46 (citing Glenn C. England, PM and Hazardous Air Pollutant Emission Factors For Gas-Fired Combustion Turbines (July 17, 2014)).

103. The comment also pointed out that "there is no indication that [Dominion's] emission factor includes emissions during startups, shutdowns, malfunctions, and upset conditions—"all times when, according to EPA's AP-42, formaldehyde emissions are highest." See

Sierra Club Comments at 47 (citing Environmental Protection Agency, Compilation of Air Pollutant Emission Factors, 3.1-5 (5th ed. 2000) ("For natural gas turbines, formaldehyde accounts for about two thirds of the total HAP emissions," which "increase with reduced operating loads.")). Because all "emissions during startups, shutdowns, malfunctions, and upset conditions must be considered in determining a facility's potential to emit hazardous air pollutants," Sierra Club Comments at 47 (citing Hu Honua Bioenergy, Petition No. IX-2011-1, 2014 WL 4292227, *17 (E.P.A. 2011)), the Sierra Club argued that the Department has yet to determine the turbines' "absolute 'maximum capacity' to emit formaldehyde under every conceivable scenario allowed by their 'physical and operational design,'" Sierra Club Comments at 47 (quoting 9 VAC 5-80-1410).

D. The Department's Response to Comments

104. On or about May 31, 2016, the Department issued a revised draft PSD permit, a revised engineering analysis, and a document responding to public comments (Response to Comments).

i. The Department's Source Aggregation Analysis

105. The revised permit materials maintained that the relevant "source" for PSD purposes did not include the Atlantic Coast Pipeline. See Response to Comments at 6.

106. The Department's response did not dispute that the above- and below-ground components of the Atlantic Coast Pipeline would constitute pollutant-emitting activities; that the Greensville Station and the Atlantic Coast Pipeline would belong to the same Major Group under the Standard Industrial Classification Manual; or that the Greensville Station and the Atlantic Coast Pipeline would be operated under the control of persons under common control.

107. The Department did, however, argue that the Greensville Station and the Atlantic Coast Pipeline were not "contiguous or adjacent." Id. Despite acknowledging "a connection between the [ACP] and the Greensville facility," the Department claimed that the two projects "are not contiguous because the pollutant emitting activities are not on physically bordering properties." Id. It provided no support or other basis for this statement.

108. The Department also argued that the pollutant-emitting activities could not be aggregated because they do not "meet the common sense notion of a plant nor do they fit within the ordinary meaning of 'building,' 'structure,' 'facility,' or 'installation.'" Id. In support of this argument, the Department cited to "Alabama v. Costle [sic] and the 1980 preamble to the resulting PSD regulations," id.—presumably referring to Alabama Power Co. v. Costle, 636 F. 2d 323 (D.C. Cir. 1979) and the EPA's preamble to its final rule, Requirements for Preparation, Adoption, and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans, 45 Fed. Reg. 52676 (August 7, 1980).

ii. The Department's Revised BACT Analysis

109. In its revised permitting materials, the Department articulated, for the first time, its position that requiring the installation of auxiliary solar generation would violate the "redefinition of the source" exception to the BACT requirement. See Response to Comments at 7.

110. The Department's response did not expressly define the "basic business purpose" of the Greensville Station, but did say that the Station "must be able to respond to changing demands for electricity at the time it occurs." Id. It then explained that "[s]upplementation of power production to meet high energy demands must be available at the time needed and does not serve its purpose if its availability is limited." Id. The Department did not explain how integrating a supplemental solar component into the already-proposed fossil-fueled components would hinder the facility's ability to meet high-energy demands.

111. The Department's response also concluded that the integration of solar generation was inappropriate because it would "require[ ] different engineering and equipment than a combustion turbine." See Response to Comments at 7.

112. Finally, the Department inaccurately attributed to the Sierra Club the position that "solar production is only 'likely to coincide with optimal solar generation conditions.'" See Response to Comments at 7. It did not explain the significance of this position, but it appears to arise from a misreading of the Sierra Club's actual comment that "times of high demand within Dominion's summer-peaking service area are likely to coincide with optimal solar generation conditions," see Sierra Club Comments at 21—a statement gleaned from Dominion's own testimony in a solar-related proceeding before the State Corporation Commission, see id. (citing Direct Testimony of J. Scott Gaskill, Application of Virginia Electric and Power Company for approval and certification of the proposed Remington Solar Facility, State Corporation Commission Case No. PUE-2015-00006 (January 20, 2015) (testifying that proposed solar facility will "provide customer energy benefits primarily during on-peak hours").

iii. The Department's Response to Comments on Dominion's Formaldehyde Emission Factor

113. In its revised permitting materials, the Department acknowledged that the Greensville Station would be subject to MACT limitations if it were a major source. See Response to Comments at 12. However, it stated that because "HAPs are not regulated NSR pollutants unless part of a larger pollutant grouping (e.g., formaldehyde is a part of VOC)," the "specific emission rate of formaldehyde is not a subject of this permit action." Id.

114. The Department did not address the requirement in 9 VAC 5-80-1705(A) that every major source subject to the PSD program "meet each applicable emissions limitation under the

implementation plan and each applicable emission standard and standard of performance under 40 CFR Parts 60, 61, and 63," which contain the HAPs program. Nor did it address the requirement in 42 U.S.C. § 7475(a)(3) that a PSD permit issue only upon a determination that "emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any . . . applicable emission standard or standard of performance under th[e] Act."

115. Nonetheless, the Department stated, "for purposes of discussion only," that "Dominion has submitted an emission rate for formaldehyde from the vendor that is applicable to this boiler [sic]" and that the "Department places a higher expected level of accuracy on such numbers." See Response to Comments at 12.

116. However, the Department provided no additional information about this emission factor and did not discuss whether it included emissions from low and intermediate load operations or operations during startup, shutdown, maintenance, and upset events.

117. The Department did revise the draft permit to require "a performance test for formaldehyde" in order "to the permit to verify the applicant's emission factor." Id. As revised, Condition No. 85 of the draft permit required "[a]n initial performance test . . . from each combustion turbine and associated duct burner," but only under two operating scenarios: "full load with the duct burners off" and "full load with the duct burners on." The permit does not require performance testing at low or intermediate load or during startup, shutdown, or maintenance events. Furthermore, the performance testing requirement is labeled as enforceable only by the Board.

E. Direct Consideration by the Board

118. On or about May 10, 2016, the Board granted the Sierra Club's request for direct consideration of the permit action and placed the matter on the agenda for the Board's June 17, 2016 meeting.

119. The Department appeared by counsel at the Board's June 17, 2016 meeting and provided a summary of public comments and a recommendation that the Board issue the permit as revised. The Board presented a PowerPoint presentation explaining the permitting process and the legal requirements of the PSD program.

120. The Sierra Club appeared by counsel at the Board's June 17, 2016 meeting and responded orally to the Department's recommendation and its summary of the public comments.

121. The Board voted to issue Permit No. 52525-001, with one member abstaining.

F. The Board's Written Decision

122. On the afternoon of June 17, 2016, counsel for the Sierra Club submitted a request under the Virginia Freedom of Information Act (FOIA), Virginia Code §§ 2.2-3700 through 2.2-3714, requesting certain "documents related to the Air Pollution Control Board's direct consideration of the PSD permit for the proposed Greensville County Power Station at the Air Pollution Control Board's June 17, 2016 meeting"—including "any written statement of 'the legal basis and justification for the decision reached,' pursuant to Virginia Code § 10.1-1322.01(P) and/or 9 VAC 5-80-25(I)."

123. On June 24, 2016, the Department and/or the Board provided twenty-two records in response to the June 17 FOIA request. Among these records was a copy of the PowerPoint presentation that the Department provided at the Board's June 17, 2016 meeting.

124. Because counsel for the Sierra Club was unable to determine which, if any, of the records provided in response to the June 17 FOIA request represented the "written statement of 'the legal basis and justification for the decision reached,' pursuant to Virginia Code § 10.1-1322.01(P) and/or 9 VAC 5-80-25(I)," counsel for the Sierra Club contacted Ms. Cindy Berndt, then listed on the Department's website as the appropriate contact for inquiries related to "Regulatory Affairs / Citizen Boards."

125. On July 6, 2016, Ms. Berndt advised counsel for the Sierra Club that the Board considered the final two slides of the Department's PowerPoint presentation to constitute the "written decision" required by Virginia Code § 10.1-1322.01(P) and 9 VAC 5-80-25(I).

126. The first of these two slides, titled "Recommendation," states in its entirety:

> DEQ staff has prepared the Dominion Greensville Power Station PSD permit in accordance with all applicable statutes, regulations and agency practices; the limits and conditions in the permit have been established to protect air quality. The proposed permit is based on the agency permit files, comments received during the public comment period and any explanation of comments previously received during the public comment period made at the Board meeting.

127. The second of these two slides, also titled "Recommendation," states in its entirety:

> Staff recommends that the Board find that
> The permit has been prepared in conformance with all applicable statutes, regulations and agency practices;
> The limits and conditions in the permit are protective of air quality;
> All public comments relevant to the permit have been considered
> Staff recommends the Board approve the permit and conditions as presented today
> Staff recommends the Board authorize the Director to issue the permit as approved by the Board.

G. The Sierra Club's Notice of Appeal

128. On July 18, 2016, the Sierra Club filed a Notice of Appeal with the Board by hand-delivery. The Sierra Club also sent copies of the Notice of Appeal by certified mail to the

Department, to the Office of the Attorney General of Virginia, to Dominion, to and Dominion's registered agent. A copy of the Notice of Appeal is attached as Exhibit D.

ASSIGNMENTS OF ERROR

FIRST ASSIGNMENT OF ERROR

Violation of Virginia Code § 10.1-1322.01(P) and 9 VAC 5-80-25(I)

129. The Sierra Club incorporates by reference all allegations contained above in paragraphs 1 through 128.

130. The Board erred by failing to "provide in writing a clear and concise statement of the legal basis and justification for the decision reached" in its direct consideration of Permit No. 52525-001.

131. Virginia Code § 10.1-1322.01(P) requires the Board "provide in writing a clear and concise statement of the legal basis and justification for the decision reached" on a directly-considered permit action.

132. 9 VAC 5-80-25(I) similarly requires the Board "provide in writing a clear and concise statement of the legal basis and justification for the decision reached" on a directly-considered permit action.

133. The Board's written statement is only a sequence of conclusory statements parroting the statutory and regulatory requirements for issuance of a permit. It does not explain the Board's reasoning in response to any of the issues raised by the Sierra Club or by other commenters.

134. The Board thus failed to "compl[y] with statutory authority" and failed to "observ[e] . . . required procedure." See Virginia Code § 2.2-4027.

135. The Board's failure to "observ[e] . . . required procedure" was not harmless as a matter of law. See Harrison v. Ocean View Fishing Pier, LLC, 50 Va. App. 556, 574–76 (Va. Ct. App. 2007). In the alternative, the Board's failure to "observ[e] . . . required procedure" was not harmless because it frustrates appellate review by this Court of its factual findings and legal conclusions.

SECOND ASSIGNMENT OF ERROR

Violation of Virginia Code § 2.2-4019

136. The Sierra Club incorporates by reference all allegations contained above in paragraphs 1 through 135.

137. The Board erred by failing to inform the Sierra Club, "briefly and in writing, of the factual or procedural basis for an adverse decision" in its direct consideration of Permit No. 52525-001.

138. Virginia Code § 2.2-4019 requires the Board "inform[ ], briefly and in writing," any "parties to [a] case" of "the factual or procedural basis for an adverse decision."

139. The Board's statement is only a series of conclusory statements parroting the statutory and regulatory requirements for issuance of the permit. It does not explain the Board's reasoning in response to any of the issues raised by the Sierra Club or by other commenters.

140. The Board thus failed to "compl[y] with statutory authority" and failed to "observ[e] . . . required procedure." See Virginia Code § 2.2-4027.

141. The Board's failure to "observ[e] . . . required procedure" was not harmless as a matter of law. See Harrison v. Ocean View Fishing Pier, LLC, 50 Va. App. 556, 574–76 (Va. Ct. App. 2007). In the alternative, the Board's failure to "observ[e] . . . required procedure"

was not harmless because it frustrates appellate review by this Court of its factual findings and legal conclusions.

THIRD ASSIGNMENT OF ERROR

Failure to Properly Define the Applicable "Source"

142. The Sierra Club incorporates by reference all allegations contained above in paragraphs 1 through 141.

143. The Board erred by failing to properly define the "source" of air pollution subject to the PSD program, by ignoring the pollutant-emitting activities of the Atlantic Coast Pipeline in its review of Permit No. 52525-001, by refusing to conduct a BACT analysis for those pollutant-emitting activities, and by failing to incorporate applicable emission limitations on those pollutant-emitting activities into Permit No. 52525-001.

144. The State Air Pollution Control Law requires that all Board permits be issued only "[p]ursuant to regulations adopted by the Board." See Virginia Code § 10.1-1322(A).

145. The Board's regulations implementing the PSD program require that the operator of any "major stationary source" obtain a PSD permit before construction.

146. Virginia's PSD program defines a "major stationary source" as including certain "stationary sources" (including any "fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input") that "emit[ ], or ha[ve] the potential to emit, 100 tons per year or more" of any criteria pollutant subject to regulation under the PSD program. See 9 VAC 5-80-1615 (definition of "Major stationary source"). Alternatively, the program defines a "major stationary source" as "any stationary source that emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant." Id.

147. Virginia's PSD program defines a "stationary source" as "any building, structure, facility, or installation that emits or may emit" a criteria pollutant subject to regulation under the PSD program. See 9 VAC 5-80-1615 (definition of "Stationary source").

148. Virginia's PSD program defines a "building, structure, facility, or installation" as "all of the pollutant-emitting activities that belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel." See 9 VAC 5-80-1615 (definition of "Building, structure, facility, or installation").

149. Virginia's PSD program further provides that "[p]ollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same 'Major Group' (i.e., that have the same first two-digit code) as described in the Standard Industrial Classification Manual." See 9 VAC 5-80-1615 (definition of "Building, structure, facility, or installation").

150. As proposed, the Greensville Station and the Atlantic Coast Pipeline involve "pollutant-emitting activities." The pollutant-emitting activities associated with the Greensville Station are those described in the Greensville Application. The pollutant-emitting activities of the Atlantic Coast Pipeline include emissions from machinery at above-ground compressor stations, like the proposed Buckingham Compressor Station, and metering and regulating stations. The pollutant-emitting activities of the Atlantic Coast Pipeline also include emissions from underground components, including fugitive greenhouse gas emissions from the pipeline itself and from periodic blowdown, purging, or other maintenance activities along the pipeline.

151. As proposed, the pollutant-emitting activities associated with the Greensville Station and the Atlantic Coast Pipeline will all belong to Major Group 49 as described in the Standard Industrial Classification Manual and are thus "part of the same industrial grouping" under 9 VAC 5-80-1615.

152. As proposed, the pollutant-emitting activities associated with the Greensville Station and the Atlantic Coast Pipeline will be conducted on "one or more contiguous or adjacent properties."

153. As proposed, the pollutant-emitting activities associated with the Greensville Station and the Atlantic Coast Pipeline will be "under the control of . . . persons under common control."

154. Therefore, as proposed, the Greensville Station and the Atlantic Coast Pipeline are a single "facility or installation" under 9 VAC 5-80-1615.

155. As proposed, this "facility or installation" will or may emit pollutants subject to regulation under the PSD program and is thus a "stationary source" under 9 VAC 5-80-1615.

156. As proposed, this "stationary source" is a "major stationary source" under 9 VAC 5-80-1615 because its potential to emit criteria pollutants exceeds the applicable major source threshold.

157. Therefore, by excluding the pollutant-emitting activities associated with the Atlantic Coast Pipeline from the applicable "source" under 9 VAC 5-80-1615, the Board failed to comply with statutory authority and with the required factual showing in connection with its case decision directly considering Permit No. 52525-001.

158. Because, as discussed above in the First and Second Assignments of Error, the Board's written decision fails to explain its reasoning, the Sierra Club is unable to identify any additional errors in the Board's legal analysis and/or its factual findings.

159. To the extent the Board's decision on Permit No. 52525-001 was premised on a factual finding that the pollutant-emitting activities associated with the Greensville Station and the Atlantic Coast Pipeline will not be conducted on "contiguous . . . properties," such a finding was without substantial evidence.

160. To the extent the Board's decision on Permit No. 52525-001 relied on language in a 1980 preamble to federal regulations encoded at 40 C.F.R. Parts 51, 52, and 124, the Board committed an error of law and acted outside the scope of its legal authority. Virginia law provides that "the preamble to a statute is no part of it and cannot enlarge or confer powers or control the words of the act unless they are doubtful or ambiguous," Renkey v. Arlington County, 272 Va. 369, 373 (Va. 2006), and that a regulatory preamble cannot "change the regulation." Bender v. Marine Resources Commission, No. 1479-01-1 (Va. Ct. App. 2001). Alternatively, to the extent federal law governs construction of the 1980 preamble, federal law similarly holds that "[w]here the enacting or operative parts of the statute are unambiguous, the meaning of the statute cannot be controlled by the language in the preamble" and that this principle also "govern[s] interpretation of the preamble of a regulation." Wyoming Outdoor Council v. U.S. Forest Service, 165 F. 3d 43, 53 (D.C. Cir. 1999) (quoting Association of American Railroads v. Costle, 562 F. 2d 1310, 1316 (D.C. Cir. 1977)). Alternatively, to the extent consideration of the preamble was appropriate, the Board erred in ignoring the preamble's clear statement that "pollutant-emitting activities will . . . be considered part of the same 'plant' if they belong to the same 'major group' as described in the Standard Industrial Classification Manual.'" See 45 Fed. Reg. at 52680.

FOURTH ASSIGNMENT OF ERROR

Failure to Conduct Proper BACT Analysis

161. The Sierra Club incorporates by reference all allegations contained above in paragraphs 1 through 160.

162. The Board erred by issuing Permit No. 52525-001 without requiring a valid BACT analysis that considered auxiliary solar generation as an available control technology.

163. The State Air Pollution Control Law requires that all Board permits be issued only "[p]ursuant to regulations adopted by the Board." See Virginia Code § 10.1-1322(A).

164. Virginia's PSD program requires that every "new major stationary source shall apply the best available control technology for each regulated NSR pollutant that it would have the potential to emit in significant amounts." See 9 VAC 5-80-1705(B).

165. Virginia's PSD program defines the "best available control technology" or "BACT" as "an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant that would be emitted from any proposed major stationary source or major modification that the board, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or 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 such pollutant." See 9 VAC 5-80-1615 (definition of "Best available control technology" or "BACT").

166. Supplemental, auxiliary solar generation is a "production process" and an "available method, system, and technique" capable of reducing emissions of greenhouse gases, nitrogen oxides, carbon monoxide, particulate matter, volatile organic compounds, sulfur

dioxide, and sulfuric acid mist from a combined-cycle natural gas-fired power plant. See La Paloma Energy Center, 16 E.A.D. ___, 2014 WL 1066556 (E.A.B. 2014).

167. Virginia has expressly adopted the EPA's top-down BACT analysis framework. See Virginia Air Pollution Control Board, Air Permitting Guidelines – New and Modified PSD Sources, Doc. ID APG-309, 4-1 (November 2, 2015). Furthermore, Virginia has not indicated or articulated an intent to employ a different approach to "assess[ing] whether an option may be excluded from a BACT analysis on 'redefining the source' grounds." Cf. Cash Creek I, slip op. at 9. As such, a BACT analysis under Virginia's PSD program is governed by the analytical framework used in the federal PSD program. Id.

168. Under this framework, a "partial switch or supplementation of the primary fuel with a different type of fuel that the applicant did not initially propose as a secondary fuel" is not of itself a redefinition of the source. Id. at 25 (emphasis in original). Accordingly, a BACT analysis for a combined-cycle natural gas-fired plant must include auxiliary solar generation as an available control technology unless that technology can be eliminated based on "site-specific constraints" or based on a finding that the technology would frustrate the facility's "basic business purpose." Id. at 32.

169. Failing to conduct a complete BACT analysis, including the failure to consider all potentially available control alternatives, is an abuse of the permitting authority's discretion. See Louisville Gas & Electric Co., 2009 WL 7698409, 13 (E.P.A. 2009) (citing Prairie State, 13 E.A.D. at 19; Knauf Fiber Glass, 8 E.A.D. 121, 142 (E.A.B. 1999); Masonite Corp., 5 E.A.D. 551, 568-569 (E.A.B. 1994)).

170. The Board did not discuss any "site-specific constraints" rendering auxiliary solar generation an unavailable control technology, nor did it discuss how auxiliary solar would

frustrate the basic business purpose of the Greensville Station. As such, the Board committed an error of law by improperly eliminating auxiliary solar generation from its BACT analysis and by failing to consider all available control alternatives.

171. Because, as discussed above in the First and Second Assignments of Error, the Board's written decision fails to explain its reasoning, the Sierra Club is unable to identify any additional errors in the Board's legal analysis and/or its factual findings.

172. To the extent the Board's decision relied upon a factual finding that integration of auxiliary solar would frustrate the basic business purpose of the Greensville Station, such a finding was unsupported by substantial evidence. Nothing in the record explains how installation of a supplemental, auxiliary solar component would hinder the Greensville Station's ability to operate as an intermediate/base load plant or to provide 1,600 megawatts of dispatchable power. See also City of Palmdale, 15 E.A.D. 700, 2012 WL 4320533 (E.A.B. 2012) (expressly recognizing that integration of auxiliary solar is consistent with the overarching business purpose of providing "reliable, baseload" power).

173. To the extent the Board's decision relied upon the Department's conclusion that "[s]olar generation requires different engineering and equipment than a combustion turbine," see Response to Comments at 7, the Board committed an error of law. The redefinition of the source doctrine "does not preclude a permitting authority from considering options that would change aspects (either minor or significant) of an applicant's proposed design in order to achieve pollutant reductions." See Environmental Protection Agency, PSD and Title V Permitting Guidance for Greenhouse Gases, 26 (2011) (emphasis added). See also La Paloma, 2014 WL 1066556 (concluding that permitting authority failed to establish solar auxiliary would "redefine the source" merely by stating that "requiring [a solar

component] in combination with fossil-fuel combustion would represent the merging of distinct and different fuel types").

FIFTH ASSIGNMENT OF ERROR

Failure to Ensure Source Met All Applicable Emission Limitations on HAPs

174. The Sierra Club incorporates by reference all allegations contained above in paragraphs 1 through 173.

175. The Board erred by issuing Permit No. 52525-001 without ensuring that the Greensville Station was not a major source of formaldehyde emissions under the HAP program and thus subject to the MACT requirement.

176. The State Air Pollution Control Law requires that all Board permits be issued only "[p]ursuant to regulations adopted by the Board." See Virginia Code § 10.1-1322(A).

177. Virginia's PSD program requires every major stationary source "meet each applicable emissions limitation under the implementation plan and each applicable emission standard and standard of performance under" the HAPs program. 9 VAC 5-80-1705(A).

178. The HAPs program requires that any new "major source" of hazardous air pollutants—i.e., any "stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant," 42 U.S.C. § 7412(a)(1)—be subject to an emission limitation that reflects MACT—i.e., the "maximum degree of reduction in emissions of the hazardous air pollutants . . . that the [EPA], taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new . . . sources," 42 U.S.C. § 7412(d)(2).

179. The Board's determination that the Greensville Station had the potential to emit only 6.43 tons of formaldehyde per year was unsupported by the record and without substantial evidence. The record contains no indication that the emission factor relied upon in calculating annual formaldehyde emissions of 6.5 tons included emissions during low or intermediate load operations or during startup, shutdown, malfunctions, or upset events. Without this information, the Board lacked substantial evidence to determine the Greensville Station's "maximum capacity . . . to emit a pollutant under its physical and operational design" and, consequently, its potential to emit for purposes of the HAP program. See Hu Honua Bioenergy, Petition No. IX-2011-1, 2014 WL 4292227, *17 (E.P.A. 2011) (emissions during startups, shutdowns, malfunctions, and upset conditions must be considered in determining a facility's potential to emit hazardous air pollutants). See also Cash Creek Generation, Petition No. IV-2010-4, 2012 WL 11850445, *27 (E.P.A. 2012) ("Cash Creek II") (remanding permit where permitting authority "failed to adequately consider several relevant factors" in "apply[ing] the emission factors" used to estimate emissions); id. at *30 (remanding permit where permitting authority "failed to provide a reasoned explanation in support of its selection of" a particular emission factor); Maryland Department of the Environment v. Shipley's Choice Homeowners Association, 2016 WL 860258, *8 n.6 (Md. Ct. Spec. App. 2016) (emission factor used in determining potential to emit must be supported by substantial evidence).

180. Furthermore, the Board's failure to respond to the Sierra Club's comments concerning the inadequacy of Dominion's emission factor was arbitrary and capricious. The Sierra Club raised these concerns in its written comments on the initial draft permit and again before the Board at its June 17, 2016 meeting. Neither the Department, nor the Board, nor Dominion responded to these specific concerns or provided any documentation

corroborating the emission factor relied upon by Dominion. The Department's inclusion of Condition No. 85 into Permit No. 52525-001, requiring initial performance testing "to determine compliance with the emission limits" on formaldehyde at full load, did not adequately respond to the Sierra Club's comment, which specifically questioned whether the emission factor "include[d] emissions during startups, shutdowns, malfunctions, and upset conditions—all times when formaldehyde emissions are highest." See Sierra Club Comments at 47. The Board's failure to respond to the Sierra Club's comment regarding formaldehyde emissions also constitutes a failure to consider all relevant factors in making its decision, rendering its decision arbitrary and capricious. See Home Box Office v. F.C.C., 567 F. 2d 9, 35–36 (D.C. Cir. 1977). See also Cash Creek II, 2012 WL 11850445 at *15 (remanding permit where permitting authority's response to comments "did not adequately respond to [commenters'] concern that . . . emissions other than those [considered in potential to emit analysis] would cause the facility's [potential to emit] combined HAPs to exceed the major source threshold"). The Board's failure to respond to the Sierra Club's comment regarding formaldehyde emissions also violates Virginia Code § 10.1-1322.01(P) and 9 VAC 5-80-25(I)—both of which require the Board consider "the verbal and written comments received during the public comment period" in deciding on a proposed permit.

181. Because, as discussed above in the First and Second Assignments of Error, the Board's written decision fails to explain its reasoning, the Sierra Club is unable to identify any additional errors in the Board's legal analysis and/or its factual findings.

RELIEF REQUESTED

WHEREFORE, the Sierra Club respectfully requests that this Court enter an order:

(a) declaring that the State Air Pollution Control Board issued Permit No. 52525-001 in violation of its authority under the State Air Pollution Control Law and the Virginia Administrative Process Act;

(b) declaring that the State Air Pollution Control Board issued Permit No. 52525-001 without substantial evidentiary support for the required findings of fact;

(c) declaring that the State Air Pollution Control Board issued Permit No. 52525-001 in violation of required procedure and that such procedural violations were not harmless;

(d) vacating, voiding, nullifying, invalidating, and/or revoking Permit No. 52525-001;

(e) remanding this matter to the Department of Environmental Quality and the State Air Pollution Control Board until such time as the Board or the Department resolves and corrects the statutory and procedural errors found by this Court;

(f) enjoining any further construction of the Greensville Station until such time as the Board issues a valid PSD permit;

(g) awarding the Virginia Chapter of the Sierra Club its costs, including reasonable attorneys fees, expended in this matter; and

(h) granting such other relief as the Court may deem appropriate.

Respectfully submitted,

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