

THE CONTROL OF AIR POLLUTION ON INDIAN RESERVATIONS

BY

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Changes in oil and gas production technology in recent years led to a substantial increase in domestic oil and gas production. This production reduced the nation's dependence on imported fuel, but it has resulted in serious air pollution problems developing in rural areas of the western United States, including Indian lands. The lack of effective air pollution controls on new and existing oil and gas well operations has made it difficult to control emissions from this industry. This Article looks at the efforts being made to deal with air quality issues arising in Indian country that involve federal and tribal law. It includes an examination of air pollution controls in Utah's Indian country.

I.	INTRODUCTION.....	894
II.	FEDERAL REGULATION OF AIR QUALITY IN INDIAN COUNTRY.....	894
	A. <i>EPA's Federal Implementation Plans</i>	898
	B. <i>EPA's PSD Permit Program</i>	899
	C. <i>EPA's Nonattainment Program</i>	903
	D. <i>EPA's Operating Permit Program</i>	905
	E. <i>Minor Source Permit Programs</i>	909
	F. <i>General Permits</i>	912
III.	TRIBAL REGULATION OF AIR QUALITY.....	914
	A. <i>Tribes as States</i>	916
	B. <i>Tribal Implementation Plans (TIPs)</i>	920
	C. <i>The Jurisdictional Reach of a TIP</i>	922
	D. <i>Delegation</i>	924
IV.	OIL & GAS REGULATION IN INDIAN COUNTRY.....	925
	A. <i>NSPS/HAPs</i>	926
	B. <i>Oil and Natural Gas Sector: Emission Standards for New and Modified Sources</i>	928

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C. <i>The 2016 FIP</i>	932
D. <i>EPA's GHG Reporting Requirements</i>	935
E. <i>Bureau of Land Management Regulations</i>	936
V. AIR POLLUTION CONTROL IN UTAH'S INDIAN COUNTRY	938
VI. UTAH'S Uintah Basin	943
VII. CONCLUSION	946
APPENDIX.....	948

I. INTRODUCTION

Changes in oil and gas production technology in recent years led to a boom in domestic oil and gas production. Between 2010 and 2014, petroleum production increased 59% and natural gas production increased by 22%.¹ While this production has reduced the nation's dependence on imported fuel, it has resulted in serious air pollution problems developing in sparsely populated oil and gas production areas of the western United States including Indian lands.² The lack of effective air pollution controls, particularly on existing oil and gas well operations, has made it difficult to control emissions from this industry. This Article looks at the efforts being made to deal with air quality issues arising in Indian country that involve a legal regimen that differs from the program applicable to the rest of the nation. It examines the air pollution control program applicable to Indian lands in Utah where approximately 40% of the active oil wells and 2.4% of the gas wells are located in Indian reservations.³

II. FEDERAL REGULATION OF AIR QUALITY IN INDIAN COUNTRY

Indian lands in 2014 produced 1.8% of U.S. crude oil, 0.4% of the natural gas liquids, and 1.0% of the natural gas production.⁴ Royalty income from energy and mineral resources in 2015 is projected to exceed \$1 billion, and is the largest source of revenue generated from Indian Trust lands.⁵ Moreover, the energy industry is a major source of employment responsible for an

¹ See U.S. Energy Info. Admin., U.S. Dep't of Energy, *U.S. Field Production of Crude Oil (Thousand Barrels per Day)*, <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=p&t=mcrf&f=m> (last visited Nov. 19, 2016); U.S. Energy Info. Admin., U.S. Dep't of Energy, *U.S. Natural Gas Marketed Production (Million Cubic Feet)*, <https://www.eia.gov/dnav/ng/hist/n9050us2a.htm> (last visited Nov. 19, 2016).

² Jana B. Milford, *Out in Front? State and Federal Regulation of Air Pollution Emissions from Oil and Gas Production Activities in the Western United States*, 55 NAT. RES. J. 1, 17–38 (2014).

³ Div. of Oil, Gas and Mining, State of Utah, *Well Counts*, http://oilgas.ogm.utah.gov/Statistics/Well_counts.cfm (last visited Nov. 19, 2016).

⁴ U.S. ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, SALES OF FOSSIL FUELS PRODUCED FROM FEDERAL AND INDIAN LANDS FY 2003 THROUGH FY 2014 3 tlb.2 (2015), available at <http://www.eia.gov/analysis/requests/federalandsales/pdf/eia-federalandsales.pdf>.

⁵ BUREAU OF INDIAN AFFAIRS, OIL AND GAS OUTLOOK IN INDIAN COUNTRY 1 (2013), available at <http://www.bia.gov/cs/groups/xieed/documents/document/idc1-024535.pdf>.

estimated 96,080 jobs.⁶ Because energy production from Indian lands is concentrated in the West, the local economic benefits are significant. Nevertheless, some Indian officials believe onerous restrictions by the United States Bureau of Land Management (BLM) are responsible for the relatively small percentage of domestic production from Indian lands.⁷ Regardless of whether changes in regulations would increase production, the current level of oil and gas production in Indian country is contributing to high concentrations of ambient ozone that threatens public health and the environment.⁸

Indian tribes have inherent sovereignty under the United States Constitution.⁹ Nevertheless, they are considered domestic dependent nations, and the Federal government is the trustee, which results in the United States Environmental Protection Agency (EPA) playing an important role in regulating air pollution in Indian country.¹⁰ The present federal policy is to encourage Indian tribes to manage their land and resources¹¹ subject to restrictions imposed by Congress.¹²

The United States government is the trustee for the 566 tribal entities in the forty-eight contiguous states and Alaska that are recognized by the United States Bureau of Indian Affairs.¹³ A large number of the tribes are in Alaska because each native village is considered a tribal entity.¹⁴ An Indian tribe “means an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994.”¹⁵ Indian tribes control approximately 326 land areas, which encompass over 56 million acres of Indian reservations.¹⁶ There are over 300

⁶ *Id.* at 6 tbl.2.

⁷ John Kemp, *Tribes Call for Faster Drilling on Indian lands*, REUTERS, Feb. 5, 2013, <http://reut.rs/14Pb9WX> (last visited Nov. 19, 2016).

⁸ See *infra* Part V (discussing current air quality in Indian country).

⁹ U.S. CONST. art. I, § 8, cl. 3; *Worcester v. Georgia*, 31 U.S. (6 Pet.) 515, 530 (1832); *United States v. Wheeler*, 435 U.S. 313, 322–23 (1978); see also Alex Tallchief Skibine, *Tribal Sovereign Interests Beyond the Reservation Borders*, 12 LEWIS & CLARK L. REV. 1003, 1003–06 (2008) (discussing extent of sovereignty).

¹⁰ *Cherokee Nation v. Georgia*, 30 U.S. (5 Pet.) 1, 17 (1831). For a critique of this trust relationship, see Alex T. Skibine, *Using the New Equal Protection to Challenge Federal Control Over Tribal Lands*, 36 PUB. LAND & RESOURCES L. REV. 3, 4–5, 67 (2015) [hereinafter Skibine, *New Equal Protection*]; Heather Whitney-Williams & Hillary M. Hoffmann, *Fracking in Indian Country: The Federal Trust Relationship, Tribal Sovereignty, and the Beneficial Use of Water*, 32 YALE J. ON REG. 451, 452–53, 493–94 (2015).

¹¹ *New Mexico v. Mescalero Apache Tribe*, 462 U.S. 324, 335 (1983); *MacArthur v. San Juan County*, 391 F. Supp. 2d 895, 941 (D. Utah 2005).

¹² *United States v. Kagama*, 118 U.S. 375, 379–80 (1886).

¹³ Indian Entities Recognized and Eligible to Receive Services from the United States Bureau of Indian Affairs, 80 Fed. Reg. 1,942 (Jan. 14, 2015).

¹⁴ *Id.* at 1,943.

¹⁵ Consultation and Coordination with Indian Tribal Governments, Exec. Order No. 13,175, § 1(b), 3 C.F.R. at 304, 304–05 (2001); see *United States v. Sandoval*, 231 U.S. 28, 48 (1913) (holding that a pueblo which held land with communal title was a dependent community).

¹⁶ Bureau of Indian Affairs, *Frequently Asked Questions*, <http://www.bia.gov/FAQs/> (last visited Nov. 19, 2016).

Indian reservations in the continental United States.¹⁷ The largest reservation is the Navajo Nation with more than 16 million acres in Arizona, New Mexico, and Utah. Many reservations, however, are less than 100 acres.¹⁸

As used in this Article, “Indian reservation” corresponds to the first prong of the term “Indian country” as defined in 18 U.S.C. § 1151, i.e., “all land within the limits of any Indian reservation.”¹⁹ Tribal jurisdiction is complicated. Tribes have inherent sovereignty over their members and their territory, generally do not have criminal jurisdiction over non-Indians, and generally do not have civil authority over the conduct of nonmembers of the tribe on nontrust land within reservation boundaries.²⁰ Except that tribes may have authority to regulate the conduct of nonmembers who have consensually entered into commercial dealings with the tribe, or whose conduct threatens the political integrity, economic security, or health or welfare of the tribe.²¹ However, an Indian tribe has very limited authority to regulate the conduct of non-Indians occurring outside reservation boundaries.²² States generally do not have authority to implement environmental protection laws in Indian country.²³

Determining what constitutes Indian country can be challenging. For example, on October 30, 2001, the United States Court of Appeals for the District of Columbia defined Indian lands as land validly set apart “for the use of the Indians . . . under the superintendence of the Government.”²⁴ The D.C. Circuit in 2014, vacated the definition of Indian country with respect to nonreservation areas of Indian country (i.e., dependent Indian communities and Indian allotments).²⁵ The court held that the states, not the tribes or

¹⁷ Am. Indian Heritage Found., *Indian Reservations*, <http://www.indians.org/articles/indian-reservations.html> (last visited Nov. 19, 2016).

¹⁸ World Atlas, *Biggest Indian Reservations in the United States*, <http://www.worldatlas.com/articles/biggest-indian-reservations-in-the-united-states.html> (last visited Nov. 19, 2016); NAT'L PARK SERV., INDIAN RESERVATIONS IN THE CONTINENTAL UNITED STATES, available at <https://www.nps.gov/NAGPRA/DOCUMENTS/RESERV.PDF>.

¹⁹ For an explanation of the different terminology, see Julie M. Reding, Comment, *Controlling Blue Skies in Indian Country: Who is the Air Quality Posse—Tribes or States? The Applicability of the Clean Air Act in Indian Country and on Oklahoma Tribal Lands*, 18 AM. INDIAN L. REV. 161, 184, & nn.174–76 (1993). See also *Ute Indian Tribe v. Utah*, 521 F. Supp. 1072, 1081–83 (D. Utah 1981) (explaining definition of “Indian country” as used by courts throughout the years).

²⁰ *Montana v. United States*, 450 U.S. 554, 564–66 (1981).

²¹ *Id.*; see also COHEN'S HANDBOOK OF FEDERAL INDIAN LAW § 10.03[2][a] (Nell Jessup Newton ed., 2012) (“Although tribes have full inherent authority over their citizens, the Supreme Court has limited tribal authority over nonmembers on fee lands . . .”).

²² William C. Scott, *Tribal Management of Tribal Lands and Resources: Environmental Regulation*, 52 ROCKY MOUNTAIN MIN. L. FOUND. J. 25, 29 (2015); see also *San Manuel Indian Bingo & Casino v. Nat'l Labor Relations Bd.*, 475 F.3d 1306, 1313–14 (D.C. Cir. 2007) (“[W]hen a tribal government goes beyond matters of internal self-governance and enters into off-reservation business transaction with non-Indians, its claim of sovereignty is at its weakest.”).

²³ COHEN'S HANDBOOK OF FEDERAL INDIAN LAW, *supra* note 21, at § 10.02[1].

²⁴ *Michigan v. U.S. Env'tl. Prot. Agency*, 268 F.3d 1075, 1079 (D.C. Cir. 2001) (quoting *Okla. Tax Comm'n v. Citizen Band Potawatomi Indian Tribe of Okla.*, 498 U.S. 505, 511 (1991)).

²⁵ *Okla. Dept. of Env'tl. Quality v. U.S. Env'tl. Prot. Agency*, 740 F.3d 185, 194–95 (D.C. Cir. 2014).

EPA, have initial primary responsibility for implementation plans under section 110 of the Clean Air Act²⁶ (CAA) in nonreservation areas of Indian country in the absence of a demonstration of tribal jurisdiction by EPA or a tribe.²⁷ EPA has amended its regulation to be consistent with the court's decision.²⁸ Moreover, over time the boundaries of reservations change. For example, the Ute Indian Tribe in Utah occupies the Uintah and Ouray Reservation.²⁹ Its exterior boundary is defined by the original boundaries of the Uintah Valley Reservation and the addition of the Uncompahgre Reservation and the Hill Creek Extension.³⁰ However, the land within the reservation has been reduced by allotments of land, particularly the General Allotment Act of 1887,³¹ as well as other federal actions including the 1905 National Forest withdrawals.³² Moreover, there are four categories of non-trust lands within the reservations.³³ This has resulted in years of litigation over which lands within the exterior boundaries of the reservation are Indian lands.³⁴ In June 2016, the State of Utah, two Utah counties, and the Ute Indian Tribe announced agreements concerning tribal and state jurisdiction.³⁵ There will be cross-deputization of state, local, and tribal police, but the Tribal Court will not exercise civil and regulatory authority over reservation lands owned by nonmembers, which will include

²⁶ 42 U.S.C. §§ 7401–7671q (2012). Section 110 is codified at § 7410.

²⁷ *Okl. Dept. of Env'tl. Quality*, 740 F.3d at 194–95.

²⁸ Federal Implementation Plan for True Minor Sources in Indian Country in the Oil and Natural Gas Production and Natural Gas Processing Segments of the Oil and Natural Gas Sector; Amendments to the Federal Minor New Source Review Program in Indian Country to Address Requirements for True Minor Sources in the Oil and Natural Gas Sector, 81 Fed. Reg. 35,944 (June 3, 2016) (codified at 40 C.F.R. pt. 49).

²⁹ See David R. Williams, Note, State v. Perank: *Is the Uintah-Ouray Reservation "Nailed Down Upon the Border"?*, 1992 BYU L. REV. 1247, 1250 (1992) (providing an example of the boundaries of a reservation changing).

³⁰ *Id.*

³¹ Indian General Allotment Act, 25 U.S.C. §§ 331–334, 339, 341–342, 348–349, 354, 381 (2012).

³² Act of Mar. 3, 1905, ch. 1479, 33 Stat. 1048, 1069 (reducing allotment of land to the Ute Indian Tribe); see also Heather J. Tanana & John C. Ruple, *Energy Development in Indian Country: Working within the Realm of Indian Law and Moving towards Collaboration*, 32 UTAH ENVTL. L. REV. 1, 11–12 (2012) (discussing reduction of allocation to the Ute Indian Tribe). Allocations to non-Indians ended in 1934, but by then landholding by Indians in the United States had been reduced by 86 million acres. Jana B. Milford, *Tribal Authority under the Clean Air Act: How Is It Working?*, 44 NAT. RESOURCES J. 213, 217 (2004) [hereinafter Milford, *Tribal Authority*].

³³ Ute Indian Tribe of the Uintah & Ouray Reservation v. Utah, 114 F.3d 1513, 1529 (10th Cir. 1997). The four categories of nontrust lands involve lands transferred under allotment legislation during 1902–1905; land apportioned under 1954 legislation; lands allocated to individual Indians that passed into fee status after 1905; and lands consolidated pursuant to 1934 and 1983 legislation. *Id.*

³⁴ Ute Indian Tribe of the Uintah & Ouray Reservation v. Myton, 835 F.3d 1255, 1257–58 (10th Cir. 2016).

³⁵ Tom Harvey, *Utah, Counties Reached Jurisdictional Deals with Utes*, SALT LAKE TRIB., June 15, 2016, <http://www.sltrib.com/news/4006969-155/utah-counties-reached-jurisdictional-deals-with> (last visited Nov. 19, 2016).

environmental regulation.³⁶ However, this agreement does not affect EPA, which has primary jurisdiction over environmental regulation on Indian reservations.³⁷

A. EPA's Federal Implementation Plans

EPA administers the CAA, which since 1970 has been the primary legal authority for administering and enforcing air pollution control requirements.³⁸ The CAA requires each state to submit and receive EPA's approval of a state implementation plan (SIP) to control stationary sources.³⁹ If there is not an approved SIP, EPA is to develop and implement a federal implementation plan (FIP).⁴⁰ By the late 1970s, EPA's position was that states do not have authority to implement environmental protection laws in Indian country within the state.⁴¹ EPA's position was upheld in 1985 when the United States Court of Appeals for the Ninth Circuit held that the State of Washington could not administer a hazardous waste program under the Resource Conservation and Recovery Act⁴² (RCRA) on lands within Indian reservations.⁴³ Numerous court decisions support the position that an approved state air pollution control program does not apply to Indian country within the state.⁴⁴

Indian tribes have the opportunity to administer the CAA's programs but few tribes have accepted this responsibility,⁴⁵ thus primary regulatory authority for air pollution control in Indian country is usually based on EPA's regulations, which includes FIPs.⁴⁶ There are currently forty-four FIPs applicable to specific tribes.⁴⁷ One FIP has been issued by EPA's Region 8, headquartered in Denver, but there is no FIP for any tribe in Utah because no Indian reservation is in a designated nonattainment area.⁴⁸ This may

³⁶ *Id.*

³⁷ CAA, 42 U.S.C. § 7413 (2012).

³⁸ Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676.

³⁹ 42 U.S.C. § 7410 (2012).

⁴⁰ *Id.* § 7410(c).

⁴¹ Scott, *supra* note 22, at 33.

⁴² Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901-6992k (2012).

⁴³ Wash. Dep't of Ecology v. U.S. Env'tl. Prot. Agency, 752 F.2d 1465, 1466 (9th Cir. 1985).

⁴⁴ Alaska v. Native Vill. of Venetie Tribal Gov't, 522 U.S. 520, 527 n.1 (1998); California v. Cabazon Band of Mission Indians, 480 U.S. 202, 216 & n.18 (1987); Ariz. Pub. Serv. Co. v. Env'tl. Prot. Agency, 211 F.3d 1280, 1284 (D.C. Cir. 2000).

⁴⁵ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,778 (July 1, 2011) (codified at 40 C.F.R. pts. 49, 51).

⁴⁶ See *Cabazon Band of Mission Indians*, 480 U.S. at 216 n.18 (noting that state authority is preempted "if it interferes or is incompatible with federal and tribal interests reflecting in federal law"). Section 10211 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Pub. L. No. 109-59, § 10211, 119 Stat. 1144, 1937 (2005), relates to the implementation of environmental regulatory programs under federal environmental laws in Indian country in Oklahoma. However, neither the State of Oklahoma, nor any Indian tribe in Oklahoma, applied to administer the CAA program in Indian country. Therefore, FIPs apply throughout Indian country, including Indian country in Oklahoma. 76 Fed. Reg. at 38,779.

⁴⁷ See *infra* Appendix Table 1.

⁴⁸ See *infra* Appendix Tables 1, 2.

change in the near future for the Ute Reservation, discussed in Part V. Even in the absence of a FIP, major sources located within Indian reservations are usually subject to EPA's regulations including national FIPs, such as the FIP for New Source Review in Indian country, discussed below.⁴⁹ Executive Order 13,175 requires EPA to consult and coordinate with tribal governments on federal actions that impact tribes.⁵⁰ Pursuant to this Executive Order and a Memorandum from President Obama,⁵¹ on May 4, 2011, EPA updated its policy on consultation and coordination, to ensure tribe members have significant opportunities to participate in the regulatory process even if their tribe has not assumed regulatory jurisdiction.⁵²

B. EPA's PSD Permit Program

Areas having better air quality than the national ambient air quality standards (NAAQS) are subject to the CAA's Prevention of Significant Deterioration (PSD) program.⁵³ A new major emitting facility subject to the PSD program must obtain a preconstruction permit that includes the requirement to use the Best Available Control Technology (BACT).⁵⁴ Construction is defined to include major modifications,⁵⁵ if there is a significant emissions increase.⁵⁶ Significant is defined in terms of tons per year (TPY).⁵⁷ A modification is any physical or operational change that would cause an increase in the allowable emissions of a minor source or an increase in the actual emissions of a major source for any regulated New Source Review (NSR) pollutant or that would cause the emission of any regulated NSR pollutant not previously emitted.⁵⁸ The following exemptions apply: routine maintenance, repair, or replacement; an increase in the hours of operation or in the production rate; and a change in ownership at a

⁴⁹ 76 Fed. Reg. at 38,751–52. The New Source Review (NSR) program includes a prevention of significant deterioration (PSD) program for areas that meet national ambient air quality standards (NAAQS) and a Nonattainment NSR program in areas that do not meet the NAAQS. *Id.* at 38,748. The use of the term NSR for two purposes can be confusing.

⁵⁰ Consultation and Coordination with Indian Tribal Governments, Exec. Order No. 13,175, 3 C.F.R. at 304 (2001).

⁵¹ Memorandum on Tribal Consultation, 2009 DAILY COMP. PRES. DOC. 887 (Nov. 5, 2009).

⁵² U.S. ENVTL. PROT. AGENCY, EPA POLICY ON CONSULTATION AND COORDINATION WITH INDIAN TRIBES 2 (2011) [hereinafter EPA POLICY ON CONSULTATION AND COORDINATION WITH INDIAN TRIBES], available at <http://www.epa.gov/sites/production/files/2013-08/documents/cons-and-coord-with-indian-tribes-policy.pdf> (noting that the Policy is intended to ensure that consultation with tribes occurs “whenever EPA takes an action that ‘may affect’ tribal interests,” but not mentioning a requirement of assuming regulatory jurisdiction).

⁵³ CAA, 42 U.S.C. § 7471 (2012).

⁵⁴ *Id.* § 7475; see also 40 C.F.R. § 52.21(b)(1), (12) (defining major stationary source and BACT).

⁵⁵ 42 U.S.C. § 7479(2)(C) (2012); see also *id.* § 7411(a)(4) (defining modification); 40 C.F.R. § 52.21(b)(2) (2015) (defining major modification).

⁵⁶ 40 C.F.R. § 52.21(b)(8) (2015).

⁵⁷ *Id.* § 52.21(b)(23).

⁵⁸ 42 U.S.C. § 7411(a)(4) (2012); 40 C.F.R. § 52.21(b)(2) (2015).

stationary source.⁵⁹ A major modification requires an increase in actual emissions based on the “actual-to-projected-actual” test.⁶⁰ If a source is a major source for hazardous air pollutants (HAPs), the CAA bars the construction or reconstruction of the source unless the appropriate permitting authority determines that the source will meet the maximum available control technology (MACT) requirements.⁶¹ If the Administrator has not established a MACT standard for the source category, MACT is to be determined on a case-by-case basis.⁶²

A permit applicant must analyze the impact of the project on ambient air quality to assure there will be no violation of the NAAQS, the PSD increments, or visibility protection requirements.⁶³ Sources or modifications that impact Class I areas (e.g., national parks and other public lands) may have additional requirements to protect air quality related values (AQRVs).⁶⁴ Under the PSD program, if the source’s potential to emit is greater than the major source threshold for one pollutant, then all pollutants regulated by the CAA may be subject to control.⁶⁵ However, these additional pollutants are subject to control only if their potential emissions are above the level defined as “significant” in the PSD regulations, which is significantly lower than the major modification threshold.⁶⁶

No tribe was administering an EPA-approved PSD program in 2011.⁶⁷ On July 1, 2011, EPA promulgated regulations that included sources in Indian country in its PSD program.⁶⁸ EPA’s implementation of the CAA in Indian country continues until there is an EPA-approved tribal implementation plan (TIP) or an approved program delegation.⁶⁹ EPA’s Region 8 has issued 14 PSD permits.⁷⁰

To address the impairment of visibility, the Clean Air Act Amendments of 1990⁷¹ added additional requirements to the PSD program.⁷² The Amendments mandated the creation of the Grand Canyon Visibility Transport Commission (GCVTC) to address the problem of air pollution in

⁵⁹ 40 C.F.R. § 52.21(b)(2)(iii) (2015).

⁶⁰ *Id.* § 52.21(a)(2)(iv).

⁶¹ 42 U.S.C. § 7412(g)(2)(B) (2012).

⁶² *Id.*; *see also* 40 C.F.R. § 63.43 (2015) (setting forth methods to accomplish case-by-case MACT determinations).

⁶³ 42 U.S.C. § 7475(a) (2012). An increment is a limit on the amount of increase in the atmospheric concentration of a specific pollutant that is allowed. *Id.* § 7473(b).

⁶⁴ *Id.* § 7475(a)(5), (d).

⁶⁵ *See* 40 C.F.R. § 52.21(b)(2)(i) (2015) (defining major modification to involve a significant emission increase at a major stationary source).

⁶⁶ *See id.* § 52.21(b)(23) (defining significant).

⁶⁷ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,753 (July 1, 2011).

⁶⁸ *Id.*

⁶⁹ *Id.* at 38,779.

⁷⁰ U.S. Env’tl. Prot. Agency, *CAA Permits Issued by EPA in Region 8*, <https://www.epa.gov/caa-permitting/caa-permits-issued-epa-region-8> (last visited Nov. 19, 2016).

⁷¹ Pub. L. No. 101-549, 104 Stat. 2399.

⁷² 42 U.S.C. § 7492 (2012).

Grand Canyon National Park.⁷³ GCVTC included representatives from eight western states and the Pueblo of Acoma, the Hopi Tribe, the Hualapai Tribe, and the Navajo Nation.⁷⁴ EPA's Regional Haze Rule incorporated GCVTC's recommendations.⁷⁵ Subsequently, GCVTC was replaced by the Western Regional Air Partnership (WRAP), which has an expanded membership that includes fifteen western states, twenty-three Indian tribes, five federal agencies, and twenty-eight local air agencies.⁷⁶

In 2000, WRAP submitted an annex to implement the GCVTC recommendations and meet the requirements of the Regional Haze Rule.⁷⁷ The Annex included a plan that applied through 2018 that involved a declining emissions cap and a sulfur dioxide (SO₂) trading program.⁷⁸ The area covered by the Annex includes more than two-hundred tribes, four of which have or had major sources of SO₂ emissions within their reservations.⁷⁹ The sources are the Navajo Nation's Four Corners Power Plant and Navajo Generating Plant; Fort Hall Reservation's Astaris-Idaho phosphorous plant (now closed); the Wind River Reservation's Snyder Oil, and Koch Sulfur Products facilities; and the Uintah and Ouray Reservation's Bonanza Power Plant (now in the process of reducing operations).⁸⁰

The Four Corners Power Plant, near Shiprock, New Mexico, received a twenty-five-year extension of its lease with the Navajo Nation on July 17, 2015.⁸¹ However, three of its five units shut down, and the operators agreed to install selective catalytic reduction devices on the other two units.⁸² On June 24, 2015, the utility companies that own the Four Corners Power Plant, in a settlement with the United States Department of Justice, agreed to install upgraded SO₂ and nitrogen oxides (NO_x) pollution controls at an

⁷³ *Id.* § 7492(f).

⁷⁴ GRAND CANYON VISIBILITY TRANSP. COMM'N, RECOMMENDATIONS FOR IMPROVING WESTERN VISTAS, at viii (1996), available at <http://www.wrapair.org/WRAP/reports/GCVTCFinal.PDF>.

⁷⁵ Regional Haze Regulations, 64 Fed. Reg. 35,714, 35,714 (July 1, 1999) (codified at 40 C.F.R. pt. 51) ("Specific provisions are included in the rule allowing nine western States to implement the recommendations of the GCVTC within the framework of the national regional haze program.")

⁷⁶ *Id.* at 35,749; W. Reg'l Air P'ship, *Membership*, <http://wrapair2.org/membership.aspx> (last visited Nov. 19, 2016).

⁷⁷ Proposed Revisions to Regional Haze Rule to Incorporate Sulfur Dioxide Milestones and Backstop Emissions Trading Program for Nine Western States and Eligible Indian Tribes Within that Geographic Area, 67 Fed. Reg. 30,418 (proposed May 6, 2002) (to be codified at 40 C.F.R. pt. 51).

⁷⁸ *Id.* at 30,419.

⁷⁹ *Id.* at 30,438.

⁸⁰ *Id.*; Brian Maffly, *Will Deal Mean 'Early Retirement' for Utah Power Plant?*, SALT LAKE TRIB., Oct. 7, 2015, <http://archive.sltrib.com/article.php?id=7055339&itype=storyID> (last visited Nov. 19, 2016); Gary Taylor, *Astaris Closing Idaho Phosphorous Plant, Cutting 300 Jobs*, ICIS NEWS, Oct. 11, 2001, <http://www.icis.com/resources/news/2001/10/11/148631/astaris-closing-idaho-phosphorus-plant-cutting-300-jobs/> (last visited Nov. 19, 2016).

⁸¹ OFFICE OF SURFACE MINING RECLAMATION & ENF'T, U.S. DEP'T OF THE INTERIOR, RECORD OF DECISION: FOUR CORNERS POWER PLANT AND NAVAJO MINE ENERGY PROJECT 13-14 (2015), available at <http://www.wrcc.osmre.gov/Initiatives/fourCorners/documents/ROD/RecordofDecisionFCPP.pdf>.

⁸² *Id.*

estimated cost of \$160 million.⁸³ The settlement also requires improvements to meet the regional haze program.⁸⁴ In addition, the settlement requires over \$10 million to be spent on health and welfare projects to benefit the local residents.⁸⁵ Moreover, both the Navajo Generating Station and the Four Corners Power Plant are required by the Clean Power Plan to reduce carbon dioxide emissions,⁸⁶ when, and if, it is allowed to be implemented.⁸⁷

The recommendations of the GCVTC were the basis for Utah's 2003 regional haze SIP.⁸⁸ This SIP was modified September 3, 2008, to include Best Available Retrofit Requirements (BART) applicable to two coal-fired power plants.⁸⁹ On December 14, 2012, EPA approved most of Utah's Regional Haze SIP, but disapproved the BART determination.⁹⁰ Prior to EPA's disapproval, three of the four units had already installed the BART-required equipment, and the fourth unit installed the required controls in 2014 as required by state law.⁹¹ Utah then opted to develop a NO_x control program based on the alternative to BART provided by 40 C.F.R. § 51.308(e)(2).⁹² The Air Quality Board approved the revised SIP provision in June 2015, and sent it to EPA for approval.⁹³ The Regional Haze SIP revision remains controversial as environmentalists continue to press for selective catalytic reduction technology being required for Rocky Mountain Power's Hunter and

⁸³ Press Release, U.S. Dep't of Justice, U.S. Requires Arizona and New Mexico Plant Owners to Reduce Emissions at Navajo Nation Four Corners Power Plant (June 24, 2015), *available at* <https://www.justice.gov/opa/pr/us-requires-arizona-and-new-mexico-plant-owners-reduce-emissions-navajo-nation-four-corners>.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662, 64,703 & n. 268 (Oct. 23, 2015) (codified at 40 C.F.R. pt. 60).

⁸⁷ The Clean Power Plan (Plan) is being challenged by twenty-seven states, as well as several utilities and industry groups. Petitioners' Joint Motion to Establish Briefing Format and Expedited Briefing Schedule at 3, *West Virginia v. U.S. Env'tl. Prot. Agency*, No. 15-1363 (D.C. Cir. Dec. 8, 2015). On February 9, 2016, the United States Supreme Court ordered that action on the Plan be halted until the case is decided by the D.C. Circuit. *West Virginia v. U.S. Env'tl. Prot. Agency*, 136 S. Ct. 1000 (2016) (mem.). The D.C. Circuit, en banc, heard oral arguments on September 27, 2016. Coral Davenport, *Appeals Court Hears Challenge to Obama's Climate Change Regulations*, N.Y. TIMES, Sept. 27, 2016, at A13.

⁸⁸ DIV. OF AIR QUALITY, UTAH DEP'T OF ENVTL. QUALITY, REVIEW OF 2008 PM BART DETERMINATION AND RECOMMENDED ALTERNATIVE TO BART FOR NO_x 1 (2015), *available at* <http://www.deq.utah.gov/NewsNotices/notices/air/docs/2015/03March/2-13-15DraftBartNOx.pdf>.

⁸⁹ *Id.* at 3.

⁹⁰ *Id.* at 5; Approval, Disapproval and Promulgation of State Implementation Plans; State of Utah; Regional Haze Rule Requirements for Mandatory Class I Areas under 40 CFR 51.309, 77 Fed. Reg. 74,355, 37,357 (Dec. 14, 2012) (codified at 40 C.F.R. pt. 52).

⁹¹ DIV. OF AIR QUALITY, *supra* note 88, at 5.

⁹² *Id.* at 6.

⁹³ Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan; Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze, 81 Fed. Reg. 2,004, 2,013 (proposed Jan. 14, 2016) (to be codified at 40 C.F.R. pt. 52).

Huntington plants.⁹⁴ On January 14, 2016, EPA proposed partially approving and partially disapproving Utah's implementation plan for the haze rule, and called for a public hearing.⁹⁵ On July 5, 2016, EPA published its final rule that partially approved Utah's particular matter (PM₁₀) portion of its haze SIP, but disapproved the alternative to BART for NO_x.⁹⁶ EPA imposed a FIP that requires the installation of Selective Catalytic Reduction technology on units one and two at the Hunter and Huntington power plants by 2021.⁹⁷

C. EPA's Nonattainment Program

In nonattainment areas, new source review (NSR) requirements are applicable to major sources, which are those that have emissions of 100 TPY of any pollutant subject to regulation under the CAA (except greenhouse gases) or lesser amounts, depending on the pollutant and the nonattainment classification.⁹⁸ For existing major sources, NSR requirements are applicable to major modifications.⁹⁹ For a modification to be major, three criteria must be met: 1) a physical change in or change in the method of operation; 2) the change must be at or above the significance levels found in 40 C.F.R. part 51, appendix S; and 3) the increase in emissions must result in a significant net emissions increase at or above the significance levels.¹⁰⁰

New or modified major sources must meet the NSR requirements, which include the use of the Lowest Achievable Emission Rate (LAER) control technology.¹⁰¹ LAER is based on the most stringent emission limitation in the implementation plan of any state or achieved in practice for the source category under review.¹⁰² Sources subject to NSR may offset emissions increases by obtaining emissions reductions from other sources in the area or in an area of equal or higher nonattainment classification that contribute to nonattainment in the proposed major source's area.¹⁰³ The ratio of the offset relative to the proposed increase depends on the severity of the

⁹⁴ Emma Penrod, *Rocky Mountain Power Weighs Legal Options as EPA Mandates Pollution Controls at Utah Coal Plants*, SALT LAKE TRIB., June 1, 2016, <http://www.sltrib.com/home/3955884-155/epa-will-require-more-pollution-controls> (last visited Nov. 19, 2016).

⁹⁵ 81 Fed. Reg. at 2,004, 2,006.

⁹⁶ Approval, Disapproval and Promulgation of Air Quality Implementation Plans, 81 Fed. Reg. 43,894, 43,921 (July 5, 2016) (codified at 40 C.F.R. pt. 52).

⁹⁷ *Id.* at 43,924 (codified at 40 C.F.R. § 52.2336).

⁹⁸ CAA, 42 U.S.C. § 7475(a) (2012) (requiring preconstruction permit for major emitting facility); *id.* § 7479(1) (defining major emitting facility); 40 C.F.R. § 70.2 (2015) (setting a threshold of 100,000 TPY for carbon dioxide equivalent (CO_{2e}) emissions).

⁹⁹ 42 U.S.C. § 7475(a) (2012). *See also id.* § 7479(2)(C) (defining construction to include modifications).

¹⁰⁰ 40 C.F.R. pt. 51, app. S, para. IIA.5.(i) (2015).

¹⁰¹ 42 U.S.C. § 7503(a)(2) (2012); 40 C.F.R. §§ 49.166–49.175 (2015). *But see* Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,751 (July 1, 2011) (to be codified at 40 C.F.R. pts. 49, 51) (explaining that the requirements in 40 C.F.R. §§ 49.166–49.175 may be modified in a specific area in Indian country when a TIP has been approved).

¹⁰² 42 U.S.C. § 7501(3) (2012); 40 C.F.R. § 51.165(a)(1)(xiii) (2015).

¹⁰³ 42 U.S.C. § 7503(c) (2012).

area's nonattainment classification and must be at least one-to-one.¹⁰⁴ Emissions reductions used as offsets must be quantifiable, federally enforceable, permanent, and not otherwise required by the CAA.¹⁰⁵

In 2011, EPA issued regulations governing the review of new sources, modifications to existing sources, and minor sources in Indian country.¹⁰⁶ The regulations provide a mechanism for permitting major sources in nonattainment areas in Indian country.¹⁰⁷ Because tribes generally do not have existing sources from which to generate offsets required for NSR permits, EPA proposed two options for tribes to address the lack of available offsets: 1) The Economic Development Zone (EDZ) option¹⁰⁸ and 2) the Appendix S, paragraph VI option.¹⁰⁹

The EDZ option is based on section 173(a)(1)(B) of the CAA under which "the Administrator, in consultation with the Secretary of Housing and Urban Development," may identify zones within nonattainment areas "as a zone to which economic development should be targeted."¹¹⁰ This would allow major NSR sources located in Indian country to be exempt from the offset requirement in section 173(a)(1)(A) of the CAA.¹¹¹ In an EDZ,

major sources that construct or modify within the EDZ are relieved of the offset requirement if the state or tribe can demonstrate that the new permitted emissions are consistent with the achievement of reasonable further progress pursuant to section 172(c)(4) of the Act and will not interfere with attainment of the applicable NAAQS by the applicable attainment date.¹¹²

Under the statutory language, EPA is required to consult with United States Department of Housing and Urban Development (HUD), but the Agencies plan to develop approval criteria so that a consultation with HUD is not required every time a tribe applies for an area of Indian country to be designated as an EDZ.¹¹³ EPA "intends to provide assistance as needed for a Tribe to complete an EDZ designation request."¹¹⁴

An NSR permit applicant must also conduct an "analysis of alternative sites, sizes, production processes, and environmental control techniques," demonstrating that the "benefits of the proposed emissions source significantly outweigh the environmental and social costs . . . of its location,

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*; see also 40 C.F.R. § 51.165(a)(3)(ii)(C)(1) (2015) (stating that emissions reductions "may be generally credited for offsets" if "such reductions are . . . permanent, quantifiable, and federally enforceable").

¹⁰⁶ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748 (July 1, 2011) (codified at 40 C.F.R. pts. 49, 51).

¹⁰⁷ 40 C.F.R. § 49.166 (2015).

¹⁰⁸ 76 Fed. Reg. at 38,804 (codified at 40 C.F.R. § 49.170).

¹⁰⁹ *Id.* at 38,807 (codified at 40 C.F.R. pt. 51, app. S, para. IV.A).

¹¹⁰ 42 U.S.C. § 7503(a)(1)(B) (2012); 40 C.F.R. § 49.170 (2015).

¹¹¹ *Id.*

¹¹² 76 Fed. Reg. at 38,774; see also 40 C.F.R. § 49.170 (2015).

¹¹³ 76 Fed. Reg. at 38,774.

¹¹⁴ *Id.*

construction or modification.”¹¹⁵ In addition, applicants must demonstrate that all other major sources under its control in the same state are in compliance, or on a schedule of compliance, with all emission limitations and standards of the CAA.¹¹⁶

EPA has designated only a few Indian reservations as nonattainment areas. Two Indian lands in California are nonattainment: the Morongo Band of Mission Indians (serious for the 8-hr ozone standard) and the Pechanga Band of Luiseno Mission Indians (moderate for the 8-hr. ozone standard).¹¹⁷ The Fort Hall Indian reservation in Idaho is designated as moderate nonattainment for PM₁₀.¹¹⁸ The Shoshone-Bannock Tribe had the world’s largest elemental phosphorous processing plant within its Fort Hall Reservation near Pocatello, Idaho.¹¹⁹ The facility closed at the end of 2001, but the reservation is still designated as nonattainment.¹²⁰

A much larger number of reservations are located within nonattainment areas designated by states. For example, in San Diego County, California there are twenty reservations for four tribal groups that comprise 193 square miles of the 4,205 square miles of the county.¹²¹

D. EPA’s Operating Permit Program

The Clean Air Act Amendments of 1990 created Title V,¹²² which for the first time mandated a comprehensive operating permit program to regulate air emissions from major stationary sources.¹²³ Minor sources are commonly subject to state permit programs, and EPA has promulgated a minor source program for emission sources in Indian country.¹²⁴ In addition, the operating permit program identifies the existing SIP program’s requirements applicable to specific sources as well as requirements imposed by other provisions of the CAA.¹²⁵ The operating permit program, which is primarily

¹¹⁵ 42 U.S.C. § 7503(a)(5) (2012); 40 C.F.R. § 49.169(b)(5) (2015).

¹¹⁶ 42 U.S.C. § 7503(a)(3) (2012); 40 C.F.R. § 49.169(b)(2) (2015).

¹¹⁷ U.S. Env’tl. Prot. Agency, *Current Nonattainment Counties for All Criteria Pollutants*, <https://www3.epa.gov/airquality/greenbook/ancl.html> (last visited Nov. 19, 2016).

¹¹⁸ *Id.*

¹¹⁹ FMC Idaho, *Plant History*, <http://fmc-idaho.com/plant-history/> (last visited Nov. 19, 2016).

¹²⁰ *Current Nonattainment Counties for All Criteria Pollutants*, *supra* note 117; U.S. ENVTL. PROT. AGENCY, PLAN TO ADDRESS POLLUTION AT FORMER FMC PHOSPHORUS PROCESSING PLANT 3 (2012), available at <http://www3.epa.gov/region10/pdf/sites/emichaud/IRODA-factsheet-oct2012.pdf>.

¹²¹ Vanessa Baehr-Jones & Christina Cheung, *An Exercise of Sovereignty: Attaining Attainment for Indian Tribes Under the Clean Air Act*, 34 ENVIRONS: ENVTL. L. & POLICY J. 189, 220 (2011). The tribal groups are the Kumeyaay/Diegueno, the Luiseno, the Cupeno, and the Cahuilla. *Id.* See *infra* Appendix Table 2 for a complete list of the number of tribes affected by nonattainment designations.

¹²² Pub. L. No. 101-549, § 501, 104 Stat. 2399, 2635–48 (codified at 42 U.S.C. §§ 7661–7661f (2012)).

¹²³ CAA, 42 U.S.C. § 7661a (2012).

¹²⁴ See *infra* Part II.F (discussing the Indian country minor source program).

¹²⁵ 42 U.S.C. § 7661c(a) (2012).

implemented by the states, attempts to place the CAA “applicable requirements” in one document.¹²⁶

EPA issues operating permits under Title V only if a state either does not establish an operating permit program that meets EPA’s requirements or does not accept delegation of EPA’s permitting authority. However, EPA is responsible for administering the operating permit program in Indian country although this responsibility may be delegated.¹²⁷ The operating permit program must, at a minimum, contain the elements required by section 502(b).¹²⁸ They include:

- (1) Requirements for permit applications, including standard application forms and criteria for determining the completeness of applications[;]
- (2) Monitoring and reporting requirements[;]
- (3) [A permit fee system to finance the air pollution control program;]
- (4) [Provisions] for adequate personnel and funding to administer the program;
- (5) [Authority to issue permits and assure that each permitted source complies with applicable requirements under the Act;]¹²⁹

Under section 502(a), the following sources must obtain an operating permit: affected sources as provided in Subchapter IV’s acid rain program; facilities that emit, or have the potential to emit, 10 TPY or more of any HAP, or 25 TPY of any combination of HAPs (section 112); sources required to have an NSR permit because they are major as defined by part D of subchapter 1; any source emitting 100/250 TPY required to have a preconstruction review permit by part C of subchapter I (PSD); other major sources, as defined in section 302 that are located in nonattainment areas and that have emissions of 100 TPY or more of any regulated pollutant; any other source, including an area source, that is subject to a section 112 HAP standard or a section 111 New Source Performance Standard (NSPS); and any other stationary source in a category designated by regulations promulgated by the Administrator.¹³⁰

¹²⁶ 40 C.F.R. §§ 70.4, 70.6(a)(1) (2015); *see also* Sierra Club v. Ga. Power Co., 443 F.3d 1346, 1356 (11th Cir. 2006) (“Our interpretation is confirmed by the fact that, as discussed above, a Title V operating permit is not intended to impose additional requirements on a source. Rather, the permit merely consolidates in a single document all of the clean air requirements already applicable to that source.”).

¹²⁷ *See* 40 C.F.R. pt. 49 subpts. D–M (2015).

¹²⁸ *Id.* § 49.3.

¹²⁹ 42 U.S.C. § 7661a(b) (2012).

¹³⁰ *Id.* § 7661a(a); *see also* ARNOLD W. REITZE, JR., AIR POLLUTION CONTROL LAW: COMPLIANCE AND ENFORCEMENT § 8-6 (2001) (listing sources required to obtain an operating permit under Title V).

Determining which sources are major is affected by the rules developed under section 111 for NSPS.¹³¹ Major stationary sources located on contiguous or adjacent properties, under common control, and belonging to a single two-digit Standard Industrial Classification (SIC) have their emissions combined to determine whether emissions exceed the threshold level.¹³² Sources of HAPs are major based on the aggregate emissions of a stationary source or group of stationary sources within a contiguous area and under common control without reference to the SIC of the source.¹³³ Fugitive emissions are used to determine whether a source is major if the source is one of twenty-six categories listed in the regulation.¹³⁴

Applicants for permits must submit the permit application that meets the requirements of section 504 and 40 C.F.R. §§ 70.5(a)(2) and 70.6.¹³⁵ Each permit application must include at a minimum: 1) a description of the facility's processes and products; 2) a list of all air emissions from the facility; 3) emission rates in TPY; 4) information on fuels, fuel use, raw materials, production rates, and operating schedules; and 5) a description of air pollution control equipment.¹³⁶ The permit application must include a certification by a responsible official attesting to the truth and accuracy of the permit application.¹³⁷ Applicants may avoid a major source classification by accepting emission limits in an operating permit below the TPY major source threshold, or by accepting operational limits that have a similar effect.¹³⁸

A compliance plan is also required, which includes a schedule for compliance.¹³⁹ A compliance schedule must include a schedule of remedial measures to be taken, and must be submitted within twelve months of the date on which the source becomes subject to a permit program.¹⁴⁰ It must include a description of how the facility will achieve compliance with requirements for which the facility is not currently in compliance.¹⁴¹ A responsible official must sign the application as well as the compliance plan, compliance schedule, annual compliance certification, and all reports that are required to be submitted to the permitting authority.¹⁴² The responsible official's signature certifies, under penalty of law, that the statements and information in the documents are true, accurate, and complete.¹⁴³

¹³¹ REITZE, *supra* note 130, § 8-6.

¹³² 40 C.F.R. § 70.2 (2015).

¹³³ *Id.* § 63.2.

¹³⁴ *Id.* § 70.2.

¹³⁵ *Id.* § 70.5(a)(2).

¹³⁶ *Id.* § 70.5(c).

¹³⁷ *Id.* § 70.5(d).

¹³⁸ *Id.* § 51.166(b)(4).

¹³⁹ CAA, 42 U.S.C. § 7661b(b) (2012); *see also id.* § 7661(3) (defining schedule of compliance).

¹⁴⁰ 40 C.F.R. § 70.5(a)(1), (c)(8) (2015).

¹⁴¹ *Id.* § 70.5(c)(8)(C).

¹⁴² *Id.* § 70.5(d).

¹⁴³ *Id.*

Section 505(b) provides for states (or tribes) to develop and run an operating permit program, but EPA may veto the issuance of permits.¹⁴⁴ Regulations concerning the process for permit issuance, review, renewal, revision, and reopening are found at 40 C.F.R. §§ 70.7 and 70.8. Under the regulations, the permitting authority must submit to EPA any application for a permit, renewal, or revision, including any compliance plan.¹⁴⁵ The permitting authority also is required to notify all affected states of each item that must be forwarded to EPA.¹⁴⁶ Affected states are those whose air quality may be affected or are contiguous to the state in which the source is located or are within fifty miles of the source.¹⁴⁷ The permitting authority must accept written recommendations from affected states; if they are rejected, it must explain the reasons in writing.¹⁴⁸

If new requirements are imposed under the CAA, the permitting authority is required to revise all major source permits subject to the new requirements that have a remaining life of three or more years.¹⁴⁹ However, no permit revision is necessary if the effective date of the requirement is after the expiration of the permit.¹⁵⁰ The permitting authority must have the right to terminate, modify, or revoke permits for cause.¹⁵¹ Reopenings for cause are subject to the requirements of section 505(e) and the regulations of the applicable title.¹⁵²

In 2011, no tribe had an EPA-approved Title V permitting program or had adopted any other program to implement section 112(g).¹⁵³ However, the Navajo Nation had been delegated authority to assist with implementation of the federal part 71 operating permit program.¹⁵⁴ In 2012, EPA approved the Title V Operating Permit for Colorado's Southern Ute Tribe.¹⁵⁵ EPA has issued fifty-three Title V permits to major sources located on Indian tribal lands in Regions 2, 5, 6, 8, 9, and 10.¹⁵⁶ Sixteen of the permits are for facilities

¹⁴⁴ 42 U.S.C. § 7661d(b) (2012); 40 C.F.R. § 70.8(c) (2015).

¹⁴⁵ *Id.* § 70.8(a).

¹⁴⁶ *Id.* § 70.8(b).

¹⁴⁷ *Id.* § 70.2.

¹⁴⁸ *Id.* § 70.8(b)(2).

¹⁴⁹ 42 U.S.C. § 7661a(b)(9) (2012).

¹⁵⁰ 40 C.F.R. § 70.7(f)(1)(i) (2015).

¹⁵¹ *Id.* § 70.7(f)(1).

¹⁵² *Id.* § 70.7(f)(2).

¹⁵³ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,771 (July 1, 2011) (codified at 40 C.F.R. pts. 49, 51).

¹⁵⁴ Announcement of a Supplement to the Delegation of the Title V Permitting Program, Consistent with 40 CFR Part 71, to the Navajo Nation Environmental Protection Agency and the Suspension of Part 71 Fee Collection by USEPA for the Four Corners Steam Electric Station and the Navajo Generating Station, 71 Fed. Reg. 16,773, 16,774 (Apr. 4, 2006).

¹⁵⁵ Clean Air Act Full Approval of Title V Operating Permits Program; Southern Ute Indian Tribe, 77 Fed. Reg. 15,267 (Mar. 15, 2012) (codified at 40 C.F.R. pt. 70).

¹⁵⁶ U.S. Env'tl. Prot. Agency, *CAA Permits Issued by EPA in Region 2*, <http://www.epa.gov/caa-permitting/caa-permits-issued-epa-region-2#part71permits> (last visited Nov. 19, 2016) (listing four permits); U.S. Env'tl. Prot. Agency, *Region 5 EPA-Issued Air Permits*, <https://yosemite.epa.gov/r5/r5ard.nsf/Tribal+Permits!OpenView> (last visited Nov. 19, 2016) (listing thirteen permits); U.S. Env'tl. Prot. Agency, *Part 71 Operating Permits on Tribal Lands in EPA's South Central Region*, <http://www.epa.gov/caa-permitting/part-71-operating-permits->

in Region 8 covering New Mexico, Wyoming, Colorado, Montana, Utah, and North Dakota.¹⁵⁷ There are no permits in Regions 1, 3, 4, and 7.

E. Minor Source Permit Programs

A permitting program for minor sources is to be developed by the states based on federal requirements.¹⁵⁸ Most minor sources located in Indian country, however, have not been regulated, and only a few tribes administer EPA-approved minor NSR programs.¹⁵⁹

On July 1, 2011, EPA promulgated an Indian country FIP that applies to new and modified minor stationary sources, and minor modifications at existing major stationary sources.¹⁶⁰ The FIP also provides for a case-by-case determination of the MACT for sources of HAPs.¹⁶¹

On May 1, 2015, an additional regulation for the minor source program in Indian country was promulgated.¹⁶² A minor source is a source, not including the exempt emissions units and activities listed in 40 C.F.R. § 49.153(c), with the potential to emit regulated NSR pollutants below the major source thresholds, but above minor NSR thresholds.¹⁶³ Beginning September 2, 2014, any new stationary source that has the potential to emit (PTE) a regulated NSR pollutant in amounts equal to or greater than the minor NSR thresholds must apply for and obtain a minor NSR permit before commencing construction.¹⁶⁴ A source's PTE for a pollutant is expressed in TPY and calculated by multiplying the maximum hourly emissions rate in pounds per hour (lbs./hr.) times 8,760 hours (the number of hours in a year) divided by 2,000 (the number of pounds in a ton).¹⁶⁵ If a source's emissions are restricted by enforceable permit conditions, the PTE is calculated based on the permit restrictions.¹⁶⁶

A proposed modification of an existing major source that does not qualify as a major modification is subject to the minor NSR program requirements, if the net emissions increase from the actual-to-projected-

tribal-lands-epas-south-central-region (last visited Nov. 19, 2016) (listing five permits); U.S. Envtl. Prot. Agency, *CAA Permits Issued by EPA in Region 8*, *supra* note 70 (listing sixteen permits); U.S. Envtl. Prot. Agency, *Title V Permits Issued by Region 9*, <http://www.epa.gov/caa-permitting/title-v-permits-issued-region-9> (last visited Nov. 19, 2016) (listing seven permits); U.S. Envtl. Prot. Agency, *Air Permits Issued by Region 10*, <http://www.epa.gov/caa-permitting/air-permits-issued-epa-region-10> (last visited Nov. 19, 2016) (listing eight permits).

¹⁵⁷ *CAA Permits Issued by EPA in Region 8*, *supra* note 70.

¹⁵⁸ See 40 C.F.R. §§ 51.160–164 (2015) (setting out guidelines for local review of new sources and modifications).

¹⁵⁹ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,756 (July 1, 2011); see *infra* Part III.B, D (discussing tribal administration of EPA programs).

¹⁶⁰ 76 Fed. Reg. at 38,748.

¹⁶¹ 40 C.F.R. § 49.153(a)(4) (2015).

¹⁶² General Permits and Permits by Rule for the Federal Minor New Source Review Program in Indian Country for Five Source Categories, 80 Fed. Reg. 25,068 (May 1, 2015).

¹⁶³ 40 C.F.R. § 49.152 (2015).

¹⁶⁴ *Id.* § 49.151(c)(1)(iii)(B).

¹⁶⁵ 76 Fed. Reg. at 38,755.

¹⁶⁶ 40 C.F.R. § 49.152 (2015).

actual test is equal to or above the minor NSR thresholds listed in table 1 of the regulation.¹⁶⁷ However, the emissions must be less than the amount that would qualify the source as a major source or a major modification for purposes of the more stringent PSD or nonattainment NSR programs.¹⁶⁸ The minor thresholds are much lower than the significance level and are more stringent for nonattainment areas than for attainment areas.¹⁶⁹

Fugitive emissions are included to the extent they are quantifiable for source categories listed in the regulations.¹⁷⁰ These sources must install and operate control technology as determined by the reviewing authority on a case-by-case basis.¹⁷¹ These sources may also be required to submit air quality impact analyses as part of their permit applications.¹⁷² As an alternative to a site-specific permit, minor sources can request coverage under a general permit.¹⁷³ Moreover, EPA has developed a list of activities that are exempted from the minor NSR program.¹⁷⁴ The list was expanded on May 30, 2014.¹⁷⁵

EPA estimates that about 1% or less of total emissions will be exempt from review under the minor NSR program, while the thresholds will exempt 42% to 76% of sources—depending on the pollutant—from preconstruction review due to the minor source thresholds.¹⁷⁶ The Indian Country Minor NSR Rule incorporates by reference six federal rules. They are: 1) National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters;¹⁷⁷ 2) Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984;¹⁷⁸ 3) Standards of Performance for Stationary Compression Ignition Internal Combustion Engines;¹⁷⁹ 4) Standards of Performance for Stationary Spark Ignition Internal Combustion Engines;¹⁸⁰ 5) Standards for New and Modified Sources in the Oil and Natural Gas Sector;¹⁸¹ and 6) National Emission

¹⁶⁷ *Id.* § 49.153 tbl.1.

¹⁶⁸ *Id.* § 49.153.

¹⁶⁹ *Id.* § 49.153 tbl.1.

¹⁷⁰ *Id.* § 49.152. The categories are found at 40 C.F.R. pt. 51, app. S, and § 52.21(b)(1)(iii).

¹⁷¹ *Id.* § 49.153(a)(4).

¹⁷² *Id.* § 49.151(e)(4).

¹⁷³ *Id.* at 38,795–96 (codified at 40 C.F.R. § 49.156)

¹⁷⁴ *Id.* at 38,792 (codified at 40 C.F.R. § 49.153(c)).

¹⁷⁵ Review of New Sources and Modifications in Indian Country—Amendments to the Federal Indian Country Minor Source Review Rule, 79 Fed. Reg. 31,035, 31,044 (May 30, 2014) (codified at 40 C.F.R. § 49.153(c)).

¹⁷⁶ 76 Fed. Reg. at 38,758.

¹⁷⁷ 40 C.F.R. pt. 63, subpt. DDDDD (2015).

¹⁷⁸ *Id.* pt. 60, subpt. Kb.

¹⁷⁹ *Id.* pt. 60, subpt. IIII.

¹⁸⁰ *Id.* pt. 60, subpt. JJJJ.

¹⁸¹ Review of New Sources and Modifications in Indian Country: Federal Implementation Plan for Managing Air Emissions from True Minor Sources Engaged in Oil and Natural Gas Production in Indian Country. 80 Fed. Reg. 56,554, 56,569 (proposed Sept. 18, 2015) (to be codified at 40 C.F.R. pt. 49).

Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities.¹⁸² There are numerous other amendments to the Indian Country Minor NSR Rule.¹⁸³ The proposed FIP is needed because in September 2015 there were no approved TIPs covering areas subject to the Federal Indian Country Minor NSR Rule.¹⁸⁴

States that have a federally enforceable minor source permit program may designate sources that have the potential to emit above the major source thresholds as “synthetic minor” sources if they accept enforceable permit limits on emissions that keep the emissions below the major source threshold.¹⁸⁵ However, this program was not available in Indian country until July 1, 2011.¹⁸⁶

The regulations promulgated in 2011 established the first synthetic minor source permitting mechanism for major sources of regulated NSR pollutants and/or HAPs in Indian country.¹⁸⁷ A synthetic minor source permit is available under the PSD, nonattainment major NSR and Title V programs, as well as by synthetic minor sources for MACT standards and Title V purposes.¹⁸⁸ HAP sources having synthetic minor permits must comply with emissions limits that are enforceable as a practical matter and with the applicable regulations found in 40 C.F.R. part 63.¹⁸⁹ A synthetic minor source for NSR that has other applicable requirements that make it major for Title V purposes, must also apply for a part 71, Title V permit.¹⁹⁰

To obtain a synthetic source designation requires the source to agree to limit emissions below the major source trigger.¹⁹¹ The agreement to limit emissions must be enforceable.¹⁹² This rule is implemented by EPA or by a delegated tribal agency.¹⁹³ Synthetic minor sources need a site-specific permit, but EPA is developing general permits for some common types of minor sources in order to streamline the permitting process.¹⁹⁴ An applicant for a synthetic minor designation must also comply with minor source regulations concerning public participation requirements, the procedures for final permit issuance, and administrative and judicial review.¹⁹⁵

¹⁸² 40 C.F.R. pt. 63, subpart HH (2015).

¹⁸³ 80 Fed. Reg. at 56,558.

¹⁸⁴ *Id.* at 56,562. See *infra* Part IV.C for a discussion of the promulgated FIP.

¹⁸⁵ 40 C.F.R. § 51.166(b)(4) (2015).

¹⁸⁶ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,792 (July 1, 2011) (codified at 40 C.F.R. § 49.153(a)(3)).

¹⁸⁷ *Id.* at 38,797 (codified at 40 C.F.R. § 49.158).

¹⁸⁸ 40 C.F.R. § 49.158 (2015).

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ *Id.* § 49.152(d).

¹⁹² *Id.*

¹⁹³ *Id.* (“Reviewing authority means the Administrator or may mean an Indian Tribe in cases where a Tribal agency is assisting EPA with administration of the program through a delegation.”).

¹⁹⁴ See *infra* Part II.G.

¹⁹⁵ 40 C.F.R. §§ 49.157, .159 (2015).

On June 3, 2016, EPA promulgated a FIP applicable to the oil and gas industry that is to be used to regulate most minor sources rather than using source-specific minor source preconstruction permits.¹⁹⁶

F. General Permits

A “general permit” is a preconstruction permit used to regulate numerous similar emissions from new or modified true minor sources in a cost-effective manner for both the government and the source.¹⁹⁷ They streamline the preconstruction permitting through the issuance of one permit that can apply to multiple stationary sources that have similar emissions.¹⁹⁸ EPA finalized the general permit issuance process in July 2011, as part of the Federal Indian Country Minor NSR Rule.¹⁹⁹ The reviewing authority may issue a general permit for a “category of emissions units or sources that are similar in nature, have substantially similar emissions, and would be subject to the same or substantially similar requirements governing operations, emissions, monitoring, reporting and recordkeeping.”²⁰⁰

A general permit when issued “is considered final action with respect to all aspects of the permit except its applicability to an individual source.”²⁰¹ The sole issue that may be appealed after a permit approval is the applicability of the general permit to a particular source.²⁰² The reviewing authority determines “which categories of individual emissions units, groups of similar emissions units, or sources are appropriate for general permits in its area.”²⁰³

Emissions units covered by a general permit should usually have similar operations or processes and emit pollutants with similar characteristics.²⁰⁴ They should be able to handle the same or substantially similar permit requirements governing operation, emissions, monitoring, recordkeeping, and reporting.²⁰⁵ EPA is in the process of developing general permits for various source categories under the factors mentioned.²⁰⁶ General permits must deal with the same permit elements required for permits issued under

¹⁹⁶ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824, 35,827 (June 3, 2016); see discussion *infra* Part IV.C.

¹⁹⁷ 40 C.F.R. § 49.156(a) (2015).

¹⁹⁸ *Id.*

¹⁹⁹ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,795 (July 1, 2011) (codified at 40 C.F.R. § 49.156(b)).

²⁰⁰ 40 C.F.R. § 49.156(b)(1) (2015).

²⁰¹ *Id.* § 49.156(b)(3).

²⁰² *Id.* § 49.156(c)(1).

²⁰³ *Id.* § 49.156(b)(1).

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,767 (July 1, 2011).

the site-specific preconstruction review rules.²⁰⁷ However, EPA has not allowed reviewing authorities to create general permit categories for synthetic minor sources.²⁰⁸

On May 1, 2015, EPA finalized a rule concerning general permits in Indian country for new or modified minor sources in two source categories: hot mix asphalt (HMA) plants; and stone quarrying, crushing, and screening (SQCS) facilities.²⁰⁹ EPA also authorized the use of general permits to create synthetic minor sources for the HMA and SQCS source categories.²¹⁰ EPA finalized permits by rule for new or modified minor sources in three source categories: auto body repair and miscellaneous surface coating operations; gasoline dispensing facilities, except in California; and petroleum dry cleaning facilities.²¹¹ Permit by rule requirements are codified in the *Code of Federal Regulations* and they preauthorize construction and modification activities that are carried out in accordance with the codified requirements.²¹² EPA subsequently promulgated a rule to manage emissions from six source categories of minor sources in Indian country on October 14, 2016.²¹³ The rule covers concrete batch plants, boilers and emergency engines, stationary spark ignition engines, stationary compression ignition engines, graphic arts and printing operations, and sawmill facilities. The rule requires a preconstruction permit for true minor sources on or after September 2, 2017.²¹⁴ This rule is one of several modifications to 40 C.F.R. § 49.151(c). True minor sources in the oil and natural gas production and natural gas processing segments of the oil and natural gas sector are also subject to the June 3, 2016, FIP for true minor sources in Indian country.²¹⁵

To become covered by a permit by rule, a source must notify the reviewing authority that it meets the terms of coverage and is complying with the permit's terms and conditions but does not need the approvals required for a source specific permit.²¹⁶ The source must also submit a Notification of Coverage Form in fulfillment of the minor source registration requirement in the Federal Indian Country Minor NSR Rule.²¹⁷ Once the Notification of Coverage Form has been submitted, and the reviewing authority has posted it online, the source may commence construction of a

²⁰⁷ 40 C.F.R. § 49.156(d) (2015) (requiring all inclusion of all elements from 40 C.F.R. § 49.155(a) (2015), the regulation dealing with site-specific permits).

²⁰⁸ 76 Fed. Reg. at 38,770.

²⁰⁹ General Permits and Permits by Rule for the Federal Minor New Source Review Program in Indian Country for Five Source Categories, 80 Fed. Reg. 25,068 (May 1, 2015) (codified at 40 C.F.R. pts 49, 51).

²¹⁰ *Id.* at 25,070.

²¹¹ *Id.* at 25,068, 25,091–107 (codified at 49 C.F.R. §§ 40.161–163).

²¹² *See* 40 C.F.R. § 49.156(f) (2015).

²¹³ General Permits and Permits by Rule for the Federal Minor New Source Review Program in Indian Country for Six Source Categories, 81 Fed. Reg. 70,944 (Oct. 14, 2016).

²¹⁴ *Id.* at 70,945.

²¹⁵ *See infra* Part IV.C.

²¹⁶ 40 C.F.R. § 49.156(f)(1) (2015).

²¹⁷ *Id.*

new source or modification of an existing source.²¹⁸ The regulations do not allow the use of permits by rule to create synthetic minor sources.²¹⁹

III. TRIBAL REGULATION OF AIR QUALITY

The efforts by Indian tribes to use the CAA to advance tribal interests became more focused when the Clean Air Act Amendments of 1977²²⁰ authorized federally recognized tribes to redesignate land within the exterior boundaries of their reservations under the CAA's PSD program.²²¹ This program classified areas that met the NAAQS into three classes, with the least air quality deterioration allowed in Class I, and the most deterioration allowed in Class III areas providing the NAAQS were not exceeded.²²²

By changing the status of a reservation to Class I, a tribe can make it difficult or even impossible for major emitting sources constructed after August 7, 1977, to locate either inside the reservation's boundary or outside the boundary if the air quality of the Class I area is projected to be impacted above the legally allowed increase, known as the increment.²²³ Moreover, even if the allowed atmospheric concentration of a regulated pollutant does not exceed the increment, a permit for a new source or major modification of an existing source can be denied if it will violate "air quality related values," including visibility.²²⁴ However, visibility protection only applies to mandatory Class I areas (e.g. national parks and wilderness areas).²²⁵ Nonmandatory Class I areas are only covered if they are part of the statutory dispute resolution process.²²⁶ If there is a dispute among tribes concerning classification, a mechanism is provided to allow EPA to resolve disputes between states and tribes.²²⁷ This ability to redesignate areas allowed Indian tribes to influence development within the exterior boundaries of their reservations as well as development upwind of reservations.

In 1977, the Northern Cheyenne Tribe requested Class I status for its reservation based on EPA's 1974 PSD regulation.²²⁸ On August 5, 1977, the redesignation was approved days before the PSD program, including the right for tribes to redesignate tribal lands, was codified by the 1977 CAA

²¹⁸ *Id.*

²¹⁹ General Permits and Permits by Rule for the Federal Minor New Source Review Program in Indian Country for Five Source Categories, 80 Fed. Reg. 25,068, 25,070 (May 1, 2015).

²²⁰ Pub. L. No. 95-95, 91 Stat. 685.

²²¹ *Id.* § 164(c), 91 Stat. at 734 (codified at 42 U.S.C. § 7474(c) (2012)).

²²² CAA, 42 U.S.C. §§ 7472-7473 (2012).

²²³ *Id.* §§ 7472-7475.

²²⁴ *Id.* § 7475(d)(2)(C)(ii).

²²⁵ *Id.* § 7491(a).

²²⁶ *Id.* § 7474(e).

²²⁷ *Id.*

²²⁸ Redesignation of Northern Cheyenne Indian Reservation for Prevention of Significant Deterioration, 42 Fed. Reg. 21,819, 21,819 (proposed Apr. 29, 1977) (to be codified in 40 C.F.R. pt. 52).

Amendments.²²⁹ Thus, the Northern Cheyenne Tribe was the first Tribe to utilize the redesignation process. In 1981, the Ninth Circuit upheld EPA's delegation to Indian tribes the authority to redesignate their lands.²³⁰ This redesignation resulted in the Montana Power Company being blocked from completing two new coal strip units.²³¹ The units were eventually constructed after they agreed to install wet scrubbers to meet the Tribe's PSD increment for SO₂.²³² The redesignation was opposed by the Crow Indian Tribe, which wanted the electric power project to be constructed.²³³

In 1984, EPA issued a policy statement saying that until tribal governments are able to assume full responsibility for administering delegable programs, EPA will retain responsibility for managing the environmental programs, but will encourage tribal participation.²³⁴ For a noncompliant facility that is tribally owned, EPA will work cooperatively with the tribe to achieve compliance, but if the facility is owned or managed by private parties EPA will deal with environmental violations in the same way that it would respond if Indian land was not involved.²³⁵ In 2011, EPA updated the 1984 policy.²³⁶

In 1982, EPA approved the redesignation of the Confederated Salish and Kootenai Tribe's Flathead Reservation in northwest Montana to Class I.²³⁷ In 1984, EPA approved the Sioux and Assiniboine Tribes' request to redesignate the Fort Peck reservation as Class I,²³⁸ which prevented a coal-fired electric power facility from being constructed.²³⁹ In 1991, EPA approved the redesignation of the Spokane Reservation in Washington as Class I.²⁴⁰ On November 1, 1996, EPA approved the redesignation of the Yavapai-Apache Reservation in Arizona to Class I.²⁴¹ In 2008, EPA approved the redesignation of the Forest County Potawatomi Community Reservation in Wisconsin as

²²⁹ Approval and Promulgation of Implementation Plans, 42 Fed. Reg. 40,695 (Aug. 11, 1977) (codified 40 C.F.R. pt. 52); Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685 (codified as amended at 42 U.S.C. §§ 7401-7671q (2012)) (enacted August 7, 1977).

²³⁰ *Nance v. U.S. Envtl. Prot. Agency*, 645 F.2d 701, 704 (9th Cir. 1981).

²³¹ *Mont. Power Co. v. U.S. Envtl. Prot. Agency*, 608 F.2d 334, 343, 357-58 (9th Cir. 1979) (upholding EPA's denial of permits because units would violate the Class I pollution increments).

²³² *Baehr-Jones & Cheung*, *supra* note 121, at 213.

²³³ *Nance*, 645 F.2d at 710-11.

²³⁴ U.S. ENVTL. PROT. AGENCY, EPA POLICY FOR THE ADMINISTRATION OF ENVIRONMENTAL PROGRAMS ON INDIAN RESERVATIONS 2 (1984) [hereinafter 1984 EPA POLICY], *available at* <https://www.epa.gov/sites/production/files/2015-04/documents/indian-policy-84.pdf>.

²³⁵ *Id.* at 4.

²³⁶ EPA POLICY ON CONSULTATION AND COORDINATION WITH INDIAN TRIBES, *supra* note 52.

²³⁷ Approval and Promulgation of State Implementation Plans, PSD Redesignation; Flathead Reservation, 47 Fed. Reg. 23,927 (June 2, 1982) (codified at 40 C.F.R. pt. 52).

²³⁸ Approval and Promulgation of State Implementation Plans; PSD Redesignation—Fort Peck Reservation, 49 Fed. Reg. 4,734 (Feb. 8, 1984) (codified at 40 C.F.R. pt. 52).

²³⁹ *Baehr-Jones & Cheung*, *supra* note 121, at 213.

²⁴⁰ Approval and Promulgation of State Implementation Plans: Washington, 56 Fed. Reg. 14,861 (Apr. 12, 1991) (codified at 40 C.F.R. pt. 52).

²⁴¹ Arizona Redesignation of the Yavapai-Apache Reservation to a PSD Class I Area, 61 Fed. Reg. 56,461 (Nov. 1, 1996) (codified at 40 C.F.R. pt. 52).

Class I.²⁴² Nearly all redesignations involve the effort of tribes to prevent industrial development outside the boundaries of the reservation.²⁴³ However, once redesignation occurs, the tribe also has the limits imposed on its emissions producing development. In 2013, EPA issued guidance for Indian tribes seeking redesignation of lands within their exterior borders to Class I.²⁴⁴

A. Tribes as States

EPA administers the implementation of the CAA within Indian country until a tribal program is approved.²⁴⁵ In 1984, EPA adopted an Indian Policy that recognized the importance of close involvement by EPA with tribal governments in making decisions and managing environmental programs affecting Indian tribes.²⁴⁶ In the Clean Air Act Amendments of 1990, Congress expanded the power of Indian tribes to control air pollution by providing a path for Indian tribes to be treated as states (TAS), which allows tribes to administer and enforce the CAA in Indian lands.²⁴⁷

Congress expanded the ability of Indian tribes to protect the environment with the Safe Drinking Water Act Amendments of 1986,²⁴⁸ the Water Quality Act of 1987,²⁴⁹ and the Surface Mining Control and Reclamation Act Amendments of 2006.²⁵⁰ RCRA is the only major statute administered by EPA that does not have a TAS provision. RCRA treats Indian tribes as municipalities.²⁵¹ However, RCRA prohibits the states from using it as a basis for jurisdiction in Indian country.²⁵² The Comprehensive Environmental Response, Compensation, and Liability Act,²⁵³ provides for

²⁴² Approval and Promulgation of Air Quality Implementation Plans; Wisconsin; Redesignation of the Forest County Potawatomi Community Reservation to a PSD Class I Area, 73 Fed. Reg. 23,086 (Apr. 29, 2008) (codified at 40 C.F.R. pt. 52).

²⁴³ Baehr-Jones & Cheung, *supra* note 121, at 230.

²⁴⁴ U.S. ENVTL. PROT. AGENCY, GUIDANCE FOR INDIAN TRIBES SEEKING CLASS I REDESIGNATION OF INDIAN COUNTRY PURSUANT TO SECTION 164(C) OF THE CLEAN AIR ACT (2013).

²⁴⁵ See *supra* Part II.A.

²⁴⁶ 1984 EPA POLICY, *supra* note 234; see David F. Coursen, News & Analysis, *Tribes as States: Indian Tribal Authority to Regulate and Enforce Federal Environmental Laws and Regulations*, 23 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,579 (Oct. 1993) (discussing EPA's treatment of tribes as states under certain programs).

²⁴⁷ Pub. L. No. 101-549, § 107(d), 104 Stat. 2399, 2464-65 (codified at 42 U.S.C. § 7601(d) (2012)); Indian Tribes; Eligibility for Program Authorization, 59 Fed. Reg. 64,339, 64,339 (Dec. 14, 1994) (codified at 40 C.F.R. pts. 123, 124, 131, 142, 144, 145, 233, 501) (noting that in 1994, EPA adopted a policy that TAS would mean "treatment in a manner similar to a state").

²⁴⁸ Pub. L. No. 99-339, § 302(a), 100 Stat. 642, 665 (current version at 42 U.S.C. § 300j-11(a) (2012)).

²⁴⁹ Pub. L. No. 100-4, § 506(e), 101 Stat. 7, 77 (codified as amended at 33 U.S.C. § 1377(e) (2012)).

²⁵⁰ Pub. L. No. 109-432, § 209(a), 120 Stat. 2922, 3019-20 (codified as amended at 30 U.S.C. § 1300(j) (2012)).

²⁵¹ RCRA, 42 U.S.C. § 6903(13)(A) (2012) (defining municipality to include Indian tribes).

²⁵² Wash. Dep't of Ecology v. U.S. Envtl. Prot. Agency, 752 F.2d 1465, 1469 (9th Cir. 1985).

²⁵³ Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9675 (2012).

tribes to be TAS for specific provisions of the statute including notification of releases consultation concerning remedial action affecting a tribe, but it does not recognize tribal authority to the same extent as the other pollution control statutes.²⁵⁴

The Clean Air Act Amendments of 1990 expanded the power of Indian tribes to control air pollution in Indian country by providing a path for Indian tribes to be TAS.²⁵⁵ The Amendments provide Indian tribes with opportunities for air pollution program planning, implementation, and enforcement.²⁵⁶ Tribes can use section 105 to obtain funds to implement tribal air pollution programs.²⁵⁷ TAS status allows tribes to petition EPA under section 126 to impose control requirements on upwind sources that significantly contribute to a violation of an air quality standard in a downwind area.²⁵⁸

The CAA includes Indian tribal agencies in its definition of an “air pollution control agency.”²⁵⁹ Section 302(r) defines an Indian tribe as “any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village, which is Federally recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.”²⁶⁰

In 1998, EPA promulgated its Tribal Authority Rule (TAR), which sets forth the requirements for a tribe to obtain TAS status.²⁶¹ This status allows a tribe to implement the programs of the CAA, such as the development of implementation plans, the PSD program, and Title V permitting program.²⁶² The TAR also sets out the requirements that a tribe must meet to have an approved TIP.²⁶³ The United States Court of Appeals for the District of Columbia upheld the TAR in *Arizona Public Service Co. v. United States Environmental Protection Agency*.²⁶⁴

EPA has provided guidance concerning the procedural steps that tribes must follow to obtain TAS status.²⁶⁵ After pre-application discussions and technical assistance, a tribe submits an application to EPA, which reviews

²⁵⁴ *Id.* § 9626.

²⁵⁵ Pub. L. No. 101-549, § 107(d), 104 Stat. 2399, 2464–65 (codified at 42 U.S.C. § 7601(d) (2012)); Indian Tribes; Eligibility for Program Authorization, 59 Fed. Reg. 64,339, 64,339 (Dec. 14, 1994) (codified at 40 C.F.R. pts. 123, 124, 131, 142, 144, 145, 233, 501) (noting that in 1994, EPA adopted a policy that TAS would mean “treatment in a manner similar to a state”).

²⁵⁶ § 107, 104 Stat. at 2464–65 (codified at 42 U.S.C. § 7601(a), (d) (2012)).

²⁵⁷ CAA, 42 U.S.C. § 7405(b) (2012).

²⁵⁸ *Id.* § 7426. *See also id.* § 7410(a)(2)(D) (requiring compliance with § 7426).

²⁵⁹ *Id.* § 7602(b)(5).

²⁶⁰ *Id.* § 7602(r).

²⁶¹ Indian Tribes: Air Quality Planning and Management, 63 Fed. Reg. 7,254 (Feb. 12, 1998) (codified at 40 C.F.R. pts. 9, 35, 49, 50, 81).

²⁶² 40 C.F.R. § 49.3 (2015).

²⁶³ *Id.* §§ 49.6–7.

²⁶⁴ 211 F. 3d 1280, 1288 (D.C. Cir. 2000).

²⁶⁵ Memorandum from Marcus Peacock, Deputy Adm’r, U.S. Evtl. Prot. Agency, to Assistant Adm’rs & Regional Adm’rs (June 23, 2008), *available at* <https://www.epa.gov/sites/production/files/2014-10/documents/strategy-for-reviewing-applications-for-tas.pdf>.

the application.²⁶⁶ EPA notifies the appropriate governmental entities, identifies the reservation's boundaries and any assertions concerning tribal authority over nonreservation areas, and notifies the tribe when the application is complete.²⁶⁷ A public comment period follows, and the tribe is given the opportunity to review the comments and to respond.²⁶⁸ EPA produces a draft decision, which includes a response to comments for final review within the Agency.²⁶⁹ If the application is approved, the regional EPA office notifies the tribe in a letter that includes the boundaries of the reservation and the tribal jurisdiction over nonreservation areas.²⁷⁰

As of October 2015, there were forty-nine tribes—some with multiple approvals—that had TAS status for various CAA provisions.²⁷¹ Region 8 has nine tribes with TAS approval: the Arapaho Tribe of the Wind River Reservation, Wyoming; the Assiniboine and Sioux Tribes of the Fort Peck Reservation, Montana; the Blackfeet Tribe of the Blackfeet Indian Reservation, Montana; the Confederated Salish and Kootenai Tribes of the Flathead Reservation, Montana; the Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, the Montana; Shoshone Tribe of the Wind River Reservation, Wyoming; the Southern Ute Indian Tribe of the Southern Ute Reservation, Colorado; the Three Affiliated Tribes of the Fort Berthold Reservation, North Dakota; and the Ute Indian Tribe of the Uintah and Ouray Reservation, Utah.²⁷² Region 9 has ten TAS reservations, and Region 10 has thirteen TAS reservations.²⁷³ Thus, about two-thirds of the TAS reservations are in the West.

TAS status allows tribes to seek primacy to implement the CAA through a TIP, or to seek a more limited role by seeking primacy over specific CAA regulatory programs. EPA allows TAS and primacy applications to be filed together.²⁷⁴ Indian tribes must meet specified requirements to be granted TAS status. First, the tribe must have a governing body that has substantial governmental duties and powers.²⁷⁵ Second, the air pollution control functions to be exercised by the tribe must pertain to air resource management and protection within the exterior boundaries of the reservation—including tribal trust lands outside reservation boundaries.²⁷⁶ EPA interprets this requirement to cover sources within the reservation to

²⁶⁶ *Id.* at 27.

²⁶⁷ *Id.*

²⁶⁸ *Id.* at 28.

²⁶⁹ *Id.*

²⁷⁰ *Id.*

²⁷¹ E-mail from Regina Chappell, Liaison, Office of Air Quality Planning & Standards, U.S. Evtl. Prot. Agency, to Sheena M. Christman, Research Assistant, S.J. Quinney Coll. of Law (Oct. 27, 2015) (unpublished spreadsheet) (on file with author).

²⁷² *Id.*

²⁷³ *Id.*

²⁷⁴ 40 C.F.R. § 49.7(b)(2015).

²⁷⁵ CAA, 42 U.S.C. § 7601(d)(2)(A) (2012); 40 C.F.R. § 49.7(a)(2) (2015).

²⁷⁶ 42 U.S.C. § 7601(d)(2)(B) (2012); 40 C.F.R. § 49.7(a)(3) (2015); *see also* Okla. Tax Comm'n v. Citizen Band Potawatomi Indian Tribe of Okla., 498 U.S. 505, 511 (1991) (holding that tribal trust land outside reservation boundaries qualifies as a reservation for tribal immunity purposes).

include non-Indians within the reservation boundaries.²⁷⁷ To deal with emissions from outside the reservation boundaries requires the tribe to demonstrate its regulatory authority under general principles of Indian law.²⁷⁸ Third, the tribe must be “reasonably capable” of performing the duties and functions associated with the CAA.²⁷⁹ The term “capable” has both economic and technical ability requirements.²⁸⁰

After TAS approval, EPA continues to remain the sole criminal enforcement authority over non-Indians.²⁸¹ However, EPA allows tribes to enter into agreements that allow the tribe to work with EPA to assist in developing criminal enforcement actions.²⁸² The TAR also exempts tribes with TAS status from exposure to citizen suits based on section 304,²⁸³ but tribes (or any person) can use the citizen-suit provision against sources that are constructed or operated in violation of the CAA or an applicable CAA permit.²⁸⁴ In 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users²⁸⁵ limited Oklahoma Indian tribes’ TAS authority by requiring an agreement with the state environmental protection agency to jointly administer environmental regulatory programs in order to obtain TAS authority.²⁸⁶

In 1999, the Gila River Indian Community in Arizona became the first tribe to obtain TAS status.²⁸⁷ The Navajo Nation was a pioneer in taking the responsibility for environmental protection. It was granted TAS status and primacy for a program under the Safe Drinking Water Act on October 23, 2000.²⁸⁸ It obtained TAS status under the CAA on October 15, 2004.²⁸⁹ The

²⁷⁷ U.S. ENVTL. PROT. AGENCY, PLAN EJ 2014: LEGAL TOOLS 76, 79 (2011) [hereinafter PLAN EJ 2014], *available at* <https://www.epa.gov/sites/production/files/2016-07/documents/ej-legal-tools.pdf>.

²⁷⁸ Indian Tribes: Air Quality Planning and Management, 63 Fed. Reg. 7,254, 7,259 (Feb. 12, 1998) (codified at 40 C.F.R. pts. 9, 35, 49, 50, 81). *See* *Montana v. United States*, 450 U.S. 544, 557, 564–65 (1981) (holding that the Crow Indian Tribe had no authority to prohibit fishing and hunting by nonmembers on non-Indian property within reservation boundaries because there was no “inherent” Indian sovereignty).

²⁷⁹ 42 U.S.C. § 7601(d)(2)(C) (2012).

²⁸⁰ 40 C.F.R. § 49.7(a)(4) (2015).

²⁸¹ *Oliphant v. Suquamish Indian Tribe*, 435 U.S. 191, 208, 212 (1978) (holding that Indian Tribes do not have criminal jurisdiction over non-Indians); *Ute Indian Tribe of the Uintah & Ouray Reservation v. Utah*, 790 F.3d 1000, 1003–06, 1012 (10th Cir. 2015) (holding that a state and its subdivisions lack authority to prosecute Indians in state court for criminal offenses arising in Indian country and noting that states may exercise civil jurisdiction over non-Indians for activities on rights-of-way crossing Indian country, and may, in certain circumstances, enter Indian lands to investigate off-reservation crimes).

²⁸² PLAN EJ 2014, *supra* note 277, at 78.

²⁸³ 40 C.F.R. § 49.4(o) (2015).

²⁸⁴ 42 U.S.C. § 7604(a), (e) (2012).

²⁸⁵ Pub. L. No. 109-59, 119 Stat. 1144 (2005).

²⁸⁶ *Id.* § 10211, 119 Stat. 1144, 1937.

²⁸⁷ Milford, *Tribal Authority*, *supra* note 32, at 223.

²⁸⁸ Public Water System Supervision Program; Primary Enforcement Responsibility Approval for the Navajo Nation, 65 Fed. Reg. 66,541 (Nov. 6, 2000).

²⁸⁹ Announcement of the Delegation of the Title V Permitting Program, Consistent with Federal Operating Permit Programs to the Navajo Nation Environmental Protection Agency and

Navajo Nation obtained TAS status for water quality on January 23, 2006, and obtained primacy approval on March 23, 2006.²⁹⁰

On November 5, 2009, President Obama issued a memorandum that reiterated a commitment to collaboration with tribal governments on federal decisions that affect Indians.²⁹¹ The memorandum directed federal agencies to develop plans to implement Executive Order 13,175, which requires coordination with tribal governments on federal actions that impact tribes.²⁹² On May 4, 2011, EPA updated its policy on consultation and coordination.²⁹³ This policy expands the standards applicable to federal agencies beyond the requirements of Executive Order 13,175.²⁹⁴ In addition, several EPA Regions have procedures for consultation with Indian tribal governments.²⁹⁵

B. Tribal Implementation Plans (TIPs)

A tribe that has obtained TAS status may develop a TIP subject to EPA's approval.²⁹⁶ TIPs provide more flexibility than a SIP. A TIP allows tribes to address their specific air quality needs and takes into consideration a tribe's capacity to manage an air quality program.²⁹⁷ There is no mandated schedule for developing TIP elements and no sanctions for submitting a deficient TIP.²⁹⁸ This allows for the modular development of a package of subprograms that can include joint tribal and EPA management.²⁹⁹ Moreover, other Federal agencies, as well as state, local, and tribal agencies may regulate air quality for purposes other than compliance with the CAA. Examples include solid waste management, fire safety, and open burning.³⁰⁰ By executive order, each federal agency shall "to the extent practicable and permitted by law, consider any application by an Indian tribe for a waiver of statutory or regulatory requirements in connection with any program administered by the agency."³⁰¹

the Suspension of Federal Operating Permit Program Fee Collection by the EPA for Sources Covered by the Delegation of Authority Agreement, 69 Fed. Reg. 67,578 (Nov. 18, 2004).

²⁹⁰ Jill Elise Grant, *The Navajo Nation EPA's Experience with "Treatment as a State" and Primacy*, NAT. RESOURCES & ENV'T, Winter 2007, at 9, 12.

²⁹¹ Memorandum on Tribal Consultation, 2009 DAILY COMP. PRES. DOC. 887 (Nov. 5, 2009).

²⁹² Consultation and Coordination with Indian Tribal Governments, Exec. Order No. 13,175, § 3(c), 3 C.F.R. at 304, 305 (2001).

²⁹³ EPA POLICY ON CONSULTATION AND COORDINATION WITH INDIAN TRIBES, *supra* note 52.

²⁹⁴ See *id.* at 2 (noting that this policy will "implement both the Executive Order and the 1984 Indian Policy" with an expansive view of the need for consultation with tribes).

²⁹⁵ PLAN EJ 2014, *supra* note 277, at 74.

²⁹⁶ CAA, 42 U.S.C. § 7410(o) (2012). See generally William H. Gelles, *Tribal Regulatory Authority under the Clean Air Act*, 3 ENVTL. LAW. 363 (1997).

²⁹⁷ U.S. ENVTL. PROT. AGENCY, DEVELOPING A TRIBAL IMPLEMENTATION PLAN 22 (2002) [hereinafter DEVELOPING A TRIBAL IMPLEMENTATION PLAN], available at <https://nepis.epa.gov/Exe/ZyPDF.cgi/00002SIS.PDF?Dockey=00002SIS.PDF>.

²⁹⁸ *Id.* at 23.

²⁹⁹ *Id.* at 22–23.

³⁰⁰ *Id.* at 24.

³⁰¹ Consultation and Coordination with Indian Tribal Governments, Exec. Order No. 13,175, § 6(b), 3 C.F.R. at 304, 307 (2001).

EPA can provide support to tribes to initiate or operate air programs.³⁰² By 2002, more than 120 tribes had received grants.³⁰³ EPA has promulgated regulations that establish the elements of TIPs and procedures for approval or disapproval of TIPs and portions thereof.³⁰⁴ The potential elements of a TIP are: maintenance strategies, attainment strategies, source preconstruction permits, and regional haze plans.³⁰⁵

In PSD areas, there must be enforceable emission limits for existing sources, emission limits that are adequate to prevent violations, and schedules for implementing emission limits expeditiously.³⁰⁶ These requirements also apply in nonattainment areas, but additional contingency measures must be included to be used if the primary regulations do not result in attainment.³⁰⁷ EPA's NSR program for PSD areas can be delegated to a tribe, or a tribe can adopt a program of their own if it meets EPA's requirements.³⁰⁸

In nonattainment areas, an NSR program is required and may be developed for the TIP, and a minor source NSR program may also be included.³⁰⁹ A tribe may include a regional haze plan if visibility issues are a concern.³¹⁰ The last requirement for a tribe seeking approval for a TIP is to demonstrate that it has enforcement authority that meets EPA's expectations.³¹¹ Federal enforcement of the CAA on Indian lands is not always aggressive. For example, the Bonanza Power Plant owned by Desert Power is located on Utah's Uintah and Ouray reservation.³¹² The Ute Indian Tribe and environmentalists have uncovered more than 35,000 violations of the CAA by the plant.³¹³

According to EPA, in 2014, most tribes with TAS status were administering one or more parts of the CAA for EPA, but only three tribes were approved to implement TIPs, and only one tribe had been delegated the authority to implement a Title V operating permit program.³¹⁴ On October 30,

³⁰² CAA, 42 U.S.C. § 7601(d)(1)(B) (2012).

³⁰³ Milford, *Tribal Authority*, *supra* note 32, at 213–14.

³⁰⁴ Indian Tribes: Air Quality Planning and Management, 63 Fed. Reg. 7,254 (Feb. 12, 1998) (codified at 40 C.F.R. pts. 9, 35, 49, 50 and 81); 40 C.F.R. §§ 49.6–7 (2015).

³⁰⁵ DEVELOPING A TRIBAL IMPLEMENTATION PLAN, *supra* note 297, at 26.

³⁰⁶ *Id.* at 26–27, 29; *see also* 42 U.S.C. § 7410(a)(2)(D) (2012).

³⁰⁷ DEVELOPING A TRIBAL IMPLEMENTATION PLAN, *supra* note 297, at 26–28.

³⁰⁸ *Id.* at 29.

³⁰⁹ *Id.*

³¹⁰ *Id.* at 30.

³¹¹ *Id.*; 40 C.F.R. § 49.6(d) (2015).

³¹² Press Release, WildEarth Guardians, Ute Indian Tribe, WildEarth Guardians Join Forces for Clean Air, Public Health in Utah's Uinta Basin (Apr. 25, 2012), <http://www.wildearthguardians.org/site/News2?page=NewsArticle&id=7613> (last visited Nov. 19, 2016).

³¹³ *Id.*

³¹⁴ PLAN EJ 2014, *supra* note 277, at 20. The three tribes with TIP authority are the Mohegan Tribe of Connecticut, the Saint Regis Mohawk Tribe, and the Gila River Indian Community. Baehr-Jones & Cheung, *supra* note 121 at 207.

2007, EPA announced the Saint Regis Mohawk tribe in New York State had become the first tribe to have an EPA approved TIP.³¹⁵

On January 19, 2011, EPA approved the Gila River TIP.³¹⁶ The Gila River TIP is the most comprehensive TIP in the nation, and includes a minor source permit program, and mechanisms for administrative and tribal judicial review.³¹⁷ The Southern Ute Reservation in Colorado includes approximately 700,000 acres of land and its forty-two major sources are about one-third of the major sources in Indian country; it also has an estimated 1,000 minor sources of air pollution.³¹⁸ On March 12, 2012, the Southern Ute Indian Tribe became the first tribe with the authority to administer a Title V, 40 C.F.R. part 70 operating permit program.³¹⁹ The Navajo Nation had previously been delegated responsibility for administering an operating permit program under 40 C.F.R. part 71.³²⁰

Nevertheless, few tribes have tribal air pollution codes. In 2014, Professor Elizabeth Warner examined the environmental laws of 74 of the 566 recognized tribes, which included 29% of the nation's Native American population.³²¹ The tribes surveyed were located in Oklahoma, New York, Montana, and Arizona.³²² Her study discovered that only 5% of the survey group had enacted tribal air pollution laws.³²³ They were the Cherokee Nation, the Gila River Indian Community, the St. Regis Mohawk Tribe, and the part of the Navajo Nation in Arizona.³²⁴ The Navajo Nation has the most comprehensive air pollution regulations that generally follow the CAA.³²⁵

C. The Jurisdictional Reach of a TIP

An important issue is the jurisdictional reach of a tribe with TAS status that has an approved TIP. It may regulate all areas within the exterior boundaries of a reservation, including areas held in fee.³²⁶ It includes all dependent Indian communities, and all Indian allotments to which Indian

³¹⁵ Gerald B. Silverman, *Saint Regis Mohawks First Tribe to Receive EPA Approval for Tribal Implementation Plan*, 38 *Env't Rep.* (BNA) 2335, 38 *ENR* 2335 (BL) (Nov. 2, 2007); *Approval and Promulgation of Saint Regis Mohawk's Tribal Implementation Plan*, 72 *Fed. Reg.* 69,618 (Dec. 10, 2007) (codified at 40 C.F.R. pt. 49).

³¹⁶ *Approval and Promulgation of Gila River Indian Community's Tribal Implementation Plan*, 76 *Fed. Reg.* 17,028 (Mar. 28, 2011) (codified at 40 C.F.R. pt. 49).

³¹⁷ Baehr-Jones & Cheung, *supra* note 121, at 209.

³¹⁸ Sam W. Maynes, *Air Pollution Control on the Southern Ute Indian Reservation*, 42 *COLO. LAW.* 85, 86 (2013).

³¹⁹ *Clean Air Act Full Approval of Title V Operating Permits Program, Southern Ute Indian Tribe*, 77 *Fed. Reg.* 15,267 (Mar. 15, 2012) (codified at 40 C.F.R. pt. 70).

³²⁰ Maynes, *supra* note 318, at 90 n.3.

³²¹ Elizabeth K. Warner, *Examining Tribal Environmental Law*, 39 *COLUM. J. ENVTL. L.* 42, 65–66 (2014).

³²² *Id.*

³²³ *Id.* at 68.

³²⁴ *Id.*

³²⁵ *Id.* at 74–81.

³²⁶ CAA, 42 U.S.C. § 7410(o) (2012).

title has not been extinguished.³²⁷ In *Montana v. United States Environmental Protection Agency*,³²⁸ Montana challenged EPA's decision to grant TAS status to regulate all sources of water pollutant discharges within the boundaries of the reservation, regardless of whether the sources are on land owned by members or nonmembers of the Tribe.³²⁹ The Ninth Circuit supported EPA's TAS rule that allows control of the activities of nonmembers on non-Indian fee lands if the regulated activity affects "the political integrity, the economic security, or the health and welfare of the tribe."³³⁰ The potential impacts of the activities on the tribe must be "serious and substantial" to allow tribes to regulate nonmembers.³³¹

As discussed previously, the CAA's PSD program allows tribes to exercise power over development beyond the exterior boundaries of the reservation.³³² Empowering Indian tribes with the ability to conduct their own air programs can impact emission sources in and near the Indian lands because it creates another regulatory entity that may impose regulations on existing or potential emission sources. Moreover, TAS status makes a tribe an "affected state," which allows it to comment on draft operating permits proposed by neighboring state permitting authorities.³³³

It may be possible to extend the off-reservation reach of the CAA based on decisions under the CWA. In *City of Albuquerque v. Browner*,³³⁴ the City of Albuquerque challenged EPA's approval of the Pueblo of Isleta's water quality standards.³³⁵ The district court granted summary judgment to EPA, and Albuquerque appealed.³³⁶ This case was the first challenge to water quality standards adopted by an Indian tribe under the 1987 amendments to the CWA's section 518(e) that allow Indian tribes to be treated as states.³³⁷ The Pueblo of Isleta adopted water quality standards more stringent than New Mexico's standards, which were subsequently approved by EPA.³³⁸ This affected Albuquerque's waste treatment facility because the city was required to revise its NPDES discharge permit to meet the downstream Isleta's water quality standards.³³⁹ The issue before the court was whether

³²⁷ 40 C.F.R. § 71.2 (2015) (defining Indian country).

³²⁸ 137 F.3d 1135 (9th Cir. 1998).

³²⁹ *Id.* at 1138.

³³⁰ *Id.* at 1141 (quoting *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 52 (9th Cir. 1981) (citing *Montana v. United States*, 450 U.S. 544, 566 (1981))); *cf.* *Bugenic v. Hoopa Valley Tribe*, 229 F.3d 1210, 1220 (9th Cir. 2000) (holding that this standard had not been met).

³³¹ *Montana v. U.S. Envtl. Prot. Agency*, 137 F.3d at 1139 (citing Amendments to the Water Quality Standards Regulation that Pertain to Standards on Indian Reservations, 56 Fed. Reg. 64,876, 64,877 (Dec. 12, 1991) (codified at 40 C.F.R. pt. 31)).

³³² See *supra* note 22 and accompanying text.

³³³ CAA, 42 U.S.C. § 7661d(a)(2) (2012).

³³⁴ 97 F.3d 415 (10th Cir. 1996).

³³⁵ *Id.* at 418.

³³⁶ *Id.*

³³⁷ *Id.* at 418–19; Water Quality Act of 1987, Pub. L. No 100-4, § 506(e), 101 Stat. 7, 77 (codified as amended at 33 U.S.C. § 1377(e) (2012)).

³³⁸ *City of Albuquerque*, 97 F.3d at 419.

³³⁹ *Id.*

EPA could impose Isleta's standards on an upstream discharger.³⁴⁰ The Tenth Circuit held that Indian tribes may establish water quality standards more stringent than those imposed by the federal government, and it affirmed the grant of summary judgment to EPA.³⁴¹ Moreover, the Supreme Court of the United States has held that EPA has the authority to require upstream NPDES discharges to comply with downstream state water quality standards.³⁴² If a tribe has a FIP, this Supreme Court decision could support a tribe's claims to restrict upwind emissions that affect its air quality.

D. Delegation

A tribe, with or without TAS status, as an alternative to developing a TIP, may seek to have federal air pollution programs delegated to it for implementation.³⁴³ In 1975, the Supreme Court upheld the power of Congress to allow the delegation of authority to a tribe.³⁴⁴ EPA has well established processes for delegating federal authority to states and/or tribes for administering federal rules under the CAA, including conducting NSR under 40 C.F.R. § 52.21(u), and issuing federal operating permits under 40 C.F.R. §§ 71.4(j) and 71.10. For example, in 2004, EPA delegated authority to the Navajo Nation to allow it to administer the 40 C.F.R. part 71 federal operating permit program, but excluded the Four Corners Power Plant and the Navajo Generating Station.³⁴⁵

On April 8, 2005, EPA finalized a FIP for 39 Indian reservations in Idaho, Oregon, and Washington.³⁴⁶ EPA is willing to delegate certain administrative authority to the tribes, but it maintains it has the sole authority to enforce, and such actions would be subject to EPA's appeal procedures.³⁴⁷ EPA has explained that a number of rules under the CAA will not be delegated.³⁴⁸ If delegation is approved, a Partial Delegation of Administrative Authority Agreement between EPA and the tribal agency will contain the terms and conditions of the delegation and specify the rules and provisions the tribal agency is authorized to implement.³⁴⁹

³⁴⁰ *Id.* at 420.

³⁴¹ *Id.* at 423, 429.

³⁴² *Arkansas v. Oklahoma*, 503 U.S. 91, 102 (1992).

³⁴³ 40 C.F.R. § 49.7 (2015).

³⁴⁴ *United States v. Mazurie*, 419 U.S. 544, 546 (1975).

³⁴⁵ Announcement of the Delegation of the Title V Permitting Program, Consistent with Federal Operating Permit Programs to the Navajo Nation Environmental Protection Agency and the Suspension of Federal Operating Permit Program Fee Collection by EPA for Sources Covered by the Delegation of Authority Agreement, 69 Fed. Reg. 67,578 (Nov. 18, 2004). *See Grant, supra* note 290, at 12–13 (explaining that delegation of the program was approved quickly).

³⁴⁶ Federal Implementation Plans Under the Clean Air Act for Indian Reservations in Idaho, Oregon and Washington, 70 Fed. Reg. 18,074 (Apr. 8, 2005) (codified at 40 C.F.R. pts. 9 and 49).

³⁴⁷ *Id.* at 18,080; 40 C.F.R. § 49.122(a) (2015); *see also id.* § 49.122(b) (listing the criteria for delegation).

³⁴⁸ 70 Fed. Reg. at 18,081.

³⁴⁹ 40 C.F.R. § 49.122(c) (2015).

The delegation of the authority to assist EPA with administration of elements of the federal NSR programs is a process that differs from approval of tribal eligibility and tribal programs under section 301(d) and the TAR. Tribes requesting to assist EPA through administrative delegation need not demonstrate congressionally-delegated authority within the exterior boundaries of their reservations or authority over nonreservations areas of Indian country.³⁵⁰ Tribes only need to show that their laws provide adequate authority to perform the delegated activities.³⁵¹

Administratively delegated programs will continue to be enforced by EPA, not the delegated tribal agency.³⁵² Administrative appeals of permitting decisions will also continue to be made directly to the Environmental Appeals Board, with any subsequent judicial review to be conducted in Federal court.³⁵³

EPA does not believe that it would be appropriate to delegate enforcement of a Federal permit in Federal court to an Indian Tribe assisting EPA with administration of the NSR program. . . . EPA has consistently withheld [the authority to seek] enforcement in Federal court by any administratively delegated entity, whether a state or a Tribe.³⁵⁴

Tribes operating under delegated authority cannot charge permit fees, but tribes implementing TIPs can impose fees.³⁵⁵

For many tribes, delegation is the better route to expand their ability to control air pollution, because of the expense, expertise, and time required to meet EPA's requirements for a TIP. The Southern Ute Tribe's TIP-based operating permit program, for example, required years to complete, required hiring and training of staff with the necessary expertise, and involved substantial "up front" costs.³⁵⁶

IV. OIL & GAS REGULATION IN INDIAN COUNTRY

Indian lands may be leased for mineral development pursuant to three federal laws. The Indian Mineral Leasing Act³⁵⁷ provides for Indian lands to be leased for ten years, or longer, with the consent of the Secretary of the Interior.³⁵⁸ The Indian Mineral Development Act of 1982³⁵⁹ allows tribes to enter into mineral development agreements subject to the approval of the

³⁵⁰ See Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748, 38,780 (July 1, 2011) (codified at 40 C.F.R. pts. 49, 51).

³⁵¹ *Id.*

³⁵² 40 C.F.R. § 49.122(a) (2015).

³⁵³ See *id.* ("The Federal requirements administered by the delegated Tribe will be subject to enforcement by EPA under Federal law."); see also 76 Fed. Reg. at 38,781.

³⁵⁴ 76 Fed. Reg. at 38,782.

³⁵⁵ *Id.*

³⁵⁶ Maynes, *supra* note 318, at 88–89.

³⁵⁷ 25 U.S.C. §§ 396a–396g (2012).

³⁵⁸ *Id.* § 396a.

³⁵⁹ *Id.* §§ 2101–2108.

Secretary of the Interior.³⁶⁰ In the Energy Policy Act of 2005,³⁶¹ Congress included the Indian Tribal Energy Development and Self-Determination Act.³⁶² This Act allows a tribe to enter into tribal energy resource agreements (TERAs) with the Department of the Interior if the tribe demonstrates its capacity to regulate the development of tribal resources.³⁶³ The TERA process includes an environmental review.³⁶⁴ However, as of 2015, there were no TERAs in existence.³⁶⁵ This may in part be due to the complexity of the TERA process, the high costs imposed on applicants by the Department of the Interior, and the problems created by the ownership of the surface and subsurface being held by different people.³⁶⁶

EPA's regulations applicable to oil and gas operations include NSPS for the oil and gas industry, discussed below, and NSPS for specific equipment including compression ignition and spark ignition engines.³⁶⁷ Oil and gas facilities must also comply with the National Emission Standards for Hazardous Air Pollutants (NESHAPs) such as the rule for reciprocating internal combustion engines used in their operations.³⁶⁸ Oil and gas operations on Indian lands require an Application for a Permit to Drill (APD) to be submitted to and approved by BLM.³⁶⁹ Moreover, there are additional voluntary programs for the industry aimed at reducing their air pollution emissions.³⁷⁰

A. NSPS/HAPs

An important EPA regulation is the 2012 NSPS/HAP regulation for the Crude Oil and Natural Gas Production and Onshore Natural Gas Processing Plant source category.³⁷¹ The NSPS apply to well completions, pneumatic controllers, equipment leaks from natural gas processing plants, sweetening units at natural gas processing plants, compressors, and storage vessels that

³⁶⁰ *Id.* § 2102(a).

³⁶¹ Pub. L. No. 109-58, 119 Stat. 594 (codified as amended primarily in scattered sections of 42 U.S.C. (2012)).

³⁶² 25 U.S.C. §§ 3501–3506 (2012).

³⁶³ *Id.* § 3504(e).

³⁶⁴ *Id.* § 3504(e)(2)(B)(iii)(VI).

³⁶⁵ U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-15-502, INDIAN ENERGY DEVELOPMENT: POOR MANAGEMENT BY BIA HAS HINDERED ENERGY DEVELOPMENT ON INDIAN LANDS 34 (2015).

³⁶⁶ Kemp, *supra* note 7; Tanana & Ruple, *supra* note 32, at 38–39.

³⁶⁷ 40 C.F.R. pt. 60, subpt. IIII (2015).

³⁶⁸ See *infra* notes 457–464 and accompanying text.

³⁶⁹ Indian Mineral Leasing Act, 25 U.S.C. § 396d (2012); 43 C.F.R. § 3162.3–1(c) (2015).

³⁷⁰ See, e.g., Bridget DiCosmo, *EPA Scales Back Voluntary Methane Control Program, Piquing Advocates*, CLEAN AIR REP., Feb. 11, 2016, 2016 WLNR 4098884.

³⁷¹ 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) (codified as amended at 40 C.F.R. pt. 60, subpt. OOOO and 40 C.F.R. pt. 63, subpts. HH, HHH). Amendments and correction of technical errors were made in Oil and Natural Gas Sector: Reconsideration of Additional Provisions of new Source Performance Standards, 79 Fed. Reg. 79,018 (Dec. 31, 2014) (codified at 40 C.F.R. pt. 60, subpt. OOOO).

begin construction, modification or reconstruction after August 23, 2011.³⁷² Well completions after January 1, 2015, are subject to the NSPS during the flowback period following hydraulic fracturing operations at a gas well affected facility.³⁷³ EPA has defined completions to include newly drilled and fractured wells, and completions following refracturing operations.³⁷⁴ The NSPS also applies to onshore sweetening units that process natural gas from onshore or offshore wells.³⁷⁵

The NSPS for the Crude Oil and Natural Gas Production source category sets performance standards that limit volatile organic compound (VOC) emissions from gas wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels and leaking components at onshore natural gas processing plants, as well as SO₂ emissions from onshore natural gas processing plants.³⁷⁶ The rule regulates onshore gas wells drilled principally for production of natural gas, but it does not regulate wells drilled principally for the production of crude oil.³⁷⁷ Fractured and refractured gas wells are required to use reduced emissions completions, also known as “RECs” or “green completions,” to reduce VOC emissions.³⁷⁸ This may involve the use of a combustion device to limit VOC emissions.³⁷⁹

Individual storage vessels in the oil and natural gas production segment and the natural gas processing, transmission, and storage segments, with VOC emissions equal to or greater than six TPY must achieve at least 95% emissions reduction.³⁸⁰ Pneumatic controllers located between the wellhead and the point at which the gas enters the transmission and storage segment have natural gas bleed limits.³⁸¹ Centrifugal compressors have VOC reduction requirements.³⁸² For onshore natural gas processing plants, the NSPS requirements for leak detection and repair and SO₂ emissions are made more stringent.³⁸³

The regulation also provides NESHAPs for the Oil and Natural Gas Production source category and the Natural Gas Transmission and Storage source category.³⁸⁴ In addition, EPA has established MACT standards for specified emission sources in the oil and gas industry.³⁸⁵ Major sources at oil and natural gas production facilities may be subject to the NESHAP for

³⁷² 40 C.F.R. § 60.5365 (2015).

³⁷³ *Id.* § 60.5375(a).

³⁷⁴ *Id.* § 60.5430 (“Well completion operation means any well completion with hydraulic fracturing or refracturing occurring at a gas well affected facility.”).

³⁷⁵ *Id.* § 60.5365(g).

³⁷⁶ *Id.* §§ 60.5380–.5405.

³⁷⁷ *Id.*

³⁷⁸ *Id.*; *see also id.* § 60.5375 (containing well completion requirements).

³⁷⁹ *Id.* § 60.5375(a)(3).

³⁸⁰ *Id.* § 60.5395(a).

³⁸¹ *Id.* § 60.5390.

³⁸² *Id.* § 60.5380(a).

³⁸³ Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49,490, 49,492 (Aug. 16, 2012).

³⁸⁴ *Id.*

³⁸⁵ *Id.* at 49,491–92.

glycol dehydration units, which includes MACT standards for “small” glycol dehydration units that set specific limits for benzene, ethylbenzene, toluene and xylene.³⁸⁶

There are significant tribal interests in the emissions standards because of the growth of the oil and gas production industry in Indian country. Executive Order 13,175 sets some limits on the authority of any agency, including EPA.³⁸⁷ It states that, unless required by statute, EPA may not regulate a tribe in a manner that imposes substantial direct compliance costs unless the Federal government provides the funds necessary to pay the direct compliance costs or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.³⁸⁸ EPA concluded the regulation would not have tribal implications because it does not impose a significant cost on a tribe.³⁸⁹

EPA consulted with tribal officials when developing this regulation. Prior to the proposal in 2010, EPA conducted outreach and information meetings and met with tribal leaders.³⁹⁰ After publishing the proposal, EPA offered all tribal leaders the opportunity to consult on a government-to-government basis.³⁹¹ As part of the consultation process on October 12, 2011, a telephone call with tribal leaders was held.³⁹² Among the Tribes that participated was the Southern Ute Indian Tribe.³⁹³ An affiliate of the Southern Ute Indian Tribe was concerned about the impacts of the rule on natural gas and oil production operations on the Southern Ute Indian reservation. Additional time to evaluate the impacts was requested and granted.³⁹⁴

B. Oil and Natural Gas Sector: Emission Standards for New and Modified Sources

Methane is a greenhouse gas (GHG) with 25 times the global warming potential of CO₂, and the oil and natural gas industrial category is the single most important U.S. emission source with nearly one-third of the nation's emissions.³⁹⁵ On September 18, 2015, EPA proposed amendments to the NSPS for the oil and gas sources category to expand the coverage of oil and gas VOC emissions to include controls on methane emissions.³⁹⁶ EPA

³⁸⁶ *Id.* at 49,492.

³⁸⁷ Consultation and Coordination with Indian Tribal Governments, Exec. Order No. 13,175, 3 C.F.R. at 304 (2001).

³⁸⁸ *Id.* § 5, at 306.

³⁸⁹ 77 Fed. Reg. at 49,539; Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards, 79 Fed. Reg. 79,018, 79,036 (Dec. 31, 2014).

³⁹⁰ 77 Fed. Reg. at 49,539.

³⁹¹ *Id.*

³⁹² *Id.*

³⁹³ *Id.*

³⁹⁴ *Id.*

³⁹⁵ Tripp Baltz, *States Lead on Regulating Gas Flaring, Venting*, 47 Env't. Rep. (BNA) 1947, 47 ENR 1947 (BL) (June 24, 2016).

³⁹⁶ Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, 80 Fed. Reg. 56,593 (proposed Sept. 18, 2015) (to be codified at 40 C.F.R. pt. 60).

finalized the proposed changes on June 3, 2016.³⁹⁷ The changes to the NSPS are applicable to new, reconstructed, and modified oil and gas operations.³⁹⁸ The amendments impose standards for both greenhouse gases and VOCs, and add requirements for operations and equipment covered by the 2012 standards.³⁹⁹ The amendments will apply to hydraulically fractured oil wells, well completions, pneumatic pumps, and fugitive emissions from well sites and compressor stations that are not regulated by the 2012 rules; hydraulically fractured gas well completions and equipment leaks at natural gas processing plants that are currently regulated for VOC are now subject to GHG regulations.⁴⁰⁰

The 2016 rule adds new requirements for detecting and repairing leaks at natural gas well sites.⁴⁰¹ Leaks, known as fugitive emissions, must be repaired within thirty days, but if a repair would shut down production, additional time for the repair is allowed.⁴⁰² Leak monitoring plans must be developed using optical gas imaging equipment or by using a portable VOC monitoring instrument as specified in EPA's Method 21.⁴⁰³ The leak monitoring will apply to valves, connectors, pressure relief devices, open-ended lines, flanges, closed vent systems, compressors, and other components.⁴⁰⁴ However, some wellheads that contain only "Christmas trees" are exempt.⁴⁰⁵ The rule also adds new requirements for diaphragm pumps used at well sites.⁴⁰⁶

The amendments to the NSPS rule also requires a monitoring plan to be developed and implemented to control leaks at gathering and boosting compressor stations that obtain gas from multiple wells and move it to a natural gas processing plant.⁴⁰⁷ Because the best system for reducing methane is the same as is used to reduce VOC emissions, the requirements for centrifugal and reciprocating compressors, pneumatic controllers, and

³⁹⁷ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824 (June 3, 2016) (codified at 40 C.F.R. pt. 60).

³⁹⁸ *Id.* at 35,898–937 (codified at 40 C.F.R. pt. 60, subpt. OOOOa).

³⁹⁹ *Id.* at 35,825 ("These implementation improvements do not change the requirements for operations and equipment covered by the current standards at [40 C.F.R. part 60,] subpart OOOO.").

⁴⁰⁰ *Id.* at 35,825.

⁴⁰¹ *Id.* at 35,904–06 (codified at 40 C.F.R. § 60.5397a).

⁴⁰² *Id.* at 35,906 (codified at 40 C.F.R. § 60.5397a(h)).

⁴⁰³ *Id.* at 35,904 (codified at 40 C.F.R. § 60.5397a(c)).

⁴⁰⁴ *Id.* (codified at 40 C.F.R. § 60.5397a(a)).

⁴⁰⁵ *Id.* at 35,900 (codified at 40 C.F.R. § 60.5365a(i)(2)); U.S. ENVTL. PROT. AGENCY, SUMMARY OF REQUIREMENTS FOR PROCESSES AND EQUIPMENT AT NATURAL GAS WELL SITES 2 (2016) [hereinafter REQUIREMENTS AT NATURAL GAS WELL SITES], available at <https://www.epa.gov/sites/production/files/2016-10/documents/nsps-gas-well-fs.pdf>.

⁴⁰⁶ 81 Fed. Reg. at 35,900 (codified at 40 C.F.R. § 60.5365a(h)).

⁴⁰⁷ See *id.* at 35,934 (codified at 40 C.F.R. § 60.5430) (defining compressor station to include "any permanent combination of one or more compressors that move natural gas at increased pressure through gathering or transmission pipelines, or into or out of storage. This includes, but is not limited to, gathering and boosting stations and transmission compressor stations."); *id.* at 35,904 (codified at 40 C.F.R. § 60.5397a(b)) (requiring the development of a monitoring plan covering the collection of fugitive emissions for compressor stations).

storage tanks continue to be regulated by the 2012 NSPS.⁴⁰⁸ However, the 2016 update limits methane and VOC emissions from wet seal centrifugal compressors from the oil and gas industry, except for those located at well sites.⁴⁰⁹ For covered centrifugal compressors, a 95% reduction of methane and VOC emissions is required by utilizing either flaring or by routing captured gas back to the processor.⁴¹⁰ Dry seal centrifugal compressors are not covered by the final rule because they have low methane and VOC emissions.⁴¹¹ Reciprocating compressors, except for those located at well sites, are to have the rod packing replaced based on specified hours of operation, or elapsed calendar months, or by routing emissions from the rod packing through a closed vent system under negative pressure to be reused or recycled by a process or a piece of equipment.⁴¹² Pneumatic controllers are used to maintain liquid levels, pressure, and temperature that are powered by high pressure natural gas.⁴¹³ Continuous bleed pneumatic controllers not located at a natural gas processing plant now have a natural gas bleed rate limit of 6 standard cubic feet per hour (scfh).⁴¹⁴ Low-bleed controllers with a gas bleed rate of 6 scfh or less have no new requirements.⁴¹⁵ EPA did not finalize requirements for pneumatic pumps at compressor stations.⁴¹⁶ Storage tanks also do not have new requirements, but continue to be regulated by the 2012 NSPS requirements.⁴¹⁷

Natural gas processing plants have new requirements for controlling emissions from pneumatic pumps.⁴¹⁸ Natural gas driven piston pumps are not subject to new rules, nor are diaphragm pumps powered by electricity, compressed air, or solar power.⁴¹⁹ Processing plants continue to be regulated primarily by the 2012 NSPS.⁴²⁰

Requirements imposed by states (and tribes) that are at least as protective as federal requirements can be used to demonstrate compliance with the federal rule.⁴²¹ Facilities that will be subject to the proposed EPA

⁴⁰⁸ REQUIREMENTS AT NATURAL GAS WELL SITES, *supra* note 405, at 3.

⁴⁰⁹ 81 Fed. Reg. at 35,900 (codified at 40 C.F.R. § 60.5365a(b)–(c)).

⁴¹⁰ *Id.* at 35,902 (codified at 40 C.F.R. § 60.5380a(a)).

⁴¹¹ U.S. ENVTL. PROT. AGENCY, SUMMARY OF REQUIREMENTS [sic] FOR EQUIPMENT AT NATURAL GAS TRANSMISSION COMPRESSOR STATIONS 1 (2016) [hereinafter REQUIREMENTS AT NATURAL GAS TRANSMISSION COMPRESSOR STATIONS], *available at* <https://www.epa.gov/sites/production/files/2016-10/documents/nsps-gas-transmission-fs.pdf>.

⁴¹² 81 Fed. Reg. at 35,902 (codified at 40 C.F.R. § 60.5385a(a)).

⁴¹³ REQUIREMENTS AT NATURAL GAS TRANSMISSION COMPRESSOR STATIONS, *supra* note 411, at 2.

⁴¹⁴ 81 Fed. Reg. at 35, 899 (codified at 40 C.F.R. § 60.5365a(d)(1)).

⁴¹⁵ *Id.*

⁴¹⁶ REQUIREMENTS AT NATURAL GAS TRANSMISSION COMPRESSOR STATIONS, *supra* note 411, at 2.

⁴¹⁷ REQUIREMENTS AT NATURAL GAS WELL SITES, *supra* note 405, at 2.

⁴¹⁸ 81 Fed. Reg. at 35,899 (codified at 40 C.F.R. § 60.5365a(d)(2)).

⁴¹⁹ REQUIREMENTS AT NATURAL GAS WELL SITES, *supra* note 405, at 2–3.

⁴²⁰ U.S. ENVTL. PROT. AGENCY, SUMMARY OF REQUIREMENTS FOR PROCESSES AND EQUIPMENT AT NATURAL GAS PROCESSING PLANTS 1 (2016), *available at* <https://www.epa.gov/sites/production/files/2016-10/documents/nsps-gas-processing-fs.pdf>.

⁴²¹ 81 Fed. Reg. at 35,871.

standards may also be subject to current or future requirements of BLM, which regulates the production of natural gas on Federal lands.⁴²² Therefore, EPA and BLM will continue to coordinate their regulatory requirements.⁴²³

EPA's regulation of methane emissions from oil and gas wells was challenged by the State of North Dakota in the D.C. Circuit on July 15, 2016.⁴²⁴ Subsequently about 14 states joined the lawsuit, as well as numerous industry organizations.⁴²⁵ This was followed by nine states and numerous environmental groups intervening to support EPA's section 111(b) rule.⁴²⁶

The "Source Determination Rule," promulgated June 3, 2016,⁴²⁷ will lead to more oil and gas facilities being considered major sources. The new rule applies to onshore oil and natural gas production and natural gas processing.⁴²⁸ The PSD preconstruction permit requirements and the Nonattainment New Source Review (NNSR) preconstruction permit program apply to stationary sources, and the Title V operating permit program applies to major sources.⁴²⁹ Sources in the same industrial group (the same two-digit SIC code) under common control and located on contiguous or adjacent properties are to be aggregated.⁴³⁰ EPA's final rule clarifies the term adjacent, which determines when minor sources are to be aggregated to create a major source.⁴³¹ Multiple sources are to be aggregated to produce a major emitting facility if they are on the same site, or are on sites that share equipment and are within one-quarter of a mile of each other.⁴³²

EPA is not requiring that EPA-approved state and local programs adopt the approach in the Source Determination Rule.⁴³³ This allows state and local permitting authorities that have programs approved by EPA to continue to make source determinations for the oil and gas industry "in the manner that they believe best addresses their local air quality concerns."⁴³⁴ However, states that administer PSD permitting programs under a delegation of federal authority will have to follow the approach of the Source

⁴²² *Id.* at 35,825; Oil and Gas; Hydraulic Fracturing on Natural Lands, 80 Fed. Reg. 16,128 (Mar. 26, 2015) (codified at 40 C.F.R. pt. 3160).

⁴²³ *See* Part IV.E *infra*.

⁴²⁴ *North Dakota v. U.S. Env'tl. Prot. Agency*, No. 16-1242 (D.C. Cir. filed Jul. 15, 2016); Anthony Adragna, *North Dakota First to Sue EPA Over Rule Targeting Oil, Gas Well Methane Emissions*, 47 Env't Rep. (BNA) 2186, 47 ENR 2186 (BL) (July 22, 2016).

⁴²⁵ Anthony Adragna, *EPA Methane Rule for New, Modified Sources Faces More Challenges From States, Industry*, 47 Env't Rep. (BNA) 2311, 47 ENR 2311 (BL) (Aug. 5, 2016).

⁴²⁶ Anthony Adragna, *Nine States, Environmental Groups Back EPA in Legal Battle Over Methane Regulations*, 47 Env't Rep. (BNA) 2446, 47 ENR 2446 (BL) (Aug. 19, 2016).

⁴²⁷ Source Determination for Certain Emission Units in the Oil and Natural Gas Sector, 81 Fed. Reg. 35,622 (June 3, 2016) (codified at 40 C.F.R. pts. 51, 52, 70, 71).

⁴²⁸ *Id.* at 35,623.

⁴²⁹ *Id.* at 35,622–23.

⁴³⁰ 40 C.F.R. §§ 51.165(a)(1)(ii), 51.166(b)(6) (2015).

⁴³¹ 81 Fed. Reg. at 35,622.

⁴³² *Id.* at 35,632–34 (codified at 40 C.F.R. §§ 51.165(a)(1)(ii), 51.166(b)(6), 52.21(b)(6), 70.2).

⁴³³ *Id.* at 35,622.

⁴³⁴ *Id.* at 35,626.

Determination Rule, or develop their own permitting programs and have them approved as a revision to a SIP.⁴³⁵

The Source Determination Rule is also expected to produce HAP reductions and will benefit areas that approach or exceed the NAAQS for ozone.⁴³⁶ There have been measurements of increasing ozone levels in areas with concentrated oil and natural gas activity, including Wyoming and Utah.⁴³⁷ Several VOCs emitted in the oil and natural gas source category are HAPs listed under section 112(b), “including benzene, toluene, ethylbenzene and xylenes (this group is commonly referred to as ‘BTEX’) and n-hexane.”⁴³⁸

C. The 2016 FIP

On September 18, 2015, EPA promulgated a proposed FIP to regulate new true minor sources and minor modifications at true minor sources involved in the production of oil and natural gas, and in the processing of natural gas.⁴³⁹ On June 3, 2016, EPA promulgated the finalized rule.⁴⁴⁰ The oil sector includes the “operations from the well to the point of custody transfer to an oil pipeline or other means of transportation to a petroleum refinery.”⁴⁴¹ The natural gas sector includes “all operations from the well to the final end user.”⁴⁴² These sectors can generally be separated into four segments: “(1) Oil and natural gas production; (2) natural gas processing; (3) natural gas transmission and storage; and (4) natural gas distribution.”⁴⁴³ The FIP applies throughout Indian country, except nonreservation areas, unless a tribe or EPA demonstrates jurisdiction for those areas.⁴⁴⁴ True minor sources are those that have the potential to emit below the major source threshold by design, while synthetic minor sources are restricted to emissions below the major source threshold by the terms of their permit.⁴⁴⁵

⁴³⁵ 81 Fed. Reg. at 35,626.

⁴³⁶ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824, 35,827 (June 3, 2016) (codified at 40 C.F.R. pt. 60).

⁴³⁷ Benjamin Storrow, *State of Pollution? 8 Wyoming Counties Could Violate New EPA Ozone Rule*, CASPER STAR TRIB., Sept. 14, 2014, http://trib.com/business/energy/state-of-pollution-wyoming-counties-could-violate-new-epa-ozone/article_df0f8bc5-fb52-5958-b7f3-e78112adc5c1.html (last visited Nov. 19, 2016). For a discussion of Utah see *infra* Part VI.

⁴³⁸ 81 Fed. Reg. at 35,827.

⁴³⁹ Review of New Sources and Modifications in Indian Country: Federal Implementation Plan for Managing Air Emissions from True Minor Sources Engaged in Oil and Natural Gas Production in Indian Country, 80 Fed. Reg. 56,554 (proposed Sept. 18, 2015) (to be codified at 40 C.F.R. pt. 49).

⁴⁴⁰ Federal Implementation Plan for True Minor Sources in Indian Country in the Oil and Natural Gas Production and Natural Gas Processing Segments of the Oil and Natural Gas Sector; Amendments to the Federal Minor New Source Review Program in Indian Country to Address Requirements for True Minor Sources in the Oil and Natural Gas Sector, 81 Fed. Reg. 35,944 (June 3, 2016) (codified at 40 C.F.R. pt. 49).

⁴⁴¹ *Id.* at 35,952.

⁴⁴² *Id.*

⁴⁴³ *Id.*

⁴⁴⁴ *Id.* at 35,956; See also Okla. Dep’t of Env’tl. Quality v. U.S. Env’tl. Prot. Agency, 740 F.3d 185, 195 (D.C. Cir. 2014)).

⁴⁴⁵ 40 C.F.R. § 49.152 (2015).

The oil and natural gas production and natural gas processing segments of the oil and natural gas sector will use the FIP, not source-specific minor source preconstruction permits, for true minor sources that are subject to the Indian Country Minor NSR Rule, unless there is an applicable EPA-approved program with enforceable requirements to control and reduce air emissions from such sources.⁴⁴⁶ EPA believes the “issuance of source-specific permits has the potential to overwhelm the system . . . [, and] a FIP is the most appropriate way of implementing the Federal Indian Country Minor NSR rule.”⁴⁴⁷ The FIP does not apply in areas that are nonattainment for a NAAQS.⁴⁴⁸ In nonattainment areas, true minor sources will require either a site-specific minor NSR permit or compliance with a reservation-specific FIP, if one exists.⁴⁴⁹ Sources covered by the Federal Indian Country Minor NSR Rule that do not meet all of the eligibility criteria must obtain a site-specific permit prior to beginning construction on or after October 3, 2016.⁴⁵⁰ A source owner/operator that does not want to comply with the FIP also has the option to apply for a site-specific permit.⁴⁵¹ True minor sources are generally subject to the applicable provisions of the standard as written at the time construction or reconstruction of the source begins.⁴⁵² Major sources continue to be regulated by the more complex NSR permit program.⁴⁵³ To accommodate the FIP, the Indian Country Minor NSR Rule has been updated.⁴⁵⁴

The FIP incorporates emission limits and other requirements from the following eight federal standards:⁴⁵⁵ 1) National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters;⁴⁵⁶ 2) National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines;⁴⁵⁷ 3) Standards of Performance for Stationary Compression Ignition Internal Combustion Engines;⁴⁵⁸ 4) Standards of Performance for Stationary Spark Ignition Internal Combustion Engines;⁴⁵⁹ 5) Standards of Performance for Volatile Organic Liquid Storage Vessels;⁴⁶⁰ 6) Standards of Performance for Crude Oil and Natural Gas Facilities for

⁴⁴⁶ 81 Fed. Reg. at 35,952.

⁴⁴⁷ *Id.* at 35,951, 35,952.

⁴⁴⁸ *Id.* at 35,977 (codified at 40 C.F.R. § 49.101(b)(1)(v)).

⁴⁴⁹ *Id.* at 35,946.

⁴⁵⁰ *Id.* at 35,977 (codified at 40 C.F.R. § 49.101(b)(1)).

⁴⁵¹ *Id.*

⁴⁵² *See, e.g., id.* at 35,979–80 (codified at 40 C.F.R. § 49.105).

⁴⁵³ *See id.* at 35,977 (codified at 40 C.F.R. § 49.101(d)) (“This Federal Implementation Plan (FIP) does not apply to minor modifications at major sources.”); *see also* Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38,748 (July 1, 2011) (codified at 40 C.F.R. pts. 49, 51).

⁴⁵⁴ 81 Fed. Reg. at 35,981 (codified at 40 C.F.R. §§ 49.160, .166, .167).

⁴⁵⁵ *Id.* at 35,979 (codified at 40 C.F.R. § 49.105).

⁴⁵⁶ 40 C.F.R. pt. 63, subpt. DDDDD (2015).

⁴⁵⁷ *Id.* pt. 63, subpt. ZZZZ.

⁴⁵⁸ *Id.* pt. 60, subpt. III.

⁴⁵⁹ *Id.* pt. 60, subpt. JJJJ.

⁴⁶⁰ *Id.* pt. 60, subpt. Kb.

which Construction, Modification, or Reconstruction Commenced after September 18, 2015;⁴⁶¹ 7) National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities;⁴⁶² and 8) Standards of Performance for Stationary Combustion Turbines.⁴⁶³

The regulations imposed on production and processing components may include, but are not limited to:

Wells and related casing head; tubing head and ‘Christmas tree’ piping; pumps; compressors; heater treaters; separators; storage vessels; pneumatic devices; stationary engines; natural gas sweetening; truck loading; dewpoint suppression skids; natural gas dehydrators; completion and workover processes; gathering pipelines and related components that collect and transport the oil, natural gas and other materials and wastes from the wells or well pads; and natural gas processing plants.⁴⁶⁴

The natural gas production segment ends at the natural gas processing plant.⁴⁶⁵ If there is no processing plant, the production segment ends where the natural gas enters the transmission segment for long-line transport.⁴⁶⁶ The crude oil production segment ends where custody is transferred to an oil pipeline or for transport of the crude oil to a petroleum refinery.⁴⁶⁷ Pollutants emitted from new and modified minor sources and minor modifications of major sources in areas covered by the Federal Indian Country Minor NSR Rule include: VOC, NO_x, SO₂, PM, PM₁₀, PM_{2.5}, hydrogen sulfide, carbon monoxide, and various sulfur compounds.⁴⁶⁸ “Hydrogen sulfide (H₂S) and SO₂ are emitted from production and processing operations that handle and treat sour gas.”⁴⁶⁹

In addition to air emission control requirements, EPA requires true minor sources to assess their impacts on threatened and endangered species and historic properties.⁴⁷⁰ The rule provides two options for compliance:

(1) Prior completion of assessment by another federal agency. The owner/operator shall submit to the EPA Regional Office (and to the relevant tribe for the area where the source is located/locating) valid documentation demonstrating that prior Endangered Species Act (ESA) and/or National Historic Preservation Act (NHPA) compliance has been completed by another federal agency in connection with the specific oil and natural gas activity operated under this FIP

⁴⁶¹ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824, 35,827 (June 3, 2016) (codified at 40 C.F.R. pt. 60, subpt. OOOOa).

⁴⁶² 40 C.F.R. pt. 63, subpart HH (2015).

⁴⁶³ *Id.* pt. 60, subpart KKKK.

⁴⁶⁴ *Id.* at 35,977 (codified at 40 C.F.R. § 49.102).

⁴⁶⁵ *Id.* at 35,959.

⁴⁶⁶ *Id.*

⁴⁶⁷ *Id.* at 35,977 (codified at 40 C.F.R. § 49.101(a)).

⁴⁶⁸ *Id.* at 37,972.

⁴⁶⁹ *Id.*

⁴⁷⁰ *Id.* at 35,978 (codified at 40 C.F.R. § 49.104).

(2) Screening procedures completed by the owner/operator. The owner/operator shall submit to the EPA Regional Office (and to the relevant tribe for the area where the source is located/locating) documentation demonstrating that it has completed the screening procedures specified for consideration of threatened and endangered species and/or historic properties and receive written confirmation from the EPA stating that it has satisfactorily completed these procedures. . . .⁴⁷¹

D. EPA's GHG Reporting Requirements

EPA requires oil and natural gas companies to collect and report GHG emissions data for sources emitting 25,000 metric TPY, or more, of carbon dioxide equivalent (CO_{2e}).⁴⁷² The reporting requirements apply to facilities owned or operated by Indian tribes and private oil and gas operations on Indian reservations.⁴⁷³ During 2015, 2,413 oil and natural gas facilities reported GHG emissions, of which only 534 were onshore production facilities.⁴⁷⁴ Most production operations do not exceed the 25,000 ton threshold for reporting. EPA's data for 2014 shows only two facilities on the Uintah and Ouray Indian Reservation reporting—the Altamont Gas Plant and the Bonanza Power Plant.⁴⁷⁵ Beginning January 1, 2016, additional data from gathering and boosting systems, completions and workovers of oil wells using hydraulic fracturing, and blowdowns of gas transmission pipelines must be collected, and this information must be reported beginning March 31, 2017.⁴⁷⁶ However, the information concerning GHG emissions from oil and gas production is inadequate for effective policy development. On

⁴⁷¹ *Id.* (codified at 40 C.F.R. § 49.104(a)(1)–(2)).

⁴⁷² Greenhouse Gas Reporting Rule: 2015 Revisions and Confidentiality Determinations for Petroleum and Natural Gas, 80 Fed. Reg. 64,262, 64,284 (Oct. 22, 2015) (codified at 40 C.F.R. § 98.231(a)).

⁴⁷³ *Id.* at 64,283 (“This action has tribal implications. However, it will neither impose substantial direct compliance costs on federally recognized tribal governments, nor preempt tribal law. This regulation will apply directly to petroleum and natural gas facilities that emit GHGs. . . . [F]ew facilities that will be subject to the rule are likely to be owned by tribal governments. . . .”); *see also* Mandatory Reporting of Greenhouse Gases: Petroleum and Natural Gas Systems, 75 Fed. Reg. 74,458, 74,486 (codified at 40 C.F.R. pt. 98) (“It should be noted that the owner or operator of any privately owned sources located on a reservation would be required to report for any applicable facility.”).

⁴⁷⁴ U.S. Env'tl. Prot. Agency, *GHGRP 2013: Petroleum and Natural Gas Systems*, <https://www.epa.gov/ghgreporting/ghgrp-petroleum-and-natural-gas-systems> (last visited Nov. 19, 2016).

⁴⁷⁵ U.S. Env'tl. Protection Agency, *Facility Level Information on GreenHouse Gases Tool (FLIGHT)*, <https://ghgdata.epa.gov/ghgp/main.do> (select “Tribal Land,” then under “Data View” select “List,” and finally, under “Pick a Tribal Land” select “Ute Indian Tribe of the Uintah & Ouray Reservation, Utah”).

⁴⁷⁶ 80 Fed. Reg. at 64,291 (codified at 40 C.F.R. § 98.234(g)); Anthony Adragna, *New Oil, Gas Greenhouse Gas Reporting Mandates Finalized*, 46 Env't. Rep. (BNA) 3161, 46 ENR 3161 (BL) (Oct. 23, 2015).

January 15, 2015, EPA proposed revisions to the GHG reporting rule.⁴⁷⁷ On May 12, 2016, EPA issued a Draft Information Collection Request to require oil and natural gas companies to provide the information needed to regulate existing sources of methane emissions, including underground storage facilities that are not currently regulated.⁴⁷⁸ On September 23, 2016, EPA issued a second draft Information Collection Request.⁴⁷⁹ This could lead to hundreds of thousands of existing oil and gas sources that emit methane being subject to new requirements.⁴⁸⁰ The comment period for this information collection effort ended October 31, 2016, and EPA's proposal has been subject to criticism from the oil and gas industry.⁴⁸¹

E. Bureau of Land Management Regulations

BLM carries out the regulatory duties of the Secretary of the Interior with regard to the 56 million acres of Indian mineral estates based on the Indian Mineral Leasing Act⁴⁸² and other laws.⁴⁸³ Approval of a permit to drill (APD) by the federal land manager (FLM) is normally a prerequisite in Indian Country for a natural gas owner/operator to begin construction oil and natural gas owner/operator beginning construction.⁴⁸⁴ This authorization will include a NEPA review by agencies within the Department of the Interior.⁴⁸⁵ Under this review process, BLM is typically responsible for authorizing mineral rights and the Bureau of Indian Affairs (BIA) authorizes surface activities, such as, preparing the site for well-drilling activities and operating equipment for the production of oil and, or, natural gas.⁴⁸⁶ BLM and BIA often enter into agreements designating one agency to take the lead in the NEPA review process regarding the potential impacts of subsurface and surface activities.⁴⁸⁷

⁴⁷⁷ 2015 Revisions and Confidentiality Determinations for Data Elements Under the Greenhouse Gas Reporting Rule, 81 Fed. Reg. 2,536 (proposed Jan. 15, 2016) (to be codified at 40 C.F.R. pt. 98).

⁴⁷⁸ Proposed Information Collection Request; Comment Request; Information Collection Effort for Oil and Gas Facilities, 81 Fed. Reg. 35,763 (June 3, 2016).

⁴⁷⁹ Information Collection Request Submitted to OMB for Review and Approval; Comment Request; Information Collection Effort for Oil and Gas Facilities, 81 Fed. Reg. 66,962 (Sept. 29, 2016).

⁴⁸⁰ 81 Fed. Reg. at 35,764.

⁴⁸¹ Bridget DiCosmo, *Energy Groups Cite Data Collection Challenges in Call for Narrow EPA ICR*, INSIDE E.P.A. WEEKLY REPORT, Aug. 11, 2016, 2016 WLNR 24334464.

⁴⁸² Indian Mineral Leasing Act of 1938, 25 U.S.C. §§ 396a–396g (2012).

⁴⁸³ Press Release, U.S. Dep't of the Interior, Interior Department Releases Final Rule to Support Safe, Responsible Hydraulic Fracturing Activities on Public Lands (Mar. 20, 2015), <https://www.doi.gov/news/pressreleases/interior-department-releases-final-rule-to-support-safe-responsible-hydraulic-fracturing-activities-on-public-and-tribal-lands> (last visited Nov. 19, 2016).

⁴⁸⁴ 43 C.F.R. § 3162.3–1(c) (2015); Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, 80 Fed. Reg. 56,593, 56,566 (proposed Sept. 18, 2015) (to be codified at 40 C.F.R. pt. 60).

⁴⁸⁵ 80 Fed. Reg. at 56,666; 43 C.F.R. § 3162.5–1(a) (2015).

⁴⁸⁶ 80 Fed. Reg. at 56,666.

⁴⁸⁷ *Id.*

These government actions also trigger the need to comply with the Endangered Species Act⁴⁸⁸ (ESA) and the National Historic Preservation Act.⁴⁸⁹ Compliance with the ESA involves the United States Fish and Wildlife Service field offices assessing the impacts to threatened and endangered species and critical habitats, which results in measures implemented to protect those resources that are incorporated in the FLM's authorization.⁴⁹⁰ Historic property impacts are evaluated by State and/or Tribal Historic Preservation Offices, and FLMs must require appropriate measures to protect historic property.⁴⁹¹

On March 26, 2015, BLM released its final rule concerning hydraulic fracturing activities on tribal lands.⁴⁹² This rule updates a regulatory program that has existed for many years. Most of the rule is aimed at protecting land, water, and wildlife from the adverse impacts of fracking, but compliance with the CAA is also required.⁴⁹³ Indian tribes can request a variance from the provisions if they have an equal or more protective regulation.⁴⁹⁴ On February 8, 2016, BLM proposed regulations that would update the provisions that are more than 30 years old concerning natural gas venting, flaring, and royalty free gas.⁴⁹⁵ The proposed rule would require oil and gas producers to limit flaring at oil wells on public and tribal lands.⁴⁹⁶ They require inspection for leaks and the replacement of outdated equipment that vent large quantities of gas.⁴⁹⁷ Venting from storage tanks will have new limits, and best practices must be utilized to limit gas losses when removing liquids from wells.⁴⁹⁸ The proposal also clarifies when operators owe royalties on flared gas, and authorizes BLM to set royalty rates above 12.5% of the value of the production.⁴⁹⁹ Colorado, North Dakota, Utah, Wyoming, and other plaintiffs, including the Ute Tribe, challenged BLM's authority to regulate fracking.⁵⁰⁰ The Ute Tribe also argued that even if BLM has the authority to regulate fracking on federal land, the power does not extend to

⁴⁸⁸ Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (2012).

⁴⁸⁹ 54 U.S.C. §§ 300101–307108 (3 Supp. II 2015); 80 Fed. Reg. at 56,666.

⁴⁹⁰ *Id.*

⁴⁹¹ *Id.*

⁴⁹² Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16,128 (Mar. 26, 2015) (codified at 43 C.F.R. pt. 3160). BLM issued a minor correction to the rule a few days later. Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16,577 (Mar. 30, 2015) (codified at 43 C.F.R. pt. 3160).

⁴⁹³ 43 C.F.R. § 3162.1(a) (2015) (“The operating rights owner or operator, as appropriate, shall comply with applicable laws and regulations.”).

⁴⁹⁴ *Id.* § 3162.3–3(k).

⁴⁹⁵ Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 6,616 (proposed Feb. 8, 2016) (to be codified at 43 C.F.R. pts. 3100, 3160, 3710). BLM subsequently extended the public comment period. Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 19,110 (Apr. 4, 2016).

⁴⁹⁶ 81 Fed. Reg. at 6,682 (to be codified at 43 C.F.R. § 3179.6).

⁴⁹⁷ *Id.* at 6,684–86 (to be codified at 43 C.F.R. §§ 3179.201–202, .301–305).

⁴⁹⁸ *Id.* at 6,685 (to be codified at 43 C.F.R. §§ 3179.203–204).

⁴⁹⁹ *Id.* at 6,679 (to be codified at 43 C.F.R. § 3103.3–1) (setting royalty rate); *id.* at 6,682 (to be codified at 43 C.F.R. § 3179.5) (defining when royalties are owed on lost production).

⁵⁰⁰ Wyoming v. U.S. Dep't of the Interior, No. 2:15-CV-041-SWS, 2016 WL 3509415 (D. Wyo. June 21, 2016), *appeal docketed*, No. 16-8069 (10th Cir. filed June 29, 2016).

land held in trust for Indian tribes.⁵⁰¹ In addition, Republican senators were claiming BLM lacks the authority to regulate methane emissions.⁵⁰² On June 21, 2016, the United States District Court for the District of Wyoming held that BLM lacks Congressional authority to promulgate regulations to regulate hydraulic fracturing and the Fracking Rule is unlawful.⁵⁰³ The case was appealed to the United States Court of Appeals for the Tenth Circuit on June 29, 2016.⁵⁰⁴

V. AIR POLLUTION CONTROL IN UTAH'S INDIAN COUNTRY

The federal government exercises its trust responsibilities in Indian country through the BIA within the Department of the Interior.⁵⁰⁵ Much of its work is done through the twelve regional offices.⁵⁰⁶ The Western Region, located in Phoenix, Arizona, services approximately 143,000 American Indians in forty-two tribes located in Arizona (excluding the Navajo Nation), Nevada, Utah, and portions of California, Oregon and Idaho.⁵⁰⁷ The regions have agencies located in their service area to serve specific tribes.⁵⁰⁸

There are six federally recognized Indian tribes in Utah, and a small band of Colorado's Ute Mountain Tribe, but only two of the tribes have significant sources of air pollutants.⁵⁰⁹ The Confederated Tribes of the Goshute Reservation is located in western Utah and covers approximately 112,000 acres.⁵¹⁰ The Tribe does not appear to have any significant air emission sources.⁵¹¹ The Skull Valley Indian Community (Goshute) is located

⁵⁰¹ *Id.* at *3.

⁵⁰² Renee Schoof, *Sen. Barrasso Says BLM Lacks Authority to Cut Gas Waste on Public, Tribal Lands*, 47 Env't Rep. (BNA) 1178 (Apr. 15, 2016); Alan Kovski, *Wisdom, Legality of BLM Gas Flaring Rule Argued in Hearing, Public Comment Filing*, 47 Env't Rep. (BNA) 1334, 47 ENR 1334 (BL) (Apr. 29, 2016).

⁵⁰³ *Wyoming v. U.S. Dep't of the Interior*, 2016 WL 3509415, at *12.

⁵⁰⁴ *Wyoming v. U.S. Dep't of the Interior*, No. 16-8069 (10th Cir. filed June 29, 2016).

⁵⁰⁵ Bureau of Indian Affairs, *Who We Are*, <http://www.bia.gov/WhoWeAre/index.htm> (last visited Nov. 19, 2016) (noting that the BIA is "responsible for the administration and management of 55 million surface acres and 57 million acres of subsurface minerals estates held in trust by the United States for American Indian, Indian tribes, and Alaska natives").

⁵⁰⁶ Bureau of Indian Affairs, *Regional Offices*, <http://www.bia.gov/WhoWeAre/RegionalOffices/index.htm> (last visited Nov. 19, 2016).

⁵⁰⁷ Bureau of Indian Affairs, *Western Region Overview*, <http://www.bia.gov/WhoWeAre/RegionalOffices/Western/index.htm> (last visited Nov. 19, 2016).

⁵⁰⁸ Bureau of Indian Affairs, *History of BIA*, <http://www.bia.gov/WhoWeAre/BIA/index.htm> (last visited Nov. 19, 2016).

⁵⁰⁹ Utah Am. Indian Dig. Archive, Univ. of Utah, *Frequently Asked Questions*, <http://utahindians.org/archives/faq.html> (last visited Nov. 19, 2016). In addition, the White Mesa Utes that are part of the Ute Mountain Tribe located in Tawaoc, Colorado have a settlement of 380 members located eleven miles south of Blanding, Utah. Utah Am. Indian Dig. Archive, Univ. of Utah, *White Mesa*, <https://utahindians.org/archives/whiteMesa.html> (last visited Nov. 19, 2016).

⁵¹⁰ Utah Am. Indian Dig. Archive, Univ. of Utah, *Frequently Asked Questions*, <https://utahindians.org/archives/faq.html> (last visited Nov. 19, 2016).

⁵¹¹ Efforts to contact the Confederated Tribes of the Goshute Reservation failed. The Utah Division of Indian Affairs had no information on air emission sources on the Tribe's reservation.

in northwestern Utah and is approximately 17,248 acres.⁵¹² As of 2009, there were about 500 Goshutes in the two Goshute Tribes.⁵¹³ In 1976, the Skull Valley Band of Goshutes built a rocket motor testing facility that was leased to Hercules, Inc.⁵¹⁴ The facility shut down in the mid-1990s, and there are no existing or planned sources of air pollution on the Skull Valley reservation.⁵¹⁵ However, some of the Skull Valley Goshutes tried to allow their reservation to be used for depositing nuclear waste, which became controversial.⁵¹⁶ The Confederated Tribes of the Goshute Reservation were among the groups opposed to the waste facility.⁵¹⁷ The efforts to site the waste facility were ultimately unsuccessful.⁵¹⁸

The Paiute Indian Tribe consists of five bands that live on five reservations in Southwestern Utah.⁵¹⁹ The Paiutes lost most of their land and population in the period from the mid-1800s through 1980.⁵²⁰ Legislation enacted on April 3, 1980, restored some of the land.⁵²¹ Today the Paiute Tribe's reservation has a population of 709 on 32,446 acres scattered through southwestern Utah.⁵²² There are no emission sources on the reservation other than homes and vehicles, and there are no air regulations.⁵²³

The Northwestern Band of the Shoshone is located in northern Utah.⁵²⁴ Their 187 acres is the smallest reservation in Utah.⁵²⁵ In 2013, the tribe had 431 members.⁵²⁶ It too appears to have no significant air pollution sources.

⁵¹² *Frequently Asked Questions*, *supra* note 510.

⁵¹³ Utah Am. Indian Dig. Archive, Univ. of Utah, *The Goshutes: Did you Know*, <https://utahindians.org/archives/goshute/didYouKnow.html> (last visited Nov. 19, 2016).

⁵¹⁴ Utah Am. Indian Dig. Archive, Univ. of Utah, *History: The Goshutes*, <https://www.utahindians.org/archives/goshute/history.html> (last visited Nov. 19, 2016).

⁵¹⁵ E-mail from Candace Bear, Tribal Chairperson, Skull Valley Band of Goshutes, to Arnold W. Reitze, Jr., Professor of Law, S.J. Quinney Coll. of Law (Dec. 22, 2015) (on file with author).

⁵¹⁶ See, e.g., Judy Fahys, *Utah N-Waste Site Backers Call it Quits*, SALT LAKE TRIB. (Dec. 21, 2012), <http://archive.sltrib.com/story.php?ref=/sltrib/politics/55513674-90/consortium-friday-license-nrc.html.csp> (last visited Nov. 19, 2016) (showing the public's strong opposition to the proposal of a nuclear waste site on the reservation). See Utah Dep't Envtl. Quality, *Opposition to High-Level Nuclear Waste* <http://www.deq.utah.gov/Pollutants/H/highlevelnw/opposition/index.htm> (last visited Nov. 19, 2016), for documents concerning the spent fuel storage installation.

⁵¹⁷ Res. 97-G-022, Goshute Bus. Council (1997), *available at* <http://www.deq.utah.gov/Pollutants/H/highlevelnw/opposition/docs/2005/09Sep/goshutetribes.pdf>.

⁵¹⁸ Fahys, *supra* note 516.

⁵¹⁹ Utah Am. Indian Dig. Archive, Univ. of Utah, *Paiute*, <https://utahindians.org/archives/paiute.html> (last visited Nov. 19, 2016).

⁵²⁰ Utah Am. Indian Dig. Archive, *History: The Paiutes*, <https://www.utahindians.org/archives/paiutes/history.html> (last visited Nov. 19, 2016).

⁵²¹ Paiute Indian Tribe of Utah Restoration Act, Pub. L. No. 96-227, 94 Stat. 317 (1980).

⁵²² Utah State Office of Educ., *Paiute Tribe*, <http://www.uen.org/indianed/utahtribes/paiute.shtml> (last visited Nov. 19, 2016).

⁵²³ E-mail from Gaylord Robb, Paiute Tribe of Utah Econ. Dev., to Arnold W. Reitze, Jr., Professor of Law, S.J. Quinney Coll. of Law (Dec. 21, 2015) (on file with author).

⁵²⁴ Utah Am. Indian Dig. Archive, Univ. of Utah, *Shoshone*, <https://utahindians.org/archives/shoshone.html> (last visited Nov. 19, 2016).

⁵²⁵ Utah Am. Indian Dig. Archive, Univ. of Utah, *Did You Know?: The Shoshone*, <https://utahindians.org/archives/shoshone/didYouKnow.html> (last visited Nov. 19, 2016).

⁵²⁶ *Shoshone*, *supra* note 524.

The Navajo Nation is the largest Indian reservation in the United States, with over 17 million acres, and is headquartered in Window Rock, Arizona.⁵²⁷ The tribal lands extend into New Mexico and southeastern Utah.⁵²⁸ The tribe has over 300,000 members, and 6,000 live in Utah.⁵²⁹ The Navajo Nation has an environmental protection agency with 65 staff members.⁵³⁰ The Navajo Nation enacted a comprehensive Air Pollution Prevention and Control Act in 2004.⁵³¹ The Navajo Nation EPA has been delegated the authority to administer the part 71, Title V program for major facilities, for which the Navajo Nation has promulgated operating permit regulations.⁵³² There are currently 13 facilities operating with Title V permits on the Navajo Nation.⁵³³ The Navajo Nation also has been delegated significant authority over environmental inspections and civil enforcement.⁵³⁴

Petroleum development began on the Navajo Nation in the 1920s.⁵³⁵ In 1933, Congress enlarged the Navajo Nation by adding the Aneth Extension located in southeast Utah.⁵³⁶ In 1956, oil was discovered in the Aneth field and 577 wells have since been drilled, resulting in the production of 428 million barrels of oil.⁵³⁷ The field has three units operated by Resolute Energy Corporation, which owns the controlling interest in the field.⁵³⁸ In 1993, the

⁵²⁷ World Atlas, *supra* note 18.

⁵²⁸ Navajo Nation, *History*, <http://www.navajo-nsn.gov/history.htm> (last visited Nov. 19, 2016). One of the Navajo Nation's major sources of air pollutants is the Four Corners Power Plant located on the Navajo Nation near Shiprock, New Mexico. *See supra* note 80 and accompanying text. Arizona Public Service Company and the other owners in 2015 agreed in a consent decree to spend \$160 million over the next four years to reduce air pollution. Press Release, U.S. Dep't of Justice, *supra* note 83.

⁵²⁹ NAVAJO DIV. OF HEALTH & NAVAJO EPIDEMIOLOGY CTR., NAVAJO POPULATION PROFILE 2010 U.S. CENSUS 5, 46 tbl.2.5 (2013), *available at* <http://www.nec.navajo-nsn.gov/Portals/0/Reports/NN2010PopulationProfile.pdf>.

⁵³⁰ Navajo Nation Env'tl. Prot. Agency, *Air & Toxics*, http://navajonationepa.org/main/index.php?option=com_content&view=article&id=68&Itemid=149 (last visited Nov. 19, 2016).

⁵³¹ Air Pollution Prevention and Control Act (2004) (Navajo Nation).

⁵³² Announcement of a Supplement to the Delegation of the Title V Permitting Program, Consistent with 40 CFR Part 71, to the Navajo Nation Environmental Protection Agency and the Suspension of Part 71 Fee Collection by USEPA for the Four Corners Steam Electric Station and the Navajo Generating Station, 71 Fed. Reg. 16,773, 16,774 (Apr. 4, 2006); NAVAJO NATION ENVTL. PROT. AGENCY, NAVAJO NATION AIR QUALITY CONTROL PROGRAM OPERATING PERMIT REGULATIONS 18, 20, 53-54 (2004), *available at* <http://www.navajonationepa.org/Pdf%20files/NNAQCP-OperatingPermitRegs-Final.pdf>; NAVAJO NATION ENVTL. PROT. AGENCY, PROGRAM DESCRIPTION AND TRANSITION PLAN FOR A DELEGATED PART 71 PROGRAM 4, 6 (2004), *available at* https://www.epa.gov/sites/production/files/2015-08/documents/navajo_nation_part_71_program_description_and_transition_plan.pdf.

⁵³³ Navajo Env'tl. Prot. Agency, *Operating Permit Program*, <http://www.navajonationepa.org/opp/index.html> (last visited Nov. 19, 2016).

⁵³⁴ Jill E. Grant, *Enforcing Tribal Environmental Laws without "Treatment as a State"*, 30 NAT. RESOURCES & ENV'T 13, 13, 15-16 (2016).

⁵³⁵ Navajo Nation Oil & Gas Co., *About NNOGC*, <http://www.nnogg.com/about-us.html> (last visited Nov. 19, 2016).

⁵³⁶ Act of Mar. 1, 1933, ch. 160, 47 Stat. 1418.

⁵³⁷ *About NNOGC*, *supra* note 535.

⁵³⁸ Resolute Energy Corp., *Aneth Field*, http://www.resoluteenergy.com/aneth_field.html (last visited Nov. 19, 2016).

Navajo Nation Oil and Gas Co., Inc. (NNOGC) was created, and in 1998 it became a federally chartered corporation pursuant to the Indian Reorganization Act.⁵³⁹ NNOGC operates an 87-mile pipeline, distributes and markets fuel, and as of 2012 owns a 10% interest in Resolute's Greater Aneth Field.⁵⁴⁰ Both oil and gas are produced from the Aneth field, but oil production dominates.⁵⁴¹ One of the units, the McElmo Creek Unit, has a PSD permit pending at EPA's Region 9.⁵⁴²

The Navajo Nation issued a part 71 permit to the Resolute Natural Resources Company on July 30, 2007, which expired July 30, 2012.⁵⁴³ Resolute submitted a timely permit renewal application and is allowed to continue to operate under their existing permit.⁵⁴⁴ On August 16, 2012, EPA promulgated rules on oil and gas operations, and on December 31, 2014, the Agency issued final revisions to the rules.⁵⁴⁵ Resolute expects that they will need to modify their operations in order to comply, which will entail increased capital and operating costs.⁵⁴⁶

The Uintah and Ouray Reservation is located in the Uintah Basin in northeastern Utah, approximately 150 miles east of Salt Lake City.⁵⁴⁷ The Northern Ute Tribe (Utes) resides on the reservation.⁵⁴⁸ It is comprised of three bands: the White River Band, the Uncompahgre Band, and the Uintah Band.⁵⁴⁹ The reservation was the original home of the Uintah Band, but later the Whiteriver Band and the Uncompahgre Band were removed from Colorado and settled in the present Uintah and Ouray Reservation.⁵⁵⁰ There are 2,970 Ute Indians, with over half the members living on 1.3 million acres of trust land.⁵⁵¹

The Uintah and Ouray Reservation covers 4.5 million acres in Utah, which makes it the second largest Indian Reservation in the United States.⁵⁵²

⁵³⁹ 25 U.S.C. §§ 461–479 (2012); *About NNOGC, supra* note 535.

⁵⁴⁰ *Id.*

⁵⁴¹ *Id.*; Investor Presentation, Resolute Energy Corp. 3 (Sept. 1, 2016), *available at* <http://www.resoluteenergy.com/downloads/IR%20Presentation%20September%202016.pdf>.

⁵⁴² U.S. Env'tl. Prot. Agency, *Prevention of Significant Deterioration (PSD) Permits Issued by Region 9*, <http://www.epa.gov/caa-permitting/prevention-significant-deterioration-psd-permits-issued-region-9> (last visited Nov. 19, 2016) (listing pending PSD permits).

⁵⁴³ NAVAJO NATION ENVTL. PROT. AGENCY, TITLE V PERMIT TO OPERATE, NN-OP 00-02 (2007), *available at* http://www.navajonationepa.org/airqty/Pdf_files/R%20A%20U%20final%20permit%2007-20-07.pdf.

⁵⁴⁴ E-mail from Justina B. George, Env'tl. Specialist, Navajo Nation Env'tl. Prot. Agency, to Sheena M. Christman, Research Assistant, S.J. Quinney Coll. of Law (Feb. 2, 2016) (on file with author).

⁵⁴⁵ Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards, 79 Fed. Reg. 79,018, 79,018 (Dec. 31, 2014) (codified at 40 C.F.R. pt. 60).

⁵⁴⁶ Resolute Energy Corp., Annual Report (Form 10-K) 17 (Mar. 7, 2016).

⁵⁴⁷ Ute Indian Tribe, *Ute Tribe Location*, <http://www.utetribe.com> (last visited Nov. 19, 2016).

⁵⁴⁸ Ute Indian Tribe, *Short History*, <http://www.utetribe.com/departments/public-relations.html> (last visited Nov. 19, 2016).

⁵⁴⁹ *Id.*

⁵⁵⁰ *Id.*

⁵⁵¹ Ute Indian Tribe, *About the Utes*, www.utetribe.com (last visited Nov. 19, 2016).

⁵⁵² *Short History, supra* note 548.

The Reservation contains land owned by the Northern Ute Tribe, Ute Indian Allocated lands, lands jointly managed by Ute Indian Tribe and Ute Distribution Corporation, privately owned lands, and federal mineral estates.⁵⁵³ In the Uintah Basin, the Ute Indian Tribe controls about one-third of the mineral estates underlying the surface estates owned by the Tribe.⁵⁵⁴

The Ute Indian Tribe leases about 400,000 acres for oil and gas development, which results in about 7,000 wells producing 45,000 barrels of oil and 900 million cubic feet of gas per day.⁵⁵⁵ In the Uintah Basin approximately three-quarters of the gas production and half the oil production is from Indian country.⁵⁵⁶ In 2014, the Ute Indian tribe announced a plan to build a 1,000 megawatt natural gas fired electric generating plant on the Uintah and Ouray Reservation to utilize the available fuel.⁵⁵⁷ Oil and natural gas wells are regulated by BLM based on the Indian Mineral Leasing Act, with regulations that are uniform for all federal lands.⁵⁵⁸ This means that drilling permits are subject to BLM's forty-nine-step process and a fee of \$6,500 or more for each well.⁵⁵⁹ For this reason, some tribal leaders believe much of the growth in oil and gas production in Utah has occurred on state or private lands, which is an issue of concern to the Utes.⁵⁶⁰

The Northern Ute Indian Tribe has TAS status.⁵⁶¹ However, EPA issues the Title V operating permits on the Uintah and Ouray Indian Reservation.⁵⁶² There are ten Title V permits on the reservation, which is about 20% of the permits issued nationwide.⁵⁶³ There are nine operating permits for the gas industry; eight are for compressor stations.⁵⁶⁴ There are no PSD permits for

⁵⁵³ UTE INDIAN TRIBE & BUREAU OF INDIAN AFFAIRS, MINERAL & MINING DEVELOPMENT GUIDE: "HOW TO DO BUSINESS ON THE UINTAH & OURAY RESERVATION" 2-3 (2006), *available at* <http://digitallibrary.utah.gov/awweb/main.jsp?flag=browse&sm=1&awdid=1>.

⁵⁵⁴ *Id.*

⁵⁵⁵ Letter from Gordon Howell, Chairman, Bus. Comm. for the Ute Indian Tribe of the Uintah & Ouray Reservation, to U.S. House of Representatives Comm. on Appropriations, Subcomm. on Interior, Env't & Related Agencies (Apr. 3, 2014), *available at* <http://docs.house.gov/meetings/AP/AP06/20140408/101765/HHRG-113-AP06-Wstate-HowellG-20140408.pdf>.

⁵⁵⁶ Utah Dep't of Env'tl. Quality, *Uinta Basin: Ozone in the Uinta Basin*, <http://www.deq.utah.gov/locations/U/uintahbasin/ozone/overview.htm> (last visited Nov. 19, 2016).

⁵⁵⁷ Brian Maffly, *Ute Indian Tribe Developing Natural Gas Power Plant*, SALT LAKE TRIB., May 22, 2014, <http://archive.sltrib.com/story.php?ref=/sltrib/news/57973622-78/plant-power-tribe-coal.html.csp> (last visited Nov. 19, 2016).

⁵⁵⁸ Indian Mineral Leasing Act, 25 U.S.C. § 396d (2012); Kemp, *supra* note 7.

⁵⁵⁹ Kemp, *supra* note 7.

⁵⁶⁰ *Id.*

⁵⁶¹ See *supra* note 272 and accompanying text.

⁵⁶² U.S. Env'tl. Prot. Agency, *CAA Permitting in Utah*, <https://www.epa.gov/caa-permitting/caa-permitting-utah> (last visited Nov. 19, 2016).

⁵⁶³ See *supra* note 156 (listing fifty-three permits nationwide).

⁵⁶⁴ *CAA Permits Issued by EPA in Region 8*, *supra* note 70 (listing the following companies and facilities: Chipeta Processing LLC - Chipeta Gas Plant; Chipeta Processing LLC - Natural Buttes Compression Station; Wind River Resources Company - North Hill Creek Compressor Station; Monarch Natural Gas LLC - Riverhead Compressor Station; QEP Field Services - Chapita Compressor Station; QEP Field Services - Coyote Wash Compressor Station; QEP Field Services - Wonsits Valley Compressor Station; QEPM Gathering LLC - Island Compressor

oil and gas industry sources, despite the reservation's importance in the production of this energy resource.⁵⁶⁵ Because the Basin has not yet been designated nonattainment for ozone, there are no nonattainment new source review permit requirements.⁵⁶⁶ There are five synthetic minor source permits.⁵⁶⁷ There are no general permits. The CAA requirements aimed at major sources are of limited applicability because the oil and gas industry minimizes the sources subject to the requirements; thus, emissions from existing oil and gas wells have been largely unregulated.

To determine whether a source is major for a determination under the Title V operating permit program, or the PSD or NSR nonattainment programs, the emissions from multiple wells are aggregated for the purpose of regulation if they are physically adjacent.⁵⁶⁸ By separating wells the oil and gas industry avoids aggregation. EPA attempted to regulate wells based on their functional relatedness, but EPA lost in the United States Court of Appeals for the Sixth Circuit.⁵⁶⁹ Its efforts to limit the decision to the Sixth Circuit's jurisdiction also failed.⁵⁷⁰ EPA in 2016, as previously discussed, announced a new source determination rule that would aggregate wells within one-quarter of a mile.⁵⁷¹

VI. UTAH'S UINTAH BASIN

The Uintah Basin, is located in northeast Utah. The Uinta Mountain range is to the north and the Book and Roan Cliffs is to the south. The Wasatch Range is to the west, and the Piceance Basin in Colorado is to the east.⁵⁷² The Basin's altitude begins at approximately 4,800 feet above sea level.⁵⁷³ Duchesne and Uintah Counties make up nearly all the Basin.⁵⁷⁴ The Uintah Basin is the center of the state's oil and gas industry;⁵⁷⁵ in 2014, there were approximately 8,000 gas wells and 2,000 oil wells in operation.⁵⁷⁶ The oil wells are mostly located in Duchesne County, and the gas wells are mostly

Station; Deseret Power Electric Cooperative - Bonanza Power Plant and Questar Pipeline Company - Fidlar Compression Station).

⁵⁶⁵ *Id.*

⁵⁶⁶ See *infra* Appendix Table 2; *supra* Part II.D.

⁵⁶⁷ *CAA Permits Issued by EPA in Region 8, supra* note 70.

⁵⁶⁸ 40 C.F.R. § 71.2 (2015).

⁵⁶⁹ *Summit Petroleum Corp. v. U. S. Env'tl. Prot. Agency*, 690 F.3d 733, 735 (6th Cir. 2012).

⁵⁷⁰ *Nat'l Env'tl. Dev. Ass'n's Clean Air Project v. U.S. Env'tl. Prot. Agency*, 752 F.3d 999, 1003 (D.C. Cir. 2014).

⁵⁷¹ See *supra* note 432 and accompanying text.

⁵⁷² ENVIRON, FINAL REPORT: 2014 UINTAH BASIN WINTER OZONE STUDY 2-1 (Till Stoeckenius ed., 2015), available at http://www.deq.utah.gov/locations/U/uintahbasin/ozone/docs/2015/02Feb/UBWOS_2014_Final.pdf.

⁵⁷³ *Id.*

⁵⁷⁴ *Id.*

⁵⁷⁵ Div. of Oil & Gas, Utah Dep't of Nat. Resources, *Utah Oil Production – by County (past 5 years)*, http://oilgas.ogm.utah.gov/Statistics/PROD_Oil_county.cfm (last visited Nov. 19, 2016).

⁵⁷⁶ C. Warneke et al., *Volatile Organic Compound Emissions from the Oil and Natural Gas Industry in the Uintah Basin, Utah: Oil and Gas Well Pad Emissions Compared to Ambient Air Composition*, 14 ATMOSPHERIC CHEMISTRY & PHYSICS 10,977, 10,977 (2014).

located in Uintah County.⁵⁷⁷ There are also about 1,000 coalbed methane wells and conventional wells in Carbon County.⁵⁷⁸ Approximately two-thirds of the active oil and gas wells, three-quarters of the gas production, and half of the oil production are located in Indian country.⁵⁷⁹

During the summer, atmospheric ozone levels in the western United States approach the ozone NAAQS even in remote rural areas.⁵⁸⁰ Rural ozone air pollution has not been the subject of much study. It was only since 2010 that high ozone levels in the winter were found in the Upper Green River Basin in Wyoming and in the Uintah Basin.⁵⁸¹ With the rapid increase in oil and gas production in the rural west, and the associated air pollution, winter ozone has become a subject of increased monitoring and research projects.⁵⁸²

The chemistry of winter ozone formation differs from summer ozone formation, and is only now relatively complete, but further research is needed to develop valid predictive models.⁵⁸³ An important precursor appears to be carbonyl emissions, such as aldehyde, ketone, and ester, emitted by oil and gas operations, especially when a well is drilled.⁵⁸⁴ The primary cause of high ozone concentrations is wintertime temperature inversions, but clouds, wind, snow depth, and the reflectivity of snow affect ozone concentrations.⁵⁸⁵ During inversion conditions in the winter of 2013–2014 the then 8-hour ozone standard of 75 parts per billion (ppb) average was exceeded at 12 of 18 monitoring locations in the Uintah Basin.⁵⁸⁶ The ozone standard is now 70 ppb.⁵⁸⁷ However, during the winter of 2012, one of the warmest winters on record, the ozone levels did not exceed the standard.⁵⁸⁸

⁵⁷⁷ *Id.*

⁵⁷⁸ *Id.*

⁵⁷⁹ *Uinta Basin: Ozone in the Uinta Basin*, *supra* note 556.

⁵⁸⁰ Arnold W. Reitze, Jr, *The National Ambient Air Quality Standards for Ozone*, 6 ARIZ. J. ENVTL. L. & POL'Y 420, 447–48 (2015).

⁵⁸¹ DIV. OF AIR QUALITY, UTAH DEP'T OF ENVTL. QUALITY, AIR QUALITY RESEARCH PROJECTS 2014–2015, at 14 (2016) [hereinafter AIR QUALITY RESEARCH PROJECTS], *available at* <http://www.deq.utah.gov/ProgramsServices/programs/air/research/docs/2016/01Jan/AirQualityProjects2014-2015%20Final.pdf>.

⁵⁸² DIV. OF AIR QUALITY, UTAH DEP'T OF ENVTL. QUALITY, RURAL AIR QUALITY AND OIL/GAS DEVELOPMENT IN UTAH FACT SHEET 1 (2010) [hereinafter OIL/GAS FACT SHEET], *available at* http://www.deq.utah.gov/Topics/FactSheets/docs/June2010_Air_Issues.pdf.

⁵⁸³ ENVIRON, *supra* note 572, at 2-23 to -24.

⁵⁸⁴ *Id.* at 5-7 to -10.

⁵⁸⁵ *Id.* at 2-4 to -6.

⁵⁸⁶ *Id.* at 3-5 to -6 & tbl.3-2.

⁵⁸⁷ National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292, 65,452–53 (Oct. 26, 2015) (codified at 40 C.F.R. § 50.19).

⁵⁸⁸ UTAH STATE UNIV., 2012 UTAH BASIN WINTER OZONE & AIR QUALITY STUDY: FINAL STUDY 95 (Seth Lyman & Howard Shorthill eds., 2013), *available at* http://www.deq.utah.gov/locations/U/uintahbasin/ozone/docs/2014/03Mar/ubos_2011-12_final_report.pdf (“The most significant outcome of this work is the finding that ozone in the Uintah Basin is tightly coupled with meteorology. In the absence of snow cover and multiday temperature inversions, ozone concentrations stayed below EPA standards and were within the range of ozone concentrations measured at remote sites around the western United States.”); *see also* Salt Lake City Weather

The high ozone levels led the Northern Ute Indian Tribe's Air Quality Department to work in cooperation with EPA, the National Park Service (NPS), and Utah to monitor ozone at locations in the Uintah Basin.⁵⁸⁹ Utah's Division of Air Quality (DAQ) has monitors in Roosevelt, Vernal, and Fruitland.⁵⁹⁰ The National Park Service has monitors in Dinosaur National Park and maintains a monitoring station in Rangely with BLM.⁵⁹¹ In addition, Utah's Division of Air Quality has a partnership with industry to evaluate the impact of oil and gas development on air quality.⁵⁹²

EPA and the Ute Tribe of the Uintah and Ouray Reservation have regulatory authority for air pollution control in Indian country.⁵⁹³ BLM has responsibility for permitting and overseeing 11,000 oil and gas operations in the Uintah Basin.⁵⁹⁴ On the nonfederal lands in the Basin, DAQ handles the permitting of oil and gas operations that is coordinated with the Utah Division of Oil, Gas, and Mining (DOGGM), which regulates oil and gas activities through the use of drilling permits.⁵⁹⁵ New or modified sources subject to DAQ/DOGGM's authority must obtain an approval order to ensure there is no increase in the ozone level in the Basin.⁵⁹⁶ Sources subject to Utah's regulation that emit less than five TPY of any criteria pollutant, or less than 500 pounds of any single hazardous air pollutant, or less than 2,000 pounds of all hazardous air pollutants are not subject to the NSR program.⁵⁹⁷ Many emission sources in the oil and gas industry are below this de minimis threshold for NSR permitting.⁵⁹⁸ Moreover, information concerning oil and gas operations has been inadequate for effective regulation.⁵⁹⁹

Forecast Office, Nat'l Weather Serv. Forecast Office, *Temperature Inversions*, <http://www.wrh.noaa.gov/slc/climate/TemperatureInversions.php> (last visited Nov. 19, 2016) ("Surface temperature inversions play a major role in air quality, especially during the winter when these inversions are the strongest. The warm air above cooler air acts like a lid, suppressing vertical mixing and trapping the cooler air at the surface. As pollutants from vehicles, fireplaces, and industry are emitted into the air, the inversion traps these pollutants near the ground, leading to poor air quality.").

⁵⁸⁹ UTAH STATE UNIV., 2014–15 UINTAH BASIN WINTER OZONE STUDY: FINAL REPORT 5–6 & tbl.1 (2015) (listing monitoring stations). Utah Dept. of Env'tl Quality, *Uinta Basin: Ozone in the Uinta Basin Strategies and Tactics*, <http://www.deq.utah.gov/locations/U/uintahbasin/ozone/strategies/monitoring.htm> (last visited Nov. 19, 2016).

⁵⁹⁰ *Id.*

⁵⁹¹ *Id.*

⁵⁹² *Uinta Basin: Ozone in the Uinta Basin*, *supra* note 556.

⁵⁹³ *See supra* Parts II, III.

⁵⁹⁴ *See supra* Part IV.E; Brian Maffly, 'The Well Needs to be Plugged' — Utah Goes After Nonproducing Oil Wells on Federal Leases, SALT LAKE TRIB., June 9, 2016, <http://www.sltrib.com/home/3870454-155/state-goes-after-nonproducing-oil-wells?fullpage=1> (last visited Nov. 19, 2016).

⁵⁹⁵ *Uinta Basin: Ozone in the Uinta Basin*, *supra* note 556.

⁵⁹⁶ UTAH ADMIN, CODE r.307-401-3, -5 (2016); Utah Dept. of Env'tl Quality, *Ozone in the Uinta Basin: Strategies and Tactics*, <http://www.deq.utah.gov/locations/U/uintahbasin/ozone/strategies/standards.htm> (last visited Nov. 19, 2016).

⁵⁹⁷ UTAH ADMIN, CODE r.307-401-9(1) (2016).

⁵⁹⁸ OIL/GAS FACT SHEET, *supra* note 582, at 4.

⁵⁹⁹ *Id.* at 5.

The State of Utah and the Ute Tribe of the Uintah and Ouray Reservation are participating in the Ozone Advance program to reduce emissions of ozone precursors with the primary focus being VOC emission reductions to avoid the designation of Basin as an ozone nonattainment area.⁶⁰⁰ This is unlikely to succeed. Uintah County is expected to be designated a moderate nonattainment area, and Duchesne County is expected to be designated a marginal nonattainment area based on the 2008 8-hour ozone standard of 75 ppb.⁶⁰¹ This will require SIP revisions to impose more stringent requirements on existing sources. The requirements will include the need to install reasonably available control technology at existing sources, and EPA announced the release of draft control techniques guidelines to control VOCs on September 18, 2015.⁶⁰² On October 1, 2015, EPA lowered the ozone standard to 70 ppb,⁶⁰³ which is expected to lead to additional emissions controls on existing sources including existing oil and gas operations.⁶⁰⁴

While EPA and Utah work to reduce emissions from oil and gas operations in the Uintah Basin, BLM is dealing with a proposal by Crescent Point Energy, a Canadian company, that is seeking approval to drill up to 3,925 wells in a 35-mile swath across the basin.⁶⁰⁵ The project will include 863 miles of new roads, 170 miles of cross-country pipelines, five saltwater disposal wells, five facilities to treat “produced” waste water, four gas-processing plants, and other support facilities.⁶⁰⁶

VII. CONCLUSION

Environmental law applicable to Indian lands is similar to the laws applicable throughout the nation, but with significant differences. States play a very limited role in regulating sources of emissions in Indian lands. EPA has the major responsibility for controlling air pollution, but its efforts

⁶⁰⁰ *Uinta Basin: Ozone in the Uinta Basin*, *supra* note 556; U.S. Env'tl. Prot. Agency, *Advance Program Participants*, <https://www.epa.gov/advance/advance-program-participants> (last visited Nov. 19, 2016). For more information about EPA's Ozone Advance Program see U.S. ENVTL. PROT. AGENCY, OZONE ADVANCE GUIDANCE (2016), *available at* https://www.epa.gov/sites/production/files/2016-04/documents/guidance_update.final_april_2016.pdf.

⁶⁰¹ Federal Implementation Plan for True Minor Sources in Indian Country in the Oil and Natural Gas Production and Natural Gas Processing Segments of the Oil and Natural Gas Sector; Amendments to the Federal Minor New Source Review Program in Indian Country to Address Requirements for True Minor Sources in the Oil and Natural Gas Sector, 81 Fed. Reg. 35,944, 35,963 & n.56 (June 3, 2016) (codified at 40 C.F.R. pt. 60).

⁶⁰² Release of Draft Control Techniques Guidelines for the Oil and Gas Industry, 80 Fed. Reg. 56,577 (Sept. 18, 2015).

⁶⁰³ National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292, 65,452–53 (Oct. 26, 2015) (codified at 40 C.F.R. § 50.19).

⁶⁰⁴ Bridget DiCosmo, *Scope of Draft EPA Emissions Guide for Drilling Hinges on Ozone NAAQS*, INSIDE E.P.A. WEEKLY REPORT, Aug. 21, 2015, 2015 WLNR 25269227.

⁶⁰⁵ Notice of Intent to Prepare an Environmental Impact Statement for the Crescent Point Energy Utah Federal-Tribal Well Development Project, Duchesne and Uintah Counties, Utah, 81 Fed. Reg. 20,668, 20,668 (Apr. 8, 2016).

⁶⁰⁶ *Id.*

to date are inadequate. The CAA gives tribes the power to regulate air pollution, but only a few tribes, such as the Navajo Nation, have the resources to utilize this power. Voluminous federal regulations take aim primarily at new sources, while existing sources have much less oversight, although this may be changing. The inability of the federal and state governments to effectively aggregate oil and gas operations in order to impose major source requirements has left important sources of rural air pollution minimally regulated. The new and pending regulations as well as the potential designation of lands used for oil and gas production as nonattainment areas may bring needed controls. However, trying to regulate effectively an industry suffering from effects of low energy prices will be a challenge.

APPENDIX

Table 1: Federal Implementation Plans for Tribes⁶⁰⁷

EPA Region	Tribe	Promulgation of FIP
1	Mohegan Tribe of Indians, Connecticut	74 Fed. Reg. 49,327 (Sept. 28 2009)
2	Saint Regis Mohawk Tribe	72 Fed. Reg. 69,618 (Dec. 10, 2007)
8	Fort Berthold Indian Reservation (Mandan, Hidatsa and Arikara Nation), North Dakota	78 Fed. Reg. 17,858 (Mar. 22, 2013)
9	Gila River Indian Community	76 Fed. Reg. 17,028 (Mar. 28, 2011)
9	Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation	80 Fed. Reg. 18,120 (Apr. 3, 2015)
10	Burns Paiute Tribe of the Burns Paiute Indian Colony of Oregon	70 Fed. Reg. 18,074, 18,110 (Apr. 8, 2005)
10	Confederated Tribes of the Chehalis Reservation, Washington	<i>Id.</i> at 18,110–11
10	Coeur D'Alene Tribe of the Coeur D'Alene Reservation, Idaho	<i>Id.</i> at 18,111
10	Confederated Tribes of the Colville Reservation, Washington	<i>Id.</i> at 18,111–12
10	Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians of Oregon	<i>Id.</i> at 18,112–13
10	Coquille Tribe of Oregon	<i>Id.</i> at 18,113
10	Cow Creek Band of Umpqua Indians of Oregon	<i>Id.</i> at 18,113–14
10	Confederated Tribes of the Grand Ronde Community of Oregon	<i>Id.</i> at 18,114
10	Hoh Indian Tribe of the Hoh Indian Reservation, Washington	<i>Id.</i> at 18,115
10	Jamestown S'Klallam Tribe of Washington	<i>Id.</i> at 18,115–16
10	Kalispel Indian Community of the Kalispel Reservation	<i>Id.</i> at 18,116
10	Klamath Indian Tribe of Oregon	<i>Id.</i> at 18,116–17
10	Kootenai Tribe of Idaho	<i>Id.</i> at 18,117
10	Lower Elwha Tribal Community of the Lower Elwha Reservation, Washington	<i>Id.</i> at 18,117–18
10	Lummi Tribe of the Lummi Reservation, Washington	<i>Id.</i> at 18,118–19

⁶⁰⁷ See 40 C.F.R. pt. 49, subpts. D–M for more details.

10	Makah Indian Tribe of the Makah Indian Reservation, Washington	<i>Id.</i> at 18,119
10	Muckleshoot Indian Tribe of the Muckleshoot Reservation, Washington	<i>Id.</i> at 18,119–20
10	Nez Perce Tribe of Idaho	<i>Id.</i> at 18,120
10	Nisqually Indian Tribe of the Nisqually Reservation, Washington	<i>Id.</i> at 18,121
10	Nooksack Indian Tribe of Washington	<i>Id.</i> at 18,121–22
10	Port Gamble Indian Community of the Port Gamble Reservation, Washington	<i>Id.</i> at 18,122
10	Puyallup Tribe of the Puyallup Reservation, Washington	<i>Id.</i> at 18,122–23
10	Quileute Tribe of the Quileute Reservation, Washington	<i>Id.</i> at 18,123
10	Quinault Tribe of the Quinault Reservation, Washington	<i>Id.</i> at 18,123–24
10	Sauk-Suiattle Indian Tribe of Washington	<i>Id.</i> at 18,124–25
10	Shoalwater Bay Tribe of the Shoalwater Bay Indian Reservation, Washington	<i>Id.</i> at 18,125
10	Shoshone-Bannock Tribes of the Fort Hall Indian Reservation of Idaho	<i>Id.</i> at 18,125–26
10	Confederated Tribes of the Siletz Reservation, Oregon	<i>Id.</i> at 18,126
10	Skokomish Indian Tribe of the Skokomish Reservation, Washington	<i>Id.</i> at 18,126–27
10	Spokane Tribe of the Spokane Reservation, Washington	<i>Id.</i> at 18,127–28
10	Squaxin Island Tribe of the Squaxin Island Reservation, Washington	<i>Id.</i> at 18,128
10	Stillaguamish Tribe of Washington	<i>Id.</i> at 18,128–29
10	Suquamish Indian Tribe of the Port Madison Reservation, Washington	<i>Id.</i> at 18,129
10	Swinomish Indians of the Swinomish Reservation, Washington	<i>Id.</i> at 18,129–30
10	Tulalip Tribes of the Tulalip Reservation, Washington	<i>Id.</i> at 18,130
10	Confederated Tribes of the Umatilla Reservation, Oregon	<i>Id.</i> at 18,131
10	Upper Skagit Indian Tribe of Washington	<i>Id.</i> at 18,131–32
10	Confederated Tribes of the Warm Springs Reservation of Oregon	<i>Id.</i> at 18,132
10	Confederated Tribes and Bands of the Yakama Nation, Washington	<i>Id.</i> at 18,132–33

Table 2: Number of Tribes Designated as Being in Nonattainment by Pollutant and State

Ground Level Ozone: 2008 Standards⁶⁰⁸	
Tribes Designated Nonattainment along with Surrounding State Areas:	
State	Number of Tribes
California	43
Arizona	2
New York	1
Connecticut	2
Massachusetts	1
Total	49
Tribes Designated Nonattainment Separate from the Surrounding State Nonattainment Area:	
California	2
Total	2
Tribes with some Indian Country Designated Nonattainment along with the Surrounding State Area:	
California	1
Arizona	1
Total	2
Tribes Designated Unclassifiable/Attainment Separate from Surrounding State Nonattainment Area:	
South Carolina	1
Total	1
Tribes Designated Unclassifiable/Attainment Separate from Surrounding Unclassifiable/Attainment Area:	
Colorado	1
Total	1
Nitrogen Dioxide: 2010 Standards⁶⁰⁹	
All tribes designated unclassifiable/attainment.	
Sulfur Dioxide: 2010 Standards⁶¹⁰	
No tribe designated nonattainment.	

⁶⁰⁸ U.S. Env'tl. Prot. Agency, *Area Designations for 2008 Ground-level Ozone Standards: Tribal Final Designations*, April 2012, <https://archive.epa.gov/ozonedesignations/web/html/tribalf.html> (last visited Nov. 19, 2016).

⁶⁰⁹ U.S. Env'tl. Prot. Agency, *Nitrogen Dioxide Designations: 2010 Nitrogen Dioxide Standards – Tribal Recommendations and EPA Responses*, <https://www.epa.gov/nitrogen-dioxide-designations/2010-nitrogen-dioxide-standards-tribal-recommendations-and-epa> (last visited Nov. 19, 2016).

⁶¹⁰ U.S. Env'tl. Prot. Agency, *Sulfur Dioxide Designations: Sulfur Dioxide Designations – Where You Live*, <https://www.epa.gov/sulfur-dioxide-designations/sulfur-dioxide-designations-where-you-live> (last visited Nov. 19, 2016); *see also* Letter from Jared Blumenfeld, Reg'l Adm'r, Region IX, U.S. Env'tl. Prot. Agency, to Terry Rambler, Chairman, San Carlos Apache Tribe (Feb. 6, 2013), *available at* <https://www.epa.gov/sites/production/files/2016-03/documents/t-sancarlos-epa-resp.pdf> (noting violations at two nearby monitoring stations, but commenting that the data are not indicative of sulfur dioxide levels on the reservation).

Lead: 2008 Standards⁶¹¹	
All tribes designated unclassifiable/attainment.	
PM_{2.5}: 2012 Standard⁶¹²	
Tribes Designated Nonattainment along with Surrounding State Areas:	
California	11
Total	11
Tribes Designated Nonattainment Separate from the Surrounding State Nonattainment Area:	
California	1
Total	1
2006 24-Hour PM_{2.5} Standards⁶¹³	
Tribes Designated Nonattainment:	
California	20
Washington	1
Wisconsin	1
Total	22

⁶¹¹ U.S. Env'tl. Prot. Agency, *Lead Designations, Lead Designations - Where You Live*, <https://www.epa.gov/lead-designations/lead-designations-where-you-live> (last visited Nov. 19, 2016).

⁶¹² U.S. Env'tl. Prot. Agency, *Area Designations for the 2012 Annual Fine Particle (PM_{2.5}) Standard*, <https://www3.epa.gov/pmdesignations/2012standards/tribal.htm> (last visited Nov. 19, 2016).

⁶¹³ U.S. Env'tl. Prot. Agency, *Area Designations for 2006 24-Hour Fine Particle (PM_{2.5}) Standards*, <http://www3.epa.gov/pmdesignations/2006standards/tribal.htm> (last visited Nov. 19, 2016).