

REPORT OF THE ENVIRONMENTAL REGULATION COMMITTEE

The following is the report of the Environmental Regulation Committee, the successor to the Climate Change and Emissions Committee. In this report, the Committee summarizes key developments in Federal and State environmental regulation from June 2011 to June 2012 that may be of particular interest to practitioners.*

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* Special thanks are due to the following Committee members for their efforts in contributing to the Committee Report: Christian D. McMurray, Kevin M. Gallagher, Diana Jeschke, Matthew T. Eggerding, Lisa M. Purdy, Blake Urban, Steven Shparber, and Krystle Billings.

I. OIL AND GAS SECTOR

A. NSPS/NESHAPS

Overview. On April 17, 2012, the Environmental Protection Agency (EPA) promulgated a final rule significantly revising its New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) for facilities in the oil and natural gas sector.¹ Proposed in August 2011, the rule limits emissions of volatile organic compounds (VOCs), sulfur dioxide (SO₂), and hazardous air pollutants (HAPs) from a variety of equipment located at natural gas processing plants, oil and natural gas production facilities (including certain hydraulically fractured wells), and natural gas transmission compressor stations.² The rule does not apply to equipment located downstream of transmission pipelines.³

Statutory Authority and Litigation History. The EPA's action is authorized by sections 111 and 112 of the Clean Air Act (CAA), which respectively require the establishment of NSPS for non-hazardous pollutants and NESHAP for hazardous pollutants.⁴ The CAA also requires that the EPA review and consider revisions to the NSPS and NESHAP standards at least once every eight years.⁵ In early 2009, two environmental non-governmental organizations (NGOs) brought suit to compel the EPA to adhere to this statutory timetable.⁶ As a result of the litigation, the timing of this rule was dictated by a consent decree entered by the United States District Court for the District of Columbia in February 2010.⁷

Key Elements. Many of the sources regulated under the new rule have not been previously subject to nationwide emission standards.⁸ Major requirements include:

- With some exceptions, newly fractured or refractured natural gas wells must use “green completion” practices to control VOC emissions after January 1, 2015.⁹
- New or modified storage vessels that exceed a certain VOC emissions threshold must reduce emissions by 95% within one year of the effective date of the rule.¹⁰
- New or modified centrifugal compressors that use wet seals must achieve a 95% reduction in VOC emissions. For reciprocating

1. Final Rule, Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49,490 (Aug. 16, 2012) (to be codified at 40 C.F.R. pts. 60 and 63).

2. *Id.* at 49,543, 49,501-02 (applicability of NSPS and summary of NESHAP amendments).

3. *See generally id.* at 49,497 (describing scope of NSPS).

4. 42 U.S.C. §§ 7411, 7412 (2012).

5. 42 U.S.C. §§ 7411(b)(1)(B), 7412(d)(6).

6. 77 Fed. Reg. 49,490, at 49,496.

7. *Id.*

8. *Id.*

9. *Id.*

10. *Id.* at 49,498.

compressors, the rule requires replacement of rod packing every 26,000 hours of operation or every thirty-six months.¹¹

- New or modified pneumatic controllers at natural gas processing plants must use zero-VOC technologies. Pneumatic controllers located at facilities upstream of the transmission pipeline must use “low bleed” designs after a 1-year phase in period.¹²
- Natural gas processing units must implement more stringent leak detection and repair (LDAR) measures to control VOC emissions and HAPs.¹³
- Existing SO₂ emission standards for “sweetening” units at natural gas processing plants were slightly strengthened.¹⁴
- Standards for HAP emissions from new and existing small glycol dehydrators, which were previously unregulated under the NESHAP.¹⁵

The rule will take effect on October 15, 2012, sixty days after its publication in the *Federal Register*.¹⁶ Existing facilities that become subject to the new NESHAP requirements will have up to three years to come into compliance, with the potential for a one-year extension.¹⁷ Oil and gas facilities that are newly built, modified, or reconstructed after August 23, 2011 will be required to comply with the NSPS for SO₂ and VOC emissions at varying dates.¹⁸ At the time of this writing, the EPA was reported to be considering a supplemental rulemaking to clarify key terms and requirements of this rule.¹⁹

Costs and Benefits. Although the EPA estimates the annual gross costs of compliance with the new NSPS will reach \$170 million (in 2008 dollars), the Agency claims that the standards will actually have a *negative* cost after taking into account the incremental recovery of saleable product that will result from “green completion” and other emission control devices.²⁰ The EPA anticipates that the final rule will reduce annual emissions of VOCs by 190,000 to 290,000 tons, and reduce annual emissions of HAPs by 12,000 to 19,000 tons.²¹ In addition, the standards will reduce annual emissions of methane – a potent greenhouse gas – by approximately 19 million metric tons CO₂-equivalent (CO₂e).²²

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*

15. *Id.* at 49,502.

16. *Id.* at 49,490.

17. *Id.* at 49,502. Section 112 of the Clean Air Act grants the EPA and the States general discretionary authority to grant one-year extensions. 42 U.S.C. § 7412(i)(3)(B) (2012).

18. *Id.* at 49,497, tbl.3.

19. Bridget DiCosmo, *Facing Concerns, EPA Weighs Late Clarifications to Novel Drilling Air Rules*, INSIDE EPA (June 22, 2012), available at 2012 WLNR 12953975.

20. 77 Fed. Reg. 49,490, at 49,534.

21. *Id.* at 49,533-34 (the larger reduction numbers result “if voluntary action is not deducted from the NSPS baseline”).

22. *Id.* at 49,535.

B. Hydraulic Fracturing

1. EPA Guidance

On May 4, 2012, the EPA released draft guidance for permitting Class II wells using diesel fuels in oil and gas hydraulic fracturing (“fracking”) under the Safe Drinking Water Act (SDWA) Underground Injection Control (UIC) Program where the EPA is the permitting authority.²³ According to the EPA, the draft guidance is intended to explain existing requirements in order to provide regulatory certainty, “improve compliance with the SDWA requirements and strengthen environmental protections”²⁴ The draft guidance discusses how companies can comply with existing law and clarifies that while the SDWA definition of “underground injection” exempts hydraulic fracturing operations from the requirement to obtain an underground injection control permit, that exemption does not apply in cases where diesel fuel is used as a fracking fluid.²⁵ Further, the draft guidance is intended for EPA permit writers and provides, *inter alia*, the “requirements for diesel fuels used for hydraulic fracturing wells, technical recommendations for permitting those wells and a description of diesel fuels for EPA underground injection control permitting.”²⁶ The draft guidance does not impose any new requirements.²⁷

2. BLM Proposed Rules

On May 11, 2012, the Bureau of Land Management (BLM) released proposed rules intended to regulate fracking on public land and Indian land.²⁸ According to the BLM, the proposed rules are intended to: “[1] provide disclosure to the public of chemicals used in hydraulic fracturing on public and Indian land, [2] strengthen regulations related to well-bore integrity, and [3] address issues related to flowback” fluids that return to the surface during and after fracturing operations.²⁹ If finalized, such rules would be the first new rules to regulate fracking on federal lands since 1988.³⁰ The proposed rules were spurred, in part, by an increase in public awareness regarding new technologies

23. Request for Comment on Draft Guidance Document, Permitting Guidance for Oil and Gas Hydraulic Fracturing Activities Using Diesel Fuels - Draft: Underground Injection Control Program Guidance #84, 77 Fed. Reg. 27,451 (May 10, 2012) [hereinafter Permitting Guidance]; *EPA Releases Draft Permitting Guidance for Using Diesel Fuel in Oil and Gas Hydraulic Fracturing*, EPA.GOV (May 4, 2012) [hereinafter *EPA Diesel Fuels News Release*], available at <http://yosemite.epa.gov/opa/admpress.nsf/0/1224E5CD2897669F852579F400697788>. The SDWA mandates that the EPA protect underground sources of drinking water from endangerment related to underground injection activities. Safe Drinking Water Act, 42 U.S.C. §§ 300h-300a-8 (2012). The UIC Program requirements were promulgated under SDWA authority and create a regulatory framework for this purpose. See generally 40 C.F.R. pts. 124, 144-148 (2012).

24. Permitting Guidance, *supra* note 23, at 27,451.

25. *Id.* at 27,452.

26. *EPA Diesel Fuels News Release*, *supra* note 23; see also Permitting Guidance, *supra* note 23, at 27,452.

27. Permitting Guidance, *supra* note 23, at 27,451-52.

28. Proposed Rule, Oil and Gas; Well Stimulation, Including Hydraulic Fracturing, on Federal and Indian Lands, 77 Fed. Reg. 27,691 (May 11, 2012) (to be codified at 43 C.F.R. pt. 3160).

29. *Id.* at 27,691.

30. *Id.* at 27,693.

that have allowed for the development of domestic oil and natural gas resources previously uneconomic to produce.³¹ The expansion of fracking in new parts of the country has particularly stirred public concern regarding the chemicals used in fracking and their related impact on water availability and water quality.³² According to the BLM, the proposed rules are therefore intended to “build public confidence and protect the health of American communities,” while balancing the economic need to develop such resources.³³ Due to the complexity of the new proposed rule, and to allow for greater public participation, the BLM extended the comment period for an additional sixty days, resetting the comment deadline for September 10, 2012.³⁴

3. State Developments

State efforts to regulate hydraulic fracturing have been in four primary areas: disclosure of fracturing fluid chemicals, groundwater protection, water sources for fracturing, and disposal or reuse of briny water.³⁵ The state regulations discussed below address these water-related hydraulic fracturing practices that have taken effect over the past year.³⁶ While numerous states have passed statutes or promulgated regulations concerning disclosure of the composition of hydraulic fluids, a handful of other states responded to the use of water, the disposal of waste, or hydraulic fracturing activity itself.

Disclosure of Chemicals Used. Since July 2011, West Virginia, Montana, Louisiana, North Dakota, Texas, New Mexico, Colorado, Oklahoma, Ohio, and Pennsylvania have each passed legislation or adopted regulations requiring chemical disclosure of hydraulic fracturing fluids.³⁷ Regulations promulgated by the Railroad Commission of Texas also require well operators to disclose the

31. News Release, BLM, Bureau of Land Management Extends Public Comment Period for Proposed Hydraulic Fracturing Rule (June 25, 2012) [hereinafter News Release Extending Comment Period], available at http://www.blm.gov/wo/st/en/info/newsroom/2012/june/NR_06_25_2012.html.

32. *Rhetoric v. Reality, Part II: Assessing the Impact of New Federal Red Tape on Hydraulic Fracturing and American Energy Independence*, Hearing Before the Subcomm. on Technology, Information Policy, Intergovernmental Relations and Procurement Reform of the Comm. on Oversight and Government Reform, 112th Cong. 79-93 (2012) (statement of Mike Pool, Deputy Director, Bureau of Land Management, Department of the Interior).

33. *Id.*

34. News Release Extending Comment Period, *supra* note 31.

35. See, e.g., Barclay Nicholson & Kadian Blanson, *Trends Emerge on Hydraulic Fracturing Litigation*, OIL & GAS J., Dec. 5, 2011, available at <http://www.ogj.com/articles/print/volume-109/issue-49/drilling-production/trends-emerge-on-hydraulic-p1.html>; Adam D. Orford, *Hydraulic Fracturing: Legislative and Regulatory Trends*, MARTEN LAW (Oct. 4, 2011), <http://www.martenlaw.com/newsletter/20111004-fracking-roundup>.

36. Resources for the Future's Center for Energy Economics and Policy provides geographic views of shale gas regulations by state and type of regulation. *A Review of Shale Gas Regulations by State*, CENTER FOR ENERGY, ECONOMICS, AND POLICY, http://www.rff.org/centers/energy_economics_and_policy/Pages/Shale_Maps.aspx (last visited Oct. 7, 2012).

37. See generally W. VA. CODE R. § 35-8-3.3 (2012); MONT. ADMIN. R. 36.22.1015 (2011); LA. ADMIN. CODE tit. 43, § 118 (2011); N.D. ADMIN. CODE 43-02-03-27.1 (2012); 16 TEX. ADMIN. CODE § 3.29 (2012); N.M. CODE R. § 19.15.16.19 (LexisNexis 2012); 2 COLO. CODE REGS. § 404-1:205A (LexisNexis 2012); OKLA. ADMIN. CODE § 165:10-3-10 (2012); OHIO REV. CODE ANN. § 1509.10 (West 2012); 58 PA. CONS. STAT. § 3222.1 (2012).

volume of water used.³⁸ While the regulations vary by state, many require full disclosure of chemicals used as additives by a well operator to a state agency and a more limited disclosure accessible to the public.³⁹ Operators may claim confidential, proprietary, or trade secret exemptions that limit general disclosure, but full disclosure may be required as part of a state agency investigation, to emergency personnel responding to a spill, or as requested by a doctor or other medical professional involved in treating a patient.⁴⁰

West Virginia. On July 12, 2011, Gov. Earl Ray Tomblin issued an executive order requesting that the West Virginia Department of Environmental Protection promulgate regulations for hydraulic fracturing.⁴¹ By August 24, 2011, the state agency had acted under emergency powers to issue regulations governing horizontal wells.⁴² The regulations focus on the source and use of water for drilling activities – a water management plan is required for wells estimated to use more than 210,000 gallons of water in any one month – and the avoidance of environmental harm, whether from disposal of drilling cuttings, sub-standard casing, or erosion and sediment.⁴³ The regulations also require well operators to issue public notice for any wells to be located within a municipality.⁴⁴

Pennsylvania. Gov. Tom Corbett signed legislation that enacted Act 13 on February 14, 2012.⁴⁵ The law distinguishes unconventional wells from conventional wells and imposes specific notice, permit, and operating obligations (and a fee) on unconventional wells.⁴⁶ Concerning water use, any person who plans to withdraw or use water for drilling or hydraulic fracture stimulation in an unconventional gas formation must receive approval for a water management plan.⁴⁷ Act 13 modified record reporting and completion reporting obligations, adding a full disclosure requirement for any chemical additives used.⁴⁸ The law also sets forth well pad site requirements such as setback distances, and site restoration within nine months after completion.⁴⁹ Notably, the law presumes an operator is responsible for water contamination located within 2,500 feet of an unconventional well if the pollution occurs within

38. 316 TEX. ADMIN. CODE § 3.29(c)(2)(A)(viii).

39. States frequently require disclosure of chemical composition of hydraulic fracturing fluids on FracFocus.org, a public hydraulic fracturing chemical registry. States are using FracFocus.org for other disclosures as well, including reports of using hydraulic fracturing or the occurrence of certain incidents. *See, e.g.,* North Dakota Industrial Commission - Oil and Gas Division, Order No. 18123 (Jan. 23, 2012).

40. *See, e.g.,* LA. ADMIN. CODE tit. 43, § 118.C.2-3; 2 COLO. CODE REGS. § 404-1:205.d.-e.; OHIO REV. CODE ANN. § 1509.10(H)-(I).

41. W.Va. Exec. Order No. 4-11 (Jul. 12, 2011), available at <http://www.governor.wv.gov/Documents/20110713150559476.pdf>.

42. W. VA. CODE R. §§ 35-8-1 – 35-8-5 (2012).

43. *Id.* §§ 35-8-3.1, 35-8-3.3, 35-8-4.3, 35-8-4.4.a.

44. *Id.* § 35-8-5.1.

45. *Pennsylvania Act 13 – Pa. HB1950*, MARCELLUS-SHALE.US, http://www.marcellus-shale.us/Act13-of-2012_HB1950.htm (last visited Oct. 7, 2012).

46. 58 PA. CONS. STAT. § 3211 (2012).

47. *Id.* § 3211(m).

48. *Id.* §§ 3222, 3222.1.

49. *Id.* §§ 3215(a), 3216(c).

twelve months of defined activities.⁵⁰ The law also increased civil penalties for unconventional gas well operators.⁵¹

Ohio. On June 11, 2012, Ohio Gov. John Kasich signed into law Senate Bill 315, which established or strengthened a broad array of regulations over natural gas drilling in the state.⁵² The law requires well operators to take and disclose results from pre-drilling samples of well water located within 300 feet of a well located in an urbanized area and within 1,500 of a proposed horizontal well.⁵³ Regarding the use of water for production activities, well permits must identify the proposed source of water to be used, including the rate and volume of use.⁵⁴ Prior to issuance of a permit for a well located in a one-hundred-year floodplain or within a five-year time of travel associated with a public drinking water supply, the division of oil and gas resources management will evaluate site-specific terms and conditions that may be attached to the permit.⁵⁵ The law helps track the movement of used water and requires injection well owners to submit quarterly electronic reports for each shipment of briny water.⁵⁶ Perhaps more importantly, the law does not expressly restrict the use of horizontal wells, hydraulic fracturing, or chemicals used in fracturing fluids.

New York. In September 2011, the New York State Department of Environmental Conservation issued draft regulations for natural gas wells, generally,⁵⁷ and “high-volume hydraulic fracturing” wells – “stimulation of a well using 300,000 gallons or more of water as the primary carrier fluid in hydraulic fracturing fluid” – specifically.⁵⁸ The proposed rules follow upon an effective moratorium of hydraulic fracturing in the state that has been in place since December 2010.⁵⁹ The bulk of regulations applicable to well operators are contained in proposed 6 NYCRR parts 550-556 and 560. The regulations create substantive obligations for all natural gas well operators to space well sites, observe specific drilling and operating practices, and to report deviations from specific practices.⁶⁰ The regulations specific to high-volume hydraulic fracturing require (a) specific permit application requirements, including fracturing fluid disclosures (an applicant may request confidential treatment); (b) setbacks from water resources; (c) well water tests prior to drilling; (d) extensive well site and operation requirements; and (e) waste management and reclamation

50. *Id.* § 3218(c).

51. *Id.* § 3256.

52. Bob Downing, *Reactions to S.B. 315 Signing by Gov. Kasich*, OHIO.COM (June 12, 2012), <http://www.ohio.com/blogs/drilling/ohio-utica-shale-1.291290/reactions-to-s-b-315-signing-by-gov-kasich-1.313535>.

53. OHIO REV. CODE ANN. § 1509.06(A)(8)(b)-(c) (West 2012).

54. *Id.* § 1509.06(A)(8)(a).

55. *Id.* § 1509.06(H)(2).

56. *Id.* § 1509.22(D)(1).

57. *High-Volume Hydraulic Fracturing Proposed Regulations*, NEW YORK STATE DEPT. OF ENVTL. CONSERVATION, <http://www.dec.ny.gov/regulations/77353.html> (last visited Oct. 7, 2012).

58. N.Y. COMP. CODES R. & REGS. tit. 6, § 560.2(b)(8) (proposed).

59. *See, e.g.*, Sarah Hoyer, *New York Governor Pauses ‘Fracking,’* CNN.COM (Dec. 13, 2010, 12:24 pm), <http://www.cnn.com/2010/US/12/13/new.york.fracking.moratorium/index.html>.

60. *See generally* N.Y. COMP. CODES R. & REGS. tit. 6, §§ 550-556, 560 (proposed).

obligations.⁶¹ Part of an overall plan to allow hydraulic fracturing in designated areas of the state, the regulations are anticipated to be finalized in 2012.⁶²

C. *Keystone XL Pipeline*

TransCanada Keystone Pipeline, L.P.'s (TransCanada) proposed Keystone XL pipeline, a 1,700 mile pipeline from Alberta, Canada to the Texas Gulf Coast, continued to work its way through the federal environmental review process.⁶³ The period covered by this writing saw significant developments related to the review by the U.S. State Department, under the National Environmental Policy Act (NEPA) and Executive Order No. 13,337, of TransCanada's September 2008 application for a Presidential Permit to construct and operate the trans-border pipeline.⁶⁴

On August 26, 2011, the State Department released the final Environmental Impact Statement (EIS), one of the final procedural steps in the NEPA process.⁶⁵ The final EIS incorporated comments from the public and cooperating agencies, including the EPA, which had found in its review that the draft EIS warranted an "Insufficient Information" rating with "Environmental Objections."⁶⁶ The EPA's review included a recommendation for "additional analysis."⁶⁷ Due to the concerns raised by the EPA and other comments, which most significantly related to environmental issues with the proposed route through the Sand Hills area of Nebraska, the State Department announced on November 10, 2011 that the agency would seek additional information regarding potential alternative routes through Nebraska.⁶⁸

TransCanada subsequently announced on November 14, 2011 that it would work with the State Department and the Nebraska Department of Environmental Quality to conduct an environmental assessment to determine the best alternative route for the pipeline, avoiding the controversial Sand Hills area.⁶⁹ Reflecting

61. N.Y. COMP. CODES R. & REGS. tit. 6, §§ 560.3, 560.4, 560.5(d), 560.6, 560.7 (proposed).

62. *High-Volume Hydraulic Fracturing SGEIS Time Line*, NEW YORK ST. DEPT. OF ENVTL. CONSERVATION, <http://www.dec.ny.gov/energy/75405.html> (last visited Oct. 7, 2012).

63. As originally proposed, the 36-inch diameter pipeline would transport 830,000 barrels per day (bpd) of crude oil produced from the Western Canadian Sedimentary Basin and the Bakken Supply Basin from Alberta, Canada to the U.S. Gulf Coast refineries. CONG. RESEARCH SERV., R41668, KEYSTONE XL PIPELINE PROJECT: KEY ISSUES 1 (2012) [hereinafter CRS KEYSTONE XL], <http://www.fas.org/sfgp/crs/misc/R41668.pdf>.

64. Under NEPA and Executive Order No. 13,337, because the proposed Keystone XL pipeline would cross international borders, TransCanada must obtain from the State Department a Presidential Permit authorizing construction and operation of the pipeline. 42 U.S.C. §§ 4321 - 4370h; Executive Order No. 13,337 of April 30, 2004, 69 Fed. Reg. 25,299 (May 5, 2004) (as amended); Department of State Delegation of Authority No. 118-2 (January 26, 2006) (Presidential Permits for Cross-Border Facilities). The Statement Department reviews the application to determine whether the proposed pipeline is in "the national interest."

65. Press Release, U.S. Dep't of State, Keystone XL Final Environmental Impact Statement Released; Public Meetings Set, (Aug. 26, 2011), *available at* <http://www.state.gov/r/pa/prs/ps/2011/08/171082.htm>.

66. Cover Letter, Keystone XL Project – Final Environmental Impact Statement (Dep't of State, Aug. 26, 2011), *available at* <http://keystonepipeline-xl.state.gov/documents/organization/182008.pdf>.

67. CRS KEYSTONE XL, *supra* note 63, at 934.

68. Press Release, U.S. Dep't of State, Keystone XL Pipeline Project Review Process: Decision to Seek Additional Information (Nov. 10, 2011), *available at* <http://www.state.gov/r/pa/prs/ps/2011/11/176964.htm>; CRS KEYSTONE XL, *supra* note 63, at 10.

69. CRS KEYSTONE XL, *supra* note 63, at 10.

the increasingly political nature of the pipeline project, the U.S. Congress enacted, on December 23, 2011, legislation intended to expedite the pipeline permitting process by requiring the Secretary of State to make a national interest determination within sixty days.⁷⁰ With the consent of President Obama, the State Department announced, on January 18, 2012, the denial of the Presidential Permit for the Keystone Pipeline.⁷¹ The agency cited as the basis for its decision the fact that the Congressionally-imposed 60-day deadline did not provide sufficient time for the agency to obtain the information necessary for a review of the amended project.⁷²

Following the denial of the initial application for the entire pipeline, TransCanada divided the project into northern and southern sections for permitting purposes.⁷³ The southern section, which was renamed the Gulf Coast Project,⁷⁴ would run 485 miles from Oklahoma to refineries on the Texas coast.⁷⁵ Because this segment would not cross an international border, the project does not require a Presidential Permit.⁷⁶

TransCanada submitted a new permit application for the 1,179-mile northern portion of the pipeline on May 4, 2012.⁷⁷ The northern section would deliver crude from border crossing facilities at Phillips County, Montana on the U.S./Canadian border to Steel City, Nebraska.⁷⁸ The May 4 application contained new proposed routes that would avoid environmentally sensitive areas of Nebraska.⁷⁹ Despite numerous attempts, Republicans of the 112th Congress to date have been unable to pass legislation creating a new decision deadline, removing Keystone permitting authority from the State Department, or removing the pipeline from the environmental review process entirely.⁸⁰ As a result, the State Department is moving forward with a supplemental environmental review of the revised Keystone Project.⁸¹ Assuming no new legislation that would

70. *Id.* (noting the enactment of The Temporary Payroll Tax Cut Continuation Act of 2011, Pub. L. No. 112-78, 125 Stat. 1280).

71. *Id.*; *see also* Press Release, U.S. Dep't of State, Briefing on the Keystone XL Pipeline (Jan. 18, 2012) [hereinafter *Keystone Briefing*], *available at* <http://www.state.gov/r/pa/prs/ps/2012/01/181492.htm>.

72. *Keystone Briefing*, *supra* note 71.

73. CRS KEYSTONE XL, *supra* note 63, at 13.

74. *Id.* at 23.

75. Steven Mufson & Juliet Eilperin, *TransCanada Gets Key Go-Ahead for Final Southern Leg of Pipeline Project*, WASH. POST (July 27, 2012), *available at* http://www.washingtonpost.com/business/keystone-xl-pipeline-permits-deal-blow-to-groups-trying-to-slow-construction/2012/07/26/gJQATYEnDX_story.html.

76. CRS KEYSTONE XL, *supra* note 63, at 1, 24.

77. Notice of Receipt, Application for Presidential Permit To Construct, Operate and Maintain Pipeline Facilities on the Border of the United States, 77 Fed. Reg. 27,533, 27,533 (May 10, 2012).

78. CRS KEYSTONE XL, *supra* note 63, at 13.

79. *Id.* at 13, 17-18.

80. *See, e.g.*, The Surface Transportation Extension Act of 2012, Part II, H.R. 4348, 112th Cong. (2012); The North American Energy Access Act, H.R. 3548, 112th Cong. (2012); The Keystone For a Secure Tomorrow Act, H.R. 3811, 112th Cong. (2012); The Grow America Act of 2012, S. 2199, 112th Cong. (2012); S. 2041, 112th Cong. (2012) (a bill to approve the Keystone XL pipeline); The EXPAND Act, H.R. 4301, 112th Cong. (2012); and The Energizing America through Employment Act, H.R. 4000, 112th Cong. (2012); *see also* CRS KEYSTONE XL, *supra* note 63, at 12, 15 (discussing the Surface Transportation Extension Act).

81. Notice of Intent To Prepare a Supplemental Environmental Impact Statement (SEIS) and To Conduct Scoping and To Initiate Consultation Under Section 106 of the National Historic Preservation Act for

affect the review, the Obama Administration expects that the review process, including a public comment period, will be completed as early as the first quarter of 2013.⁸² TransCanada expects to complete construction and place the northern segment of the pipeline into service by early 2015.⁸³

II. POWER SECTOR

A. *Non-GHG*

1. Clean Air Act

a. Utility MATS

The EPA's new Mercury and Air Toxics Standards (MATS)⁸⁴ became effective on April 16, 2012. This rule, which is also referred to as the Utility Maximum Achievable Control Technology rule, or Utility MACT rule, establishes national emission standards for hazardous air pollutants from, and standards of performance for, generating units.⁸⁵ Existing generating units have until April 16, 2015 to comply with the rule.⁸⁶

Numerous parties, including attorney generals for nearly half of the states, filed petitions with the D.C. Circuit challenging the EPA's MATS rule.⁸⁷ The

the Proposed TransCanada Keystone XL Pipeline Proposed To Extend From Phillips, MT (the Border Crossing) to Steele City, NE, 77 Fed. Reg. 36,032 (Dep't of State, June 15, 2012).

82. Press Release, U.S. Dep't of State, New Pipeline Application Received from TransCanada (May 4, 2012), available at <http://www.state.gov/r/pa/prs/ps/2012/05/189300.htm>.

83. Elana Schor, *Obama Admin to Review Pipeline's New Route Around Sandhills*, RED LODGE CLEAR HOUSE (June 19, 2012), available at <http://rlch.org/news/obama-admin-review-pipelines-new-route-around-sandhills>.

84. Final Rule, National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 9304 (Feb. 16, 2012) (codified at 40 C.F.R. pts. 60, 63).

85. *Id.* at 9304.

86. *Id.* at 9465 (codified at 40 C.F.R. § 63.9984(b)).

87. *White Stallion Energy Ctr., LLC v. EPA*, No. 12-01100 (D.C. Cir. Feb. 16, 2012); *National Mining Assoc. v. EPA*, No. 12-01101 (D.C. Cir. Feb. 16, 2012); *National Black Chamber of Commerce v. EPA*, No. 12-01102 (D.C. Cir. Feb. 16, 2012); *Utility Air Regulatory Grp. v. EPA*, No. 12-01147 (D.C. Cir. Mar. 16, 2012); *Utility Air Regulatory Grp. v. EPA*, No. 12-01166 (D.C. Cir. Apr. 09, 2012); *Eco Power Solutions (USA) Co. v. EPA*, No. 12-01170 (D.C. Cir. Apr. 12, 2012); *Midwest Ozone Grp. v. EPA*, No. 12-01172 (D.C. Cir. Apr. 12, 2012); *American Pub. Power Assoc. v. EPA*, No. 12-01173 (D.C. Cir. Apr. 13, 2012); *Julander Energy Co. v. EPA*, No. 12-01174 (D.C. Cir. Apr. 13, 2012); *Peabody Energy Corp. v. EPA*, No. 12-01175 (D.C. Cir. Apr. 13, 2012); *Deseret Power Elec. Coop. v. EPA*, No. 12-01176 (D.C. Cir. Apr. 13, 2012); *Sunflower Elec. Power Corp. v. EPA*, No. 12-01177 (D.C. Cir. Apr. 13, 2012); *Tri-State Gen. and Trans. Assoc. v. EPA*, No. 12-01178 (D.C. Cir. Apr. 13, 2012); *Tenaska Trailblazer Partners, v. EPA*, No. 12-01180 (D.C. Cir. Apr. 16, 2012); *ARIPPA v. EPA*, No. 2-01181 (D.C. Cir. Apr. 16, 2012); *WV Chamber of Commerce, v. EPA*, No. 12-01182 (D.C. Cir. Apr. 16, 2012); *United Mine Workers of Am. v. EPA*, No. 12-01183 (D.C. Cir. Apr. 13, 2012); *Power4Georgians, LLC v. EPA*, No. 12-01184 (D.C. Cir. Apr. 13, 2012); *State of Texas v. EPA*, No. 12-01185 (D.C. Cir. Apr. 16, 2012); *Kansas City Bd. of Pub. Util. v. EPA*, No. 12-01186 (D.C. Cir. Apr. 16, 2012); *Oak Grove Mgmt. Co. v. EPA*, No. 12-1186 (D.C. Cir. Apr. 16, 2012); *Gulf Coast Lignite Coal. v. EPA*, No. 12-01188 (D.C. Cir. Apr. 16, 2012); *Puerto Rico Elec. Power Auth. v. EPA*, No. 12-01189 (D.C. Cir. Apr. 16, 2012); *State of Arkansas v. EPA*, No. 12-01190 (D.C. Cir. Apr. 16, 2012); *Chase Power Dev., L.L.C. v. EPA*, No. 12-01191 (D.C. Cir. Apr. 16, 2012); *FirstEnergy Generation Corp. v. EPA*, No. 12-01192 (D.C. Cir. Apr. 16, 2012); *Edgecombe Genco, LLC v. EPA*, No. 12-01193 (D.C. Cir. Apr.

individual petitions were initially consolidated under the lead case, *White Stallion Energy Center, LLC v. EPA*, Case No. 12-1100.⁸⁸ However, the D.C. Circuit has subsequently severed and consolidated some of the issues raised in the petitions for review. On June 28, 2012, the D.C. Circuit severed and expedited certain issues applicable to “new units” and assigned these severed issues to new Case No. 12-1272.⁸⁹

Concurrent with the publication of the MATS rule in the *Federal Register*, Senator James Inhofe (R-OK) introduced a joint resolution that would block the rule from going into effect.⁹⁰ Although the joint resolution was reported by committee on June 19, 2012, the Senate voted on June 20, 2012, to reject a motion to proceed to consider the joint resolution.⁹¹

b. Cross-State Air Pollution Rule

On August 8, 2011, the EPA promulgated the Cross-State Air Pollution Rule (CSAPR) — a national regulatory framework for reducing regional transport of sulfur dioxide (SO₂) and nitrogen oxide (NO_x) emitted by over 1,000 power plants across the Eastern United States.⁹² The EPA intended for CSAPR to replace an existing regulation, the Clean Air Interstate Rule (CAIR), which the D.C. Circuit vacated in 2008 but subsequently reinstated on an interim basis.⁹³ The EPA promulgated CSAPR to ensure that eastern states comply with section 110(a)(2)(D)(i) of the Clean Air Act (CAA), which requires each state to ensure that sources within its borders do not “contribute significantly” to violations of National Ambient Air Quality Standards (NAAQS) in other states.⁹⁴ The EPA has issued two previous regional transport rules, CAIR and the NO_x SIP Call, that were intended to ensure that states fulfill this section 110 requirement. In the NO_x SIP Call, which was issued in 1998, the EPA determined that NO_x emissions from twenty-two states and the District of Columbia contributed to noncompliance with the EPA’s 1997 NAAQS for ozone.⁹⁵ Promulgated in 2005, CAIR similarly required twenty-seven states and the District of Columbia to

16, 2012); *Chesapeake Climate Action Network v. EPA*, No. 12-01194 (D.C. Cir. Apr. 16, 2012); *Wolverine Power Supply Coop. v. EPA*, No. 12-01195 (D.C. Cir. Apr. 16, 2012); *State of Michigan v. EPA*, No. 12-01196 (D.C. Cir. Apr. 16, 2012).

88. *White Stallion Energy Ctr., LLC v. EPA*, No. 12-1100, 2012 U.S. App. LEXIS 7175 (D.C. Cir. Apr. 10, 2012).

89. *White Stallion Energy Ctr., LLC v. EPA*, No. 12-1100 (D.C. Cir. June 28, 2012).

90. S.J. Res. 37, 112th Cong. (2012).

91. See generally *On the Motion to Proceed S.J. Res. 37*, GOVTRACK.US (Jun 20, 2012), <http://www.govtrack.us/congress/votes/112-2012/s139>.

92. Final Rule, Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Corrections of SIP Approvals, 76 Fed. Reg. 48,208 (Aug. 8, 2011) (to be codified at 40 C.F.R. pts. 51, 52, 72, 78, and 97) [hereinafter CSAPR].

93. *North Carolina v. EPA*, 531 F.3d 896, 901 (D.C. Cir. July 11, 2008), *on reh'g*, 550 F.3d 1176, 1178 (D.C. Cir. Dec. 23, 2008).

94. 42 U.S.C. § 7410(a)(2)(D)(i) (2012).

95. Final Rule, Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, 63 Fed. Reg. 57,356 (Oct. 27, 1998) (codified at 40 C.F.R. pts. 51, 72, 75, and 96).

mitigate NO_x and SO₂ emissions in order to address attainment with the 1997 ozone NAAQS and the 1997 NAAQS for fine particulate matter (PM_{2.5}).⁹⁶

Both the NO_x SIP Call and CAIR established emission caps (or budgets) for each jurisdiction, and directed states to submit revised State Implementation Plans (SIPs) ensuring compliance with those budgets.⁹⁷ In addition, both rules gave states the option of satisfying the SIP requirement by participating in regional emissions trading programs.⁹⁸ In 2008, however, the D.C. Circuit vacated CAIR, finding that its design was irretrievably flawed and inconsistent with the language of the CAA.⁹⁹ The D.C. Circuit subsequently reinstated CAIR on an interim basis while the EPA developed a replacement.¹⁰⁰

Key Elements of CSAPR. Broadly speaking, CSAPR has three core pillars:

(1) Finding of state contributions to nonattainment, or interference with maintenance, of NAAQS. Similar to the NO_x SIP Call and CAIR, CSAPR is predicated on a finding that emissions of NO_x and SO₂ from specific states are likely to “contribute significantly” to violations of the NAAQS in neighboring states, or interfere with maintenance of the NAAQS – in this case, the 1997 ozone NAAQS, 1997 PM_{2.5} NAAQS, and/or the 2006 PM_{2.5} NAAQS.¹⁰¹

(2) State emission “budgets.” Based on an analysis of the costs and likely impacts of emission reductions at EGUs in each state, CSAPR imposes state-wide emission limits (or “budgets”) for ozone-season NO_x, annual NO_x, and annual SO₂ for each state that the EPA found in violation of section 110(a)(2)(D)(i).¹⁰² These budgets were scheduled to take effect in January 2012.¹⁰³ A subset of states with particularly significant “downwind” emissions of SO₂ was also required to meet a more stringent SO₂ budget beginning in January 2014.¹⁰⁴

(3) Federal Implementation Plan. Because CSAPR was issued only six months in advance of the effective date of the emission budgets, the EPA imposed a Federal Implementation Plan (FIP) on each state subject to CSAPR, requiring EGUs within those states to participate in a newly-created regional emission trading program for NO_x and SO₂.¹⁰⁵ The EPA did open the door for states to replace the FIP with revised SIPs – which could either vary certain aspects of the trading program or propose independent emission reduction strategies – after CSAPR and its emission budgets had taken effect.¹⁰⁶

96. Final Rule, Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO_x SIP Call, 70 Fed. Reg. 25,162 (May 12, 2005) (codified at 40 C.F.R. pts. 51, 72, 73, 74, 77, 78, and 96).

97. Proposed Rule, Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone, 75 Fed. Reg. 45,210, 45,222-24 (Aug. 2, 2010) (codified at 40 C.F.R. pts. 51, 52, and 72) (summarizing structure of NO_x SIP Call and CAIR).

98. *Id.*

99. North Carolina v. EPA, 531 F.3d 896, 929 (D.C. Cir. 2008).

100. North Carolina v. EPA, 550 F.3d 1176, 1178 (D.C. Cir. 2008).

101. CSAPR, 76 Fed. Reg. 48,208, at 48,211.

102. *Id.* at 48,211-12.

103. *Id.* at 48,211.

104. *Id.* at 48,214.

105. *Id.* at 48,210-11.

106. *Id.* at 48,212, n.8.

Supplemental Rulemakings. In the months after CSAPR was issued, the EPA undertook three supplemental rulemakings that expanded the coverage of the rule to include twenty-eight states and the District of Columbia,¹⁰⁷ added ozone-season NO_x emission budgets for certain states,¹⁰⁸ and revised the emission budgets for a number of states.¹⁰⁹ In addition, the EPA finalized a rule that allows states with regional haze mitigation obligations under section 169A of the CAA to rely upon the CSAPR regional emission trading program as an alternative to requiring EGUs to install “best available retrofit technology” (BART).¹¹⁰

c. Particulate Matter

EPA proposed revisions to PM standards. On June 29, 2012, the EPA proposed to make revisions to the primary and secondary national ambient air quality standards (NAAQS) for particulate matter (PM).¹¹¹ “The EPA also propose[d] revisions to the prevention of significant deterioration (PSD) permitting program with respect to the proposed NAAQS revisions.”¹¹²

Basic Overview of PM. PM “is the term for a mixture of solid particles and liquid droplets found in the air.”¹¹³ “Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye.”¹¹⁴ PM also “includes ‘inhalable coarse particles,’ with diameters larger than 2.5 micrometers and smaller than 10 micrometers and ‘fine particles,’ with diameters that are 2.5 micrometers and smaller.”¹¹⁵ To put that size in context, “[t]he average human hair is about 70 micrometers in diameter - making it 30 times larger than the largest fine particle.”¹¹⁶ “Some particles, known as primary particles are emitted directly from a source, such as construction sites.”¹¹⁷ “Others form in complicated reactions in the atmosphere of chemicals such as sulfur dioxides and nitrogen oxides that are emitted from power plants, industries and automobiles.”¹¹⁸ “These particles, known as secondary particles, make up most

107. Final Rule, Revisions to Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone, 77 Fed. Reg. 34,830 (June 12, 2012) (to be codified at 40 C.F.R. pt. 97).

108. Final Rule, Revisions to Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone, 77 Fed. Reg. 10,324 (Feb. 21, 2012) (to be codified at 40 C.F.R. pts. 52, 97).

109. Final Rule, Federal Implementation Plans for Iowa, Michigan, Missouri, Oklahoma, and Wisconsin and Determination for Kansas Regarding Interstate Transport of Ozone, 76 Fed. Reg. 80,760 (Dec. 27, 2011) (to be codified at 40 C.F.R. pts. 52, 97).

110. Final Rule, Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans, 77 Fed. Reg. 33,642 (June 7, 2012) (to be codified at 40 C.F.R. pts. 51, 52).

111. Proposed Rule, National Ambient Air Quality Standards for Particulate Matter, 77 Fed. Reg. 38,890 (June 29, 2012) (to be codified at 40 C.F.R. pts. 50, 51, 52, 53 and 58) [hereinafter Proposed PM NAAQS].

112. *Id.*

113. *Particulate Matter: Basic Information*, EPA.GOV, <http://www.epa.gov/pm/basic.html> (last visited Oct. 10, 2012).

114. *Id.*

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.*

of the fine particle pollution in the country.”¹¹⁹ Specifically, “[p]article pollution contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems.”¹²⁰ “The size of particles is directly linked to their potential for causing health problems,” with smaller particles less than ten micrometers in diameter posing the greatest problems because they can get deep into human lungs, and in some cases even the bloodstream.¹²¹

Summary. “With regard to [the] primary standards for fine particles . . . , the EPA proposes to revise the annual PM_{2.5} standard¹²² by lowering the level [from 15.0] to within a range of 12.0 to 13.0” mg/m³ in order “to provide increased protection against health effects associated with long- and short term exposures.”¹²³ The EPA also proposed “to retain the level (35 mg/m³) and the form (98th percentile) of the 24-hour PM_{2.5} standard to provide supplemental protection against health effects associated with short-term exposures.”¹²⁴ The EPA states that “[t]his proposed action [will] provide increased protection for children, older adults, persons with pre-existing heart and lung disease, and other at-risk populations against an array of PM_{2.5}-related adverse health effects that include premature mortality, increased hospital admissions and emergency department visits, and development of chronic respiratory disease.”¹²⁵ The EPA asserts that “the proposed changes to the primary annual PM_{2.5} standard are within the range that [the EPA’s Clean Air Scientific Advisory Committee (CASAC)] advised the Agency to consider,” and were “based on an integrative assessment of an extensive body of new scientific evidence.”¹²⁶

With regard to the secondary PM standards, the EPA proposes to revise the suite of secondary PM standards by adding a distinct standard for PM_{2.5} to address PM-related visibility impairment. More specifically, the EPA proposes to establish a secondary standard defined in terms of a PM_{2.5} visibility index, which would use speciated PM_{2.5} mass concentrations and relative humidity data to calculate PM_{2.5} light extinction, similar to the Regional Haze Program; a 24-hour averaging time; a 90th percentile form, averaged over 3 years; and a level set at one of two options—either 30 deciviews (dv) or 28 dv. The EPA also proposes to rely upon the existing Chemical Speciation Network (CSN) to provide appropriate monitoring data for calculating PM_{2.5} visibility index values.¹²⁷

“The proposed secondary standard is based on the long-standing science characterizing the contribution of PM, especially fine particles, to visibility impairment and on air quality analyses, with consideration also given to a reanalysis of public perception surveys regarding people’s stated preferences regarding acceptable and unacceptable visual air quality.”¹²⁸

119. *Id.*

120. *Id.*

121. *Id.*

122. This generally refers to particles less than or equal to 2.5 micrometers in diameter. Proposed PM NAAQS, *supra* note 111, at 38,890.

123. *Id.*

124. *Id.* at 38,893.

125. *Id.*

126. *Id.*

127. *Id.*

128. *Id.*

Costs and Benefits of Implementing the Rule. In quantifying the costs and benefits of the proposed rule, the EPA prepared a Regulatory Impact Analysis (RIA).¹²⁹ The RIA estimated the costs and benefits of implementing the proposed standards at “alternative levels (in mg/m³) of the primary annual/24-hour PM_{2.5} standard.”¹³⁰ According to the RIA, the EPA estimates that

for the lower end of the proposed standard range of 12/35, the EPA estimates that the benefits of full attainment exceed the costs of full attainment by 34 to 86 times at a 3% discount rate and 30 to 78 times at a 7% discount rate. For the upper end of the proposed standard range of 13/35, the EPA estimates that the benefits of full attainment exceed the costs of full attainment by 30 to 77 times at a 3% discount rate and 27 to 69 times at a 7% discount rate. For the alternative standards, 11/35 and 11/30, the EPA estimates that the benefits of full attainment exceed the costs of full attainment by 34 to 94 times at a 3% discount rate and 30 to 85 times at a 7% discount rate.¹³¹

d. Regional Haze

On June 7, 2012, the EPA issued a final rule pertaining to the regional haze program and how states can meet specific requirements of the Agency.¹³² The EPA’s final rule allows states participating in the CSAPR trading program to use those programs in place of source-specific Best Available Retrofit Technology (BART) for sulfur dioxide and/or nitrogen oxide emissions from power plants that are subject to the regional haze rule.¹³³ The EPA also finalized a limited disapproval of the regional haze SIPs that several states submitted because they relied on the requirements of CAIR.¹³⁴ “To address deficiencies in CAIR-dependent regional haze SIPs, . . . the EPA [promulgated] Federal Implementation Plans (FIPs) to replace reliance on CAIR with reliance on the Transport Rule in the regional haze SIPs” of several states.¹³⁵

2. Cooling Water Regulations

Water cooling is a method used in industrial and power generation applications to remove heat from equipment by means of convective heat transfer.¹³⁶ In 2011, the EPA proposed new regulations for cooling water intake structures¹³⁷ and the California State Water Resources Control Board (SWRCB)

129. REGULATORY IMPACT ANALYSIS FOR THE PROPOSED REVISIONS TO THE NATIONAL AMBIENT AIR QUALITY STANDARDS FOR PARTICULATE MATTER, EPA 452/R-12-003 (Docket No. EPA-HQ-OAR-2010-0955-0010) [hereinafter RIA].

130. Proposed PM NAAQS, *supra* note 111, at 39,030.

131. RIA, *supra* note 129, at ES-9.

132. Final Rule, Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans, 77 Fed. Reg. 33,642 (June 7, 2012) (to be codified at 40 C.F.R. pts. 51, 52).

133. *Id.* at 33,643.

134. *Id.*

135. *Id.*

136. See generally GE Power & Water, *Chapter 23: Cooling Water Systems-Heat Transfer*, in HANDBOOK OF INDUSTRIAL WATER TREATMENT, available at http://www.gewater.com/handbook/cooling_water_systems/ch_23_heat.jsp (last updated Oct. 5, 2012).

137. Proposed Rule, National Pollutant Discharge Elimination System - Cooling Water Intake Structures at Existing Facilities and Phase I Facilities, 76 Fed. Reg. 22,174 (Apr. 20, 2011) (to be codified at 40 C.F.R. pts. 122, 125).

continued with implementation of regulations addressing the intake and use of cooling water.¹³⁸

a. EPA Cooling Water Intake Structures Rule

On April 20, 2011, the EPA proposed regulations pursuant to section 316(b) of the Clean Water Act requiring that National Pollutant Discharge Elimination System (NPDES) permits for facilities ensure that the “location, design, construction, and capacity of cooling water intake structures . . . reflect the best technology available (BTA) for minimizing adverse environmental impact.”¹³⁹ The best available technology requirements apply to existing power plants and manufacturing facilities that withdraw at least 25% of their water from an adjacent body of water exclusively for cooling purposes and have an intake flow greater than 2,000,000 gallons per day.¹⁴⁰ Facilities that withdraw at least 125,000,000 gallons per day must conduct studies for site-specific controls.¹⁴¹ Further, new units with electrical generation capacity at an existing facility must add technology equivalent to closed-cycle cooling.¹⁴²

On June 11, 2012 and June 12, 2012, the EPA posted two Notices of Data Availability (NODA) in the *Federal Register*.¹⁴³ The first NODA provided information on the EPA’s final wildlife impingement mortality limitations. Most notably, the EPA advised that the proposed rule did “not specifically require the use of modified traveling screens” and expressed a willingness to consider site-specific approaches as an alternative to the proposed national standards.¹⁴⁴ The first NODA also responded to questions and concerns about measuring and reducing the velocity of water intake.¹⁴⁵ The second NODA summarizes a “stated preference survey” performed by the EPA in which persons surveyed indicated a willingness to pay to reduce the number of fish impinged or entrained in a cooling water intake structure.¹⁴⁶ The survey may be used as part of the EPA’s benefits analysis for the final rule.¹⁴⁷

138. *Cooling Water Intake Structures - Once-Through Cooling*, CAL. STATE WATER RES. CONTROL BD., http://www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/ (last visited Oct. 12, 2012).

139. 76 Fed. Reg. 22,174, at 22,174.

140. *Id.* at 22,192 (to be codified at 40 C.F.R. § 125.94).

141. *Id.* at 22,205 (to be codified at 40 C.F.R. § 122.21(r)(1)(ii)).

142. *Id.* at 22,205-06 (to be codified at 40 C.F.R. § 125.84).

143. National Pollutant Discharge Elimination System - Proposed Regulations to Establish Requirements for Cooling Water Intake Structures at Existing Facilities; Notice of Data Availability Related to Impingement Mortality Control Requirements, 77 Fed. Reg. 34,315 (June 11, 2012) (to be codified at 40 C.F.R. pts. 122, 123, 124, and 125) [hereinafter Impingement NODA]; National Pollutant Discharge Elimination System - Proposed Regulations to Establish Requirements for Cooling Water Intake Structures at Existing Facilities; Notice of Data Availability Related to EPA’s Stated Preference Survey, 77 Fed. Reg. 34,927 (June 12, 2012) (to be codified at 40 C.F.R. pts. 122, 123, 124, and 125) [hereinafter Survey NODA].

144. Impingement NODA, *supra* note 143, at 34,317, 34,322.

145. *Id.* at 34,319-21.

146. Survey NODA, *supra* note 143, at 34,928.

147. *Id.* at 34,930.

b. California Once-Through Cooling Rule

On May 4, 2010, the SWRCB acted under its authority as a state water board and adopted a policy pursuant to section 316(b) of the Clean Water Act that drastically reduces the permitted use of coastal and estuarine waters for once-through cooling of power plants.¹⁴⁸ The policy is implemented through NPDES permits and requires existing power plants to minimize harm to marine and estuarine life by implementing technology-based standards to either (a) reduce the minimum intake velocity to a rate not to exceed 0.5 foot per second or (b) achieve a comparable reduction of impingement mortality and entrainment of marine life.¹⁴⁹ To ensure that implementation of the policy will not impact local area and grid reliability, SWRCB relies on communications with the California ISO and the California Public Utilities Commission as well as reports provided by the Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS).¹⁵⁰ The SWRCB notes that nineteen power plants are regulated by the policy,¹⁵¹ with two nuclear plants receiving an alternative, site-specific determination that the best technology available is being used.¹⁵²

On May 17, 2012, the SWRCB adopted an amendment to its policy.¹⁵³ The amendment imposes requirements on specific fossil-fueled power plants with SWRCB-approved compliance plans extending beyond December 31, 2022.¹⁵⁴ Those plants must: “(a) [c]ommit to eliminate [the use of] seawater for cooling water purposes for all units at the facility,” (b) conduct studies “to evaluate new technologies . . . to reduce impingement and entrainment” (to be submitted to the SWRCB), and (c) upon approval of the proposal for new technologies to reduce impingement, implement the proposal by December 31, 2020.¹⁵⁵ The amendment affected specific units at three power plants owned by the Los Angeles Department of Water and Power and will extend compliance dates for four units until December 31, 2029.¹⁵⁶

148. CAL. STATE. WATER RES. CONTROL BD., RES. NO. 2010-0020, STATEWIDE WATER QUALITY CONTROL POLICY ON THE USE OF COASTAL AND ESTUARINE WATERS FOR POWER PLANT COOLING I (MAY 4, 2010), *available at* http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/cwa316may2010/otcpolicy_final050410.pdf.

149. *Id.* at 4-6.

150. *Id.* at 9-11.

151. NOTICE OF ADOPTION HEARING; NOTICE OF OPPORTUNITY TO COMMENT, ST. WATER RES. CONTROL Bd. 1 (May 17, 2011), *available at* http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/notice_otc_amendment.pdf.

152. SWRCB, REVIEW COMMITTEE TO OVERSEE SPECIAL STUDIES FOR THE NUCLEAR-FUELED POWER PLANTS USING ONCE-THROUGH COOLING, SCOPE OF WORK REPORT (Nov. 7, 2011), *available at* http://www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/rcnfpp/docs/110711fs.pdf.

153. CAL. ST. WATER RES. CONTROL Bd., RES. NO. 2011-0033, ADOPTION OF AN AMENDMENT TO THE WATER QUALITY CONTROL POLICY ON THE USE OF COASTAL AND ESTUARINE WATERS FOR POWER PLANT COOLING (July 19, 2011), *available at* http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/amdpley052512.pdf.

154. *Id.* at 447.

155. *Id.*

156. *Id.* at 455.

3. Coal Combustion Residuals Rule

In June 2010, the EPA proposed two approaches to change the regulatory treatment of Coal Combustion Residuals (CCRs) (also known as Coal Ash): either (1) regulate CCRs under a strict hazardous handling regime, or (2) make changes to the existing non-hazardous program.¹⁵⁷ The EPA initially drafted the Notice of Proposed Rulemaking (NOPR) to put CCR management under the Subtitle C (hazardous) program, but upon release a nonhazardous option was included in the proposal.¹⁵⁸ CCRs are currently regulated as non-hazardous wastes under Subtitle D of the Resource Conservation & Recovery Act (RCRA).¹⁵⁹

On April 5, 2012, several environmental groups, including Earthjustice and the Sierra Club, filed a lawsuit with the District Court for the District of Columbia to force the EPA to regulate the disposal of CCRs.¹⁶⁰ Petitioners argued that the EPA is ignoring requirements to periodically review waste rules since regulations that are applicable to coal ash have not been reviewed and revised since 1981.¹⁶¹ Petitioners sought a deadline for the issuance of final rules to address the disposal of CCRs.¹⁶²

B. Greenhouse Gases

1. EPA's EGU & Refinery GHG NSPS Update

On December 23, 2010, the EPA entered into two settlement agreements that would effectively resolve lawsuits brought by a number of states and environmental groups in the D.C. Circuit.¹⁶³ The lawsuits had challenged a pair of agency rulemakings amending existing performance standards for EGUs and

157. Proposed Rule, Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. 35,127 (June 21, 2010) (to be codified at 40 C.F.R. pts. 257, 261, and 264); Notice of Data Availability, 76 Fed. Reg. 63,252 (Oct. 11, 2011) (to be codified at 40 C.F.R. pt. 257) (seeking additional comment).

158. *Comments from the Center for Progressive Reform on Hazardous and Solid Waste Management system: Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities*, CENTER FOR PROGRESSIVE REF. 3-4 (Nov. 19, 2010), available at http://www.progressivereform.org/articles/Coal_Ash_Comments_Steinzor_111910.pdf.

159. 75 Fed. Reg. at 35,127 (noting that the nonhazardous option alternative would leave in place the agency's existing treatment of CCRs under the August 1993 and May 2000 Bevill Regulatory Determinations (codified at RCRA § 3001(b)(3)(A)(i), 42 U.S.C. 6921 (2012)), which excluded CCRs from regulation as hazardous waste under subtitle C of RCRA).

160. Complaint for Declaratory and Injunctive Relief, *Appalachian Voices v. Jackson*, No. 1:12-cv-00523, 2012 WL 1130611 (D.D.C. filed April 5, 2012).

161. *Id.* ¶ 5.

162. *Id.* ¶ 1 (prayer for relief).

163. Settlement Agreement, *New York v. EPA*, No. 06 Civ. 1322 (D.C. Cir. Dec. 23, 2010) [hereinafter EGU Settlement Agreement], available at <http://www.epa.gov/airquality/pdfs/boilerghgsettlement.pdf>; see also Notice of Proposed Settlement Agreement, Proposed Settlement Agreement: Clean Air Act Citizen Suit, 75 Fed. Reg. 82,392 (Dec. 30, 2010); Modification to Settlement Agreement, *New York v. EPA*, No. 06 Civ. 1322 (D.C. Cir. Dec. 23, 2010) [hereinafter Modification to Settlement Agreement], available at <http://www.epa.gov/airquality/cps/pdfs/20110613ghgsettlementmod.pdf>; Settlement Agreement, *American Petroleum Inst. v. EPA*, No. 08 Civ. 1277 (D.C. Cir. Dec. 23, 2010) [hereinafter Refinery Settlement Agreement], available at <http://www.epa.gov/airquality/pdfs/refineryghgsettlement.pdf>; see also Notice of Proposed Settlement Agreement, Proposed Settlement Agreement, 75 Fed. Reg. 82,390 (Dec. 30, 2010).

petroleum refineries under CAA section 111.¹⁶⁴ The settlement agreements established a schedule for the EPA to promulgate GHG performance standards for EGUs and refineries under section 111.¹⁶⁵ The EGU settlement agreement, as modified on June 13, 2011, required the EPA to issue the proposed rule establishing standards of performance for EGUs by September 30, 2011, and the final rule by May 26, 2012.¹⁶⁶ The refinery settlement agreement required the EPA to issue the proposed rule establishing standards of performance for petroleum refineries by December 10, 2011, and the final rule by November 10, 2012.¹⁶⁷

On April 13, 2012, the EPA published a proposed rule to establish Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units for public comment.¹⁶⁸ The proposed rule would establish a 1,000 lbs CO₂e/MWh standard of performance for all new fossil fuel-fired EGUs.¹⁶⁹ Two public hearings were held on May 24, 2012, and the public comment period ended on June 25, 2012.¹⁷⁰ As of the date of writing, no rule to establish GHG performance standards for petroleum refineries had been published.

2. Litigation

a. EPA Rulemakings

On June 26, 2012, the U.S. Court of Appeals for the D.C. Circuit upheld a group of EPA rulemakings undertaken in response to the U.S. Supreme Court's 2007 holding in *Massachusetts v. EPA*.¹⁷¹ The decision resolved four cases (*Coalition for Responsible Regulation v. EPA*, Nos. 09-1322, 10-1073, 10-1092, and *American Chemistry Council v. EPA*, No. 10-1167) that consolidated numerous challenges by state and industry petitioners to four EPA rulemakings:

164. EGU Settlement Agreement, *supra* note 163, at 1; *see also* 75 Fed. Reg. 82,392; Modification to Settlement Agreement, *supra* note 276, at 1; Refinery Settlement Agreement, *supra* note 163, at 1-2; *see also* 75 Fed. Reg. 82,390.

165. EGU Settlement Agreement, *supra* note 163, at 3-4; *see also* 75 Fed. Reg. 82,392, at 82,392-93; Modification to Settlement Agreement, *supra* note 163, at 3; Refinery Settlement Agreement, *supra* note 163, at 4-5; *see also* 75 Fed. Reg. 82,390, at 82,391.

166. EGU Settlement Agreement, *supra* note 163, at 3-4.

167. Refinery Settlement Agreement, *supra* note 163, at 4-5.

168. Proposed Rule, Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 22,392 (Apr. 13, 2012) (to be codified at 40 C.F.R. pt. 60).

169. *Id.* at 22,394 (“The EPA is proposing standards of performance that require that all new fossil fuel-fired EGUs meet an electricity-output-based emission rate of 1,000 lbs CO₂/MWh of electricity generated on a gross basis”).

170. Proposed Rule; Notice of Public Hearings, Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 26,476 (May 4, 2012) (to be codified at 40 C.F.R. pt. 60).

171. *Coalition for Responsible Regulation, Inc. v. U.S. EPA*, 684 F.3d 102 (D.C. Cir. 2012); *see also* *Massachusetts v. U.S. EPA*, 549 U.S. 497 (2007) (holding that a group of GHGs are subject to the EPA's regulatory authority as an “air pollutant” under the Clean Air Act).

the Endangerment Finding,¹⁷² the Tailpipe Rule,¹⁷³ the Timing Rule,¹⁷⁴ and the Tailoring Rule.¹⁷⁵ The decision also addressed challenges to the EPA's longstanding interpretation of the so-called "PSD permitting triggers."¹⁷⁶

Background. Following the *Massachusetts* decision, the EPA issued, in December 2009, the Endangerment Finding, which concluded that motor-vehicle GHG emissions "contribute to . . . the climate change problem, which is reasonably anticipated to endanger public health and welfare."¹⁷⁷ The Endangerment Finding triggered section 202 of the CAA,¹⁷⁸ which resulted in the EPA's promulgation on May 7, 2010 of the Tailpipe Rule. Effective January 2, 2011, the Tailpipe Rule established GHG emission standards for cars and light trucks for model years 2012-2016.¹⁷⁹ The Tailpipe Rule in turn triggered, under longstanding agency interpretation, provisions of the CAA's Prevention of Significant Deterioration of Air Quality (PSD) program and Title V that require regulation of sources whose emissions of "any air pollutant" regulated under the CAA exceed certain specified thresholds.¹⁸⁰ On this basis, the EPA issued the Timing Rule and the Tailoring Rule to establish when and which, respectively, stationary sources of GHGs would be subject to regulation under the PSD program and Title V.¹⁸¹ The April 2010 Timing Rule established that the PSD program and Title V requirements for GHG would begin on January 2, 2011, the effective date of the Tailpipe Rule.¹⁸² Noting that GHG are emitted in significantly greater quantities than other pollutants, in the June 2010 Tailoring Rule the EPA temporarily raised the statutory emission thresholds.¹⁸³

The Decision. With regard to the Endangerment Finding, the petitioners challenged various aspects of the rulemaking, including the EPA's interpretation that the endangerment finding decision should be restricted to a science-based determination, the adequacy of the scientific evidence that supported the finding,

172. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. 1) [hereinafter Endangerment Finding].

173. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, 75 Fed. Reg. 25,324 (May 7, 2010) (to be codified at 40 C.F.R. pts. 85, 86, and 600) [hereinafter Tailpipe Rule].

174. Reconsideration of Interpretation of Regulations That Determine Pollutants Covered by Clean Air Act Permitting Programs, 75 Fed. Reg. 17,004 (Apr. 2, 2010) (to be codified at 40 C.F.R. pts. 50, 52, 70, and 71) [hereinafter Timing Rule].

175. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010) (to be codified at 40 C.F.R. pts. 51, 52, 70, and 71) [hereinafter Tailoring Rule].

176. *Coalition for Responsible Regulation*, 684 F.3d at 127. The term "PSD permitting triggers" refers to the permitting requirements for construction and modification of major emitting facilities under Clean Air Act (CAA) §§ 165(a) and 169(1). *Id.* at 129.

177. *Id.* at 114-15 (quoting Endangerment Finding, *supra* note 172, at 66,499).

178. *Id.* at 115 (noting that section 202 requires the EPA to "establish motor-vehicle emission standards for 'any air pollutant . . . which may reasonably be anticipated to endanger public health or welfare'" (citing 42 U.S.C. § 7521(a)(1))).

179. Tailpipe Rule, *supra* note 173, at 25,324.

180. *Coalition for Responsible Regulation*, 684 F.3d at 115 (quoting 42 U.S.C. §§ 7479(1) and 7602(j)).

181. *Id.* at 115-16.

182. *Id.* at 115.

183. *Id.* at 115-16.

and several procedural aspects of the rulemaking process.¹⁸⁴ In affirming the EPA's rulemaking, the court concluded the CAA prohibits the EPA from considering non-scientific factors in making the endangerment decision; that the EPA's assessment of the "substantial" scientific evidence relied on in making the decision was entitled to deference; and the agency's decision was ultimately "consistent with *Massachusetts v. EPA* and the text and structure of the CAA, and [was] adequately supported by the administrative record."¹⁸⁵

The petitioners challenging the Tailpipe Rule argued that the EPA's failure to consider the cost impacts of the rule on stationary sources, resulting from the triggering provisions of the PSD and Title V provisions, was arbitrary and capricious, and that the rule was not justified by, nor sufficient to mitigate, the risks established in the Endangerment Finding.¹⁸⁶ The court found against the petitioners on each claim. The court held that, upon making the Endangerment Finding, the EPA had a non-discretionary duty under the language of CAA section 202(a)(1) to regulate GHG emissions from light duty vehicles.¹⁸⁷ In developing the rulemaking, the court found that the EPA could consider the costs of compliance for the motor vehicle industry, but could not consider cost impacts for stationary sources.¹⁸⁸ The court also found that the EPA was under no obligation to achieve a particular level of risk mitigation through a rulemaking.¹⁸⁹ Instead, the EPA need only show that the regulated source was a significant contributor of emissions subject to regulation pursuant to an endangerment finding.¹⁹⁰

The court then reviewed the EPA's interpretation of the PSD permitting triggers in CAA sections 165(a) and 169(1).¹⁹¹ The PSD program applies to stationary sources that emit "any air pollutant" in amounts that exceed certain specified thresholds.¹⁹² The EPA has historically interpreted "any air pollutant" to encompass any air pollutant regulated under the CAA, regardless of whether or not the agency has established national ambient air quality standards (NAAQS) for the pollutant.¹⁹³ Under this interpretation, "once the Tailpipe Rule took effect and made greenhouse gases a regulated pollutant under [CAA Title II], the PSD program automatically applied to facilities emitting [greenhouse gases above a certain threshold]."¹⁹⁴

The petitioners' argued that a source is "subject to PSD permitting requirements only if (1) a source has major emissions of a NAAQS criteria pollutant and (2) the source is located in an area attaining that pollutant's air

184. *Id.* at 117.

185. *Id.* at 117-21.

186. *Id.* at 126-27.

187. *Id.*

188. *Id.* at 128.

189. *Id.*

190. *Id.*

191. *Id.* at 129.

192. *Id.* (citing Requirements for Preparation, Adoption, and Submittal of Implementation Plans: Approval and Promulgation of Implementation Plans, 45 Fed. Reg. 52,676, 52,711 (August 7, 1980) [hereinafter 1980 Implementation Plan Requirements]).

193. *Id.* at 133 (citing 1980 Implementation Plan Requirements, *supra* note 192, at 52,710-11).

194. *Id.*

quality standard.”¹⁹⁵ Because GHGs are not NAAQS criteria pollutants, GHG emissions could not trigger PSD permitting requirements.¹⁹⁶ Petitioners also argued that “pollutant” only includes air pollutants “that, unlike greenhouse gases, pollute locally,”¹⁹⁷ and that the EPA erred procedurally by failing to follow CAA section 166, which requires a study of the pollutant and a one-year delay before the effective date of regulations.¹⁹⁸ The court ruled that, in the context of PSD permitting, the “EPA’s 34-year-old interpretation of the PSD permitting triggers is statutorily compelled,”¹⁹⁹ and that “‘any air pollutant’ . . . unambiguously means ‘any air pollutant regulated under the CAA.’”²⁰⁰ The court also rejected the petitioners’ alternate arguments, finding first that the PSD program is not limited to adverse effects on local air quality,²⁰¹ and second, that the “EPA never classified greenhouse gases as a NAAQS criteria pollutant, [so] the [section] 166 [study] requirements are entirely inapplicable here.”²⁰²

The court also denied petitioners’ claims respecting the Timing Rule and the Tailoring Rule. Petitioners argued that the Timing Rule improperly “extend[ed] the PSD and Title V permitting requirements to [GHG] emissions,” but the court noted that the rule “delay[ed] the applicability of these programs, providing that major emitters of greenhouse gases would be subject to PSD and Title V permitting requirements only once the Tailpipe Rule actually took effect on January 2, 2011.”²⁰³ Petitioners also urged the court to vacate the Tailoring Rule, arguing that it was not adequately justified by the three doctrines – “absurd results,” “administrative necessity,” and “one-step-at-a-time” – that were relied upon by the EPA in promulgating the rule.²⁰⁴ The court denied the petitioners’ claims for lack of standing due to failure to demonstrate injury or redressability.²⁰⁵

b. The Public Trust Doctrine

On May 31, 2012, the District Court for the District of Columbia granted the defendants’ and defendant-intervenors’ motion to dismiss filed in *Alec L. v. Jackson*.²⁰⁶ Plaintiffs sought declaratory and injunctive relief, alleging that defendant federal agencies had violated their fiduciary duties to preserve and protect the atmosphere as a commonly shared public trust resource under the public trust doctrine by “contributing to and allowing unsafe amounts of greenhouse gas emissions into the atmosphere.”²⁰⁷ Plaintiffs sought an injunction directing defendant federal agencies to “take all necessary actions to

195. *Id.* at 138-39 (internal quotations omitted).

196. *Id.* at 139.

197. *Id.* at 136.

198. *Id.* at 143.

199. *Id.*

200. *Id.* at 136.

201. *Id.* at 138.

202. *Id.* at 144.

203. *Id.*

204. *Id.* at 145.

205. *Id.* at 146.

206. *Alec L. v. Jackson*, No. 11-cv-02235, 2012 WL 1951969 (D.D.C. May 31, 2012).

207. *Id.* at *1-2.

enable carbon dioxide emissions to peak by December 2012 and decline by at least six percent per year beginning in 2013.”²⁰⁸ In granting the defendants’ motion to dismiss, the court, following the declaration made in *PPL Montana, LLC v. Montana*,²⁰⁹ stated that “the public trust doctrine remains a matter of state law”²¹⁰ and found that Plaintiffs had failed to raise a federal question necessary to invoke the court’s jurisdiction.²¹¹

3. California Developments

California’s GHG cap-and-trade regulation became effective January 1, 2012 with enforceable compliance obligations for GHG emissions set to begin on January 1, 2013.²¹² The regulation requires covered entities to annually surrender compliance instruments to cover a percentage of its GHG emissions from the prior year.²¹³ At the end of each multi-year compliance interval, the covered entity must surrender compliance instruments covering its GHG emissions during that compliance interval.²¹⁴ The regulation covers major sources of GHG emissions, beginning with electricity and large industrial facilities, and expanding in 2015 to include distributors of transportation fuels, natural gas, and other fuels.²¹⁵

In May 2012, amendments to the cap-and-trade regulations were proposed to “add security to the market system and help staff implement the cap-and-trade program”²¹⁶ and “to allow for the use of compliance instruments issued by linked jurisdictions.”²¹⁷ The first auction of allowances is scheduled to be conducted on November 14, 2012.²¹⁸

AB 32 Scoping Plan Update. On May 20, 2011, a California superior court issued a Judgment and Peremptory Writ of Mandate in *Association of Irrigated Residents v. California Air Resources Board*, in a case challenging aspects of the Climate Change Scoping Plan.²¹⁹ The superior court ordered the California Air Resources Board (ARB) to set aside its approval of the Scoping Plan as it relates

208. *Id.* at *2.

209. *PPL Montana, LLC v. Montana*, 132 S. Ct. 1215, 1235 (2012).

210. *Alec L.*, 2012 WL 1951969, at *3 (quoting *PPL Montana*, 132 S. Ct. at 1235).

211. *Id.* at *4.

212. *See generally* CAL. CODE REGS. tit. 17, §§ 95800-96022 (2012). *See also* CAL. AIR RES. BD., CAL. ENVTL. PROT. AGENCY, CALIFORNIA CAP-AND-TRADE PROGRAM IMPLEMENTATION: FREQUENTLY ASKED QUESTIONS (JUNE 25, 2012), available at <http://www.arb.ca.gov/cc/capandtrade/implementation/faq.pdf>.

213. CAL. CODE REGS. tit. 17, § 95856. *See also* CAL. AIR RES. BD., CAL. ENVTL. PROT. AGENCY, OVERVIEW OF ARB EMISSIONS TRADING PROGRAM BD. (October 20, 2011), available at http://www.arb.ca.gov/newsrel/2011/cap_trade_overview.pdf.

214. CAL. CODE REGS. tit. 17, §§ 95855-56.

215. *Id.* § 95851.

216. 19-Z CAL. REGULATORY NOTICE REG. 625 (May 11, 2012).

217. *Id.* at 630.

218. *See generally* *Auction Information*, CAL. AIR RES. BD., <http://www.arb.ca.gov/cc/capandtrade/auction/auction.htm> (last reviewed Oct. 8, 2012).

219. Order Granting in Part and Denying in Part Petition for Writ of Mandate, Ass’n of Irrigated Residents v. Cal. Air Res. Bd., No. CPF-09-509562, 2011 WL 991534 (Cal. Super. Ct. 2011). The Air Resources Board (ARB) prepared and, in 2008, approved a Climate Change Scoping Plan (Scoping Plan) to achieve reductions in California’s greenhouse gas emissions. *Id.* The Scoping Plan included a cap-and-trade program as an emission reduction measure. *Id.*

to cap-and-trade and enjoined ARB from engaging in any cap-and-trade related activity, including rulemaking and implementation activities, until ARB comes into complete compliance with its obligations under its certified regulatory program and the California Environmental Quality Act (CEQA).²²⁰

The superior court's judgment was appealed, and a California court of appeals subsequently granted ARB's petition for a writ of supersedeas, staying enforcement of the writ of mandate.²²¹ On August 24, 2011, ARB approved the Scoping Plan including a supplemental environmental analysis, and after ARB filed a return to the writ, the trial court discharged the writ of mandate on December 5, 2011.²²² Finally, on June 19, 2012, the appellate court affirmed that ARB approved the Scoping Plan in compliance with the California Global Warming Solutions Act of 2006.²²³

4. Regional Greenhouse Gas Regimes

Regional Greenhouse Gas Initiative (RGGI). The nation's only operating mandatory regional GHG cap-and-trade regime faced several new challenges from foes of the program. A report containing results from the first three-year compliance period that ended December 31, 2011 showed covered emissions down 23% over the period and that only five of the 211 power plants subject to compliance requirements were non-compliant.²²⁴

In New Jersey, Governor Chris Christie's May 2011 decision to withdraw the state from RGGI went into effect in January 2012.²²⁵ As a result, the state will not participate in the trading program's second three-year compliance period, which began January 1, 2012 and ends December 31, 2014.²²⁶ Governor Christie's stated reason for withdrawing his state from RGGI was that the program is an ineffective method of reducing GHG emissions.²²⁷ In the state legislature, supporters passed in late 2011, and again in 2012, legislation to continue the state's participation in RGGI.²²⁸ Governor Christie vetoed the first bill.²²⁹ In the courts, the Natural Resources Defense Council and Environment New Jersey, a pair of environmental groups, filed a lawsuit on June 6, 2012 in state superior court seeking to overturn the Governor's decision.²³⁰ The suit

220. *Id.*

221. *Ass'n of Irrigated Residents v. Cal. Air Resources Bd.*, 143 Cal. Rptr. 3d 65, 71 (Cal. Ct. App. 2012).

222. *Id.*; see also CAL. AIR RES. BD., RESOLUTION 11-27 (Aug. 24, 2011).

223. *Ass'n of Irrigated Residents*, 143 Cal. Rptr. 3d at 8112.

224. Press Release, Reg'l Greenhouse Gas Initiative, Inc., 97% of RGGI Units Meet First Compliance Period Obligations (June 4, 2012), available at www.rggi.org/docs/PR060412_Compliance.pdf.

225. Dep't of Env'tl. Prot. Sustainability and Green Energy, *RGGI Withdrawal: Frequently Asked Questions*, STATE OF N.J., <http://www.nj.gov/dep/sage/ce-rggifaq.html> (last updated Feb. 24, 2012).

226. *Id.*

227. Transcript of Press Conference, Governor Chris Christie, *New Jersey's Future is Green* (May 26, 2011), <http://www.nj.gov/governor/news/news/552011/approved/20110526a.html>.

228. S. 2946, 214th Leg. (N.J. 2011); S. Con. Res. 164, 214th Leg. (N.J. 2011); S. 1322, 215th Leg. (N.J. 2012).

229. Press Release, Office of the Governor, State of N.J., Governor Christie Takes Action on Legislation (Aug. 29, 2011), <http://www.state.nj.us/governor/news/news/552011/approved/20110819c.html>.

230. Press Release, Natural Res. Def. Council, Christie Administration Sued for Illegally Leaving Regional Clean Energy Pact (June 6, 2012), <http://www.nrdc.org/media/2012/120606.asp>.

claims that the Governor's executive decision to withdraw the state from RGGI violated state law because the Governor failed to provide public notice of the decision or to an adequate public comment period.²³¹

In New York, three members of Americans for Prosperity, a conservative advocacy group, sued Governor Andrew M. Cuomo and two state agencies²³² in the state supreme court challenging regulations that implement the carbon trading program.²³³ The plaintiffs argued that, as electric utility rate-payers, they were harmed by the state regulations through increased costs passed along by electricity producers required to purchase CO₂ allowances.²³⁴ The case was dismissed June 13, 2012 due to a lack of standing.²³⁵ The court held that the plaintiffs failed to establish a particularized injury that was distinct from those felt by the general public.²³⁶ The court further found that the plaintiff's claims would be barred by the doctrine of laches²³⁷ as a result of the long delay between the 2008 promulgation of the state's RGGI regulations and the plaintiff's June 2011 lawsuit.²³⁸

The final challenge to RGGI during 2012 occurred in New Hampshire, where the state legislature passed a bill (H.B. 1490) to enable the state's withdrawal from the program.²³⁹ The bill conditions withdrawal authority on two other states leaving or being authorized to leave, or a state representing greater than 10% of the electric load regulated by the program leaving.²⁴⁰ The bill would also modify aspects of the state's RGGI program by prohibiting the retirement of allowances that remain unsold following allowance auctions, and providing rebates to state tax payers for the cost of allowances.²⁴¹ As of July 2012, New Hampshire Governor John Lynch had not indicated whether he would sign the legislation into law.

Western Climate Initiative. All U.S. state members of the Western Climate Initiative (WCI), a GHG cap-and-trade program in the Western United States and Canada, other than California (Arizona, Montana, New Mexico, Oregon, Utah and Washington) announced their departure from the trading program on November 18, 2011.²⁴² The remaining members, which remain committed to

231. *Id.*

232. The New York State Department of Environmental Conservation (DEC) and the New York State Energy Research and Development Authority (NYSERDA), the two agencies that adopted rules implementing RGGI's Budget Trading and Auction Programs.

233. *Thrun v. Cuomo*, No. 4358-11, at 2 (N.Y. Sup. Ct. June 13, 2012) (noting that the regulations challenged were: CO₂ Budget Trading Program, N.Y. COMP. CODES R. & REGS. tit. 6, pt. 242 (2008); CO₂ Allowance Auction Program, N.Y. COMP. CODES R. & REGS. tit. 21 pt. 507 (2008)).

234. *Id.* at 4.

235. *Id.* at 7.

236. *Id.*

237. *Id.* at 6. Laches is an equitable principle that bars suits in equity when a delay in asserting a claim would result in prejudice to an adverse party. *Id.*

238. *Id.* New York signed the Memorandum of Understanding that created RGGI in December 2005. The state regulations that implemented RGGI became effective in September and October 2008. *Id.*

239. H.B. 1490, 2012 Sess. (N.H. 2012).

240. *Id.*

241. *Id.*

242. *Six US States Leave the Western Climate Initiative*, PLATTS (Nov. 18, 2011), <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/6695863>.

reducing GHG emissions to at least 15% below 2005 emission levels by 2020,²⁴³ include California and the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.²⁴⁴

Despite the departures, the WCI and its remaining member jurisdictions continued to develop and implement the trading program. The WCI released new recommendations and requirements related to offset project review and approval, offset credit creation, and mandatory reporting in Canadian jurisdictions.²⁴⁵ On December 16, 2011, Quebec announced the formal adoption of regulations to implement the trading program beginning January 1, 2013.²⁴⁶ California, after delaying its own trading program by a year due to in-state legal challenges,²⁴⁷ is on track to begin trading on the same date.²⁴⁸

Concurrent with their withdrawal from the WCI, the six departing states announced their participation in an alternate organization for GHG emission reductions, the North America 2050 Initiative (NA2050).²⁴⁹ The new partnership is intended to facilitate efforts by North American states and provinces from the United States, Canada and Mexico to achieve a low carbon economy.²⁵⁰ The primary objectives of the NA2050 are to “[c]oordinate efforts to design, promote and implement effective and cost-effective policies; [a]dvocate for the most appropriate roles for federal, state, and provincial governments; [a]chieve meaningful [GHG] emission reductions; and [d]emonstrate the economic and job creation benefits of policies.”²⁵¹ NA2050 currently counts as members sixteen U.S. states²⁵² and four Canadian provinces.²⁵³

III. OTHER ISSUES

A. *Clean Water Act*

1. *Sackett v. EPA*

The United States Supreme Court ruled that an EPA compliance order issued pursuant to the Clean Water Act is subject to judicial review under the

243. *Program Design*, WESTERN CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/designing-the-program> (last visited Oct. 4, 2012).

244. *News & Updates*, WESTERN CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/news-and-updates> (last visited Oct. 4, 2012).

245. *Id.*

246. *Id.*

247. Margot Roosevelt, *California Delays Its Carbon Trading Program for a Year*, LA TIMES BLOG: GREENSPACE (June 29, 2011, 5:51 PM), <http://latimesblogs.latimes.com/greenspace/2011/06/california-cap-and-trade.html>.

248. *FAQ*, WESTERN CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program/faq> (last visited Oct. 4, 2012).

249. *About NA2050*, N. AM. 2050, <http://na2050.org/about/> (last visited Oct. 4, 2012).

250. *Id.*

251. *Id.*

252. *Participants*, N. AM. 2050, <http://na2050.org/participants/> (last visited Oct. 4, 2012) (listing the member U.S. States as: Arizona, California, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New Mexico, Oregon, Rhode Island, Vermont, and Washington).

253. *Id.* (listing the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec).

Administrative Procedure Act (APA).²⁵⁴ The Court, however, did not review the merits of whether the Clean Water Act was applicable to the Sacketts.²⁵⁵ The Sacketts owned a 2/3-acre residential lot in Idaho and, in preparation of constructing a home, filled in part of their lot with dirt and rock.²⁵⁶ Some months later, they received a compliance order from the EPA stating that the Sacketts' property contained wetlands adjacent to navigable waters and, therefore, was subject to the Clean Water Act.²⁵⁷ The order further stated that, by causing fill material to enter the waters, they had engaged in the "discharge of pollutants" within the meaning of sections 301 and 502(12) of the Clean Water Act.²⁵⁸ Because the Sacketts did not have a permit to do so, the order found that filling the wetlands constituted a violation of the Clean Water Act.²⁵⁹ The order directed the Sacketts to restore the site in accordance with the EPA's "Restoration Work Plan" and "to provide and/or obtain access to . . . all records and documentation related to the conditions at the [s]ite to . . . EPA employees."²⁶⁰

The Sacketts sought judicial review of the EPA's compliance order, contending that the order was "arbitrary and capricious" under the APA,²⁶¹ and that it deprived them of their due process rights under the Fifth Amendment.²⁶² The Ninth Circuit concluded that the Clean Water Act "preclude[s] pre-enforcement judicial review of compliance orders,"²⁶³ and that such preclusion does not violate the Fifth Amendment's due process guarantee.²⁶⁴ The Supreme Court reversed the Ninth Circuit's decision, holding that the Sacketts may bring a civil action under the APA to challenge the issuance of the EPA's compliance order.²⁶⁵ The Court found that the compliance order was final agency action, asserting that the EPA order determined the rights or obligations of the Sacketts by directing that they "restore" their property and give the EPA access to their property and records.²⁶⁶ The EPA unsuccessfully argued to the Court that the Clean Water Act excludes APA review by the courts.²⁶⁷ The Court found that "[n]othing in the Clean Water Act *expressly* precludes judicial review under the APA or otherwise,"²⁶⁸ and that the EPA failed to overcome the APA's "presumption favoring judicial review of final administrative action."²⁶⁹

254. *Sackett v. EPA*, 132 S. Ct. 1367, 1374 (2012).

255. *Id.* at 1370.

256. *Id.*

257. *Id.* at 1370-71.

258. *Id.* at 1371 (citing 33 U.S.C. §§ 1311 and 1362(12)).

259. *Id.*

260. *Id.* (quoting EPA ORDER at 21-22).

261. *Id.* (citing 5 U.S.C. § 706(2)(A)).

262. *Id.*

263. *Id.* (quoting *Sackett v. EPA*, 622 F.3d 1139, 1144 (9th Cir. 2010) (internal citations omitted)).

264. *Id.* (quoting *Sackett*, 622 F.3d at 1144).

265. *Id.* at 1374.

266. *Id.* at 1371.

267. *Id.* at 1372-74.

268. *Id.* at 1372.

269. *Id.* at 1373 (quoting *Block v. Cmty. Nutrition Inst.*, 467 U.S. 340, 349 (1984)).

2. National Mining Association v. Jackson

On October 6, 2011, the United States District Court for the District of Columbia ruled that the EPA exceeded its Clean Water Act statutory authority under section 404 and that the Multi-Criteria Integrated Resource Assessment (MCIR Assessment) and the Enhanced Coordination Process (EC Process) were “not exempt from the APA’s notice and comment rulemaking requirements.”²⁷⁰ The MCIR Assessment “involv[ed] the EPA applying the [Clean Water Act] 404(b)(1) guidelines and directing the Corps on which permit applications must go through the EC Process for further review and coordination.”²⁷¹ The National Mining Association (NMA) brought a civil action in district court challenging the MCIR Assessment and the EC Process on the grounds that the EPA exceeded its statutory authority under the Clean Water Act by expanding the EPA’s role in the issuance of section 404 permits, and that the MCIR Assessment and the EC Process established by the agencies violated the APA by establishing a permitting regime under the Clean Water Act without notice and comment procedures.²⁷²

The court granted NMA’s motion for partial summary judgment on the grounds that the EPA had exceeded its statutory authority under the Clean Water Act and “the MCIR Assessment and the EC Process are legislative rules not exempt from the APA’s notice and comment rulemaking requirements.”²⁷³ The court found that section 404 of the Clean Water Act “specifically identif[ied] the Corps as the permitting authority” and only “denote[d] specific instances in which the EPA and the Corps were to coordinate their efforts,” and “assign[ed] the EPA discrete functions,”²⁷⁴ such as the EPA’s 404(c) veto “authority to prevent the Corps from authorizing a particular dumpsite.”²⁷⁵ The court held that, “[w]ith the adoption of the MCIR Assessment and the EC Process, the EPA has expanded its role in the issuance of Section 404 permits and has thus exceeded the statutory authority afforded to it by the Clean Water Act.”²⁷⁶

With regard to violating the APA, the court found that “the Clean Water Act contains no provisions that contemplate the EPA applying the 404(b)(1) guidelines to pending permit applications” and, in fact, “specifically names the Corps as the permitting authority [with] a limited . . . role for the EPA in the permitting process.”²⁷⁷ Further, the court found that “the creation of the MCIR Assessment removed the task of applying the 404(b)(1) guidelines to pending permits from the Corps and bestowed it upon the EPA signifies a substantive,

270. *National Mining Assoc. v. Jackson*, 816 F. Supp. 2d 37, 49 (D.D.C. 2011). On June 11, 2009, the EPA and the Army Corps of Engineers (Corps) issued two separate memoranda outlining the details under which permits applications under the Clean Water Act would be processed. *Id.* at 415. The memoranda set forth that there would be “a two-step process that begins with the EPA’s MCIR Assessment and proceeds to a separate coordination process between the Corps and the EPA.” *Id.* (citation omitted).

271. *Id.*

272. *Id.* at 42.

273. *Id.* at 49.

274. *Id.* at 45.

275. *Id.* at 40.

276. *Id.* at 45.

277. *Id.* at 48.

rather than a procedural, change to the permitting framework.”²⁷⁸ Because the court found that the MCIR Assessment and the EC Process are legislative rules,²⁷⁹ the court ruled that the MCIR Assessment and the EC Process were not exempt from the APA’s notice and comment rulemaking requirements.²⁸⁰

B. *Mountain Top Mining: Mingo Logan Coal, Co. v. EPA*

In March, the United States District Court for the District of Columbia ruled in favor of petitioners who argued that the EPA does not have the authority to revoke permits issued by the U.S. Army Corps of Engineers after the fact.²⁸¹ The court’s ruling overturned the EPA’s veto of a permit issued by the Army Corps of Engineers for the Spruce No. 1 mine in Logan County pending the EPA’s appeal. The proceeding is currently before the Court of Appeals for the D.C. Circuit, and briefing is expected to continue through September.

C. *Nuclear: New York v. Nuclear Regulatory Commission*

On June 8, 2012, the D.C. Circuit vacated and remanded to the Nuclear Regulatory Commission (NRC) a rulemaking addressing temporary storage and permanent disposal of nuclear waste.²⁸² The court found that the NRC failed to comply with NEPA requirements when the agency passed, in 2010, the most recent update to its Waste Confidence Decision (WCD Update)²⁸³ and the Temporary Storage Rule (TSR),²⁸⁴ which implemented the WCD Update by updating the NRC’s regulations in accordance with the revised findings.²⁸⁵

The original Waste Confidence Rule passed in 1984 in response to a D.C. Circuit order directing the agency to consider whether, in the absence of a permanent waste disposal solution, nuclear waste generated by commercial reactors could be safely stored on site beyond the end of the generators’ operating licenses.²⁸⁶ In the WCD, the NRC considered “temporary storage” at commercial reactor sites generically and made five “Waste Confidence Findings” that addressed technical and safety issues related to temporary and permanent storage of nuclear waste.²⁸⁷ The 2010 WCD Update amended two of

278. *Id.* at 47.

279. *Id.* (citing *Am. Mining Congress v. Mine Safety & Health Admin.*, 995 F.2d 1106 (D.C. Cir. 1993)).

280. *Id.* at 49.

281. *Mingo Logan Coal Co. v. U.S. EPA*, 850 F. Supp. 2d 133 (D.D.C. 2012), *appeal pending*, *Mingo Logan Coal Co. v. U.S. EPA*, No. 12-5150 (D.C. Cir.).

282. *New York v. Nuclear Regulatory Comm’n*, 681 F.3d 471, 483 (D.C. Cir. 2012).

283. Waste Confidence Decision Update, 75 Fed. Reg. 81,037 (Dec. 23, 2010) (updating the Waste Confidence Decision, 49 Fed. Reg. 34,658, 34,659–60 (Aug. 31, 1984) and Waste Confidence Decision Review: Status, 64 Fed. Reg. 68,005, 68,006–07 (Dec. 6, 1999) (reviewing the WCD without alteration)).

284. Consideration of Environmental Impacts of Temporary Storage of Spent Fuel after Cessation of Reactor Operation, 75 Fed. Reg. 81,032 (Dec. 23, 2010) (amending 10 C.F.R. § 51.23(a)) [hereinafter Temporary Storage Rule].

285. *New York v. Nuclear Regulatory Comm’n*, 681 F.3d at 482-83.

286. *Id.* at 474-75.

287. *Id.* at 475. The findings were:

- 1) safe disposal in a mined geologic repository is technically feasible, 2) such a repository will be available by 2007–2009, 3) waste will be managed safely until the repository is available, 4) SNF can be stored safely at nuclear plants for at least thirty years beyond the licensed life of each plant, and 5) safe, independent storage will be made available if needed.

the original WCD's five findings. Specifically, the WCD Update revised Finding 2 to state that a permanent repository will be available "when necessary," rather than by 2025, and updated Finding 4 to find that spent nuclear can be safely stored on site for at least sixty years, rather than only thirty.²⁸⁸ In adopting the WCD Update, the Commission also released the TSR.²⁸⁹

In their petitions for review, four states, an Indian community, and a number of environmental groups challenged whether the NRC adequately applied NEPA in promulgating the WCD Update and the TSR.²⁹⁰ The D.C. Circuit initially found that the rulemakings were a major federal action subject to NEPA's procedural requirement that the agency conduct an environmental assessment followed by either a finding of no significant impact or a full environmental impact statement.²⁹¹ Without deciding whether the WCD Update constituted an environmental assessment of the permanent storage conclusion for NEPA purposes, the court held that, in amending Finding 2 to state that a permanent repository would be available "when necessary," the agency failed to adequately analyze the environmental effects of the potential failure to establish a permanent repository.²⁹² With regard to the changes to Finding 4, the court held that the NRC's conclusion that the amendment would have no significant impact was unsupported because the agency failed to evaluate future risks of containment pool leaks and improperly evaluated the potential consequences of pool fires.²⁹³ The rulemaking was remanded to the NRC for further action consistent with the court's decision.²⁹⁴

Id. The NRC subsequently reviewed and updated the WCD in 1990 and reviewed, without alteration, again in 1999. *Id.*

288. *Id.* The original Holding 2, which predicted permanent storage availability in the 2007-2009 timeframe, was amended to 2025 in the 1990 update to the WCD. *Id.* (citing Waste Confidence Decision Review, 55 Fed. Reg. 38,474, 38,505 (Sept. 18, 1990)).

289. *Id.* (citing Temporary Storage Rule, *supra* note 284).

290. *Id.* at 473. The petitioners included the Prairie Island Indian Community, the Natural Resources Defense Council, Inc., Blue Ridge Environmental Defense League, Riverkeeper, Inc., Southern Alliance for Clean Energy, Inc., and the States of Connecticut, New Jersey, New York, and Vermont.

291. *Id.* at 476-77.

292. *Id.* at 478-79.

293. *Id.* at 479.

294. *Id.* at 483.

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