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AIR POLLUTION EMISSIONS DURING STARTUPS, SHUTDOWNS, AND MALFUNCTIONS

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Air pollution emission limitations on stationary sources are usually based on what is achievable during normal operation, but these requirements cannot always be met during the startup or shutdown of either specific processes or the entire facility. Moreover, malfunctions occur even at facilities that are well designed and operated. How startup, shutdown, and malfunction (SSM) events should be handled under the Clean Air Act (CAA) is controversial. The issue is complicated by the fact that under the CAA the implementation and enforcement of the Act is usually delegated to the states, which have parallel requirements in their federally approved state implementation plans as well as in their state permit program regulations.

Emission standards are defined in CAA § 302(k) as requirements “which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis...”¹ In 1977 the Environmental Protection Agency (EPA) determined that excess emissions during SSM periods was not a violation of the CAA § 111’s emission standards, but sources were required to minimize emissions in a manner consistent with good air pollution control practices.² This “general duty” standard is found at 40 C.R.F. § 60.11(d). In 1994 the EPA adopted a SSM exemption in its national emission standards for hazardous air pollutants (NESHAPs), authorized by CAA section 112,³ however, the EPA required each source to develop a plan to deal with SSM.⁴ The plan was to be made publicly available, and it had to be approved by the state. It was incorporated by reference into a source’s operating permit, which protects a permit holder during SSM events.⁵

In 2002 the EPA changed its rule for hazardous air pollutant (HAP)

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¹ 42 U.S.C. § 7602(k).

² U.S. Env’tl. Protection Agency, *Standards of Performance for New Stationary Sources*, 42 Fed. Reg. 57,125 (Nov. 1, 1977).

³ U.S. Env’tl. Protection Agency, *National Emission Standards for [HAPs] for Source Categories: General Provisions*, 59 Fed. Reg. 12,408 (Mar. 16, 1994).

⁴ *Id.* at 12,421 9codified at 40 C.F.R. § 63.6(e)(3).

⁵ U.S. Env’tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions*, 58 Fed. Reg. 42,760, 42,768 (Aug. 11, 1993).

sources by no longer requiring an SSM plan to be part of the permit.⁶ This meant that an SSM plan no longer could be used as a permit shield, but a permit could be revised without dealing with the plan.⁷ In the final rule, promulgated May 30, 2003, the EPA required the SSM plan to be available to the public only if a specific and reasonable request was made to the permitting authority to request the plan from the source.⁸ Further action was at the discretion of the permitting authority. Environmental groups then petitioned for reconsideration, and the EPA agreed to reconsider the rule.

In 2006, the EPA removed the requirement that SSM plans be implemented during SSM events.⁹ The general duty to minimize emissions was the applicable requirement for SSM events.¹⁰ Post-event reporting was required to show emissions were minimized and the cause of excess emissions was corrected.¹¹ The report, including the steps taken to minimize emissions, was required to be available to the public if the Administrator has the report. If a delegated permitting authority (e.g. the state) has the report the public can obtain it only if the permitting authority agrees to release it.¹²

The Sierra Club challenged the SSM exception in the D.C. Circuit claiming it violates the CAA's mandate for continuous emission reduction. The court on December 19, 2008, held the general duty rule is not a section 112 standard and the rule violates the requirement that CAA § 112 maximum achievable control technology (MACT) standards apply continuously.¹³ The court then vacated the SSM exemption. On October 6, 2009, the EPA removed the SSM exemption from new source performance standards (NSPS) and emissions guidelines for hospital/medical/infectious waste

⁶ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions; and Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections, Section 112(g) and 112(j)*, 67 Fed. Reg. 16,582 (Apr. 5, 2002).

⁷ Compliance with an operating permit is deemed to be compliance with the CAA. See CAA § 504(f), 42 U.S.C. § 7661c(f); Utah Administrative Code, R307-415-6f.

⁸ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions; and Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections, Section 112(g) and 112(j)*, 68 Fed. Reg. 32,586, 32,591 (May 30, 2003).

⁹ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Source Categories; General Provisions*, 71 Fed. Reg. 20,446, 20,447 (Apr. 20, 2006).

¹⁰ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Source Categories; General Provisions*, 70 Fed. Reg. 43,992, 43,994 (Jul. 29, 2005). See also 40 C.F.R. § 63.6(e)(1)(i).

¹¹ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Source Categories; General Provisions*, 71 Fed. Reg. at 20,446 (Apr. 20, 2006). See also 40 C.F.R. § 63.6(e) (3).

¹² *Id.* at 20,447.

¹³ *Sierra Club v. EPA*, 551 F.3d 1019 (D. C. Cir. 2008).

incinerators (HMIWI) regulated by CAA § 129.¹⁴ The EPA's action was challenged by industry in the D.C. Circuit, but the court upheld the Agency and denied the petition for review.¹⁵ On July 17, 2014, the EPA proposed to remove the affirmative defense provisions in the NSPS for the oil and natural gas sector.¹⁶ However, the EPA refused to set emission limits for toxic releases from the brick manufacturing sector during malfunction occurrences,¹⁷ because it will take time to review its many regulations on direct emissions because each regulation may present issues that need to be resolved.¹⁸

In 2012 the EPA promulgated NESHAP and NSPS rules for electric utilities.¹⁹ The rule included SSM provisions that shielded power plants from civil penalties due to malfunctions. It also provided enforcement exemptions for excess emissions during startup, which ends when the source begins to generate electricity or use steam to power on-site equipment. However, the EPA agreed to reconsider this definition when industry pushed back saying this was too inflexible.²⁰ The EPA subsequently proposed to remove the blanket emission exemptions and proposed startup emission limits that end three hours after a facility reaches 25 percent of its capacity or six hours after the start of electricity generation, whichever comes first.²¹ The EPA said power plants would be protected by this rule because the average power plant had between nine and ten startup events during 2011-2012.²² On November 19, 2014, the EPA published its rule taking final action on some SSM

¹⁴ 42 U.S.C. § 7429. U.S. Env'tl. Protection Agency, *Standards of Performance for New Stationary Sources and Emissions Guidelines for Existing Sources: Hospital/Medical/Infectious Waste Incinerators*, 74 Fed. Reg. 51,368, 51,393 (Oct. 6, 2009).

¹⁵ *Medical Waste Institute and Energy Recovery Council v. EPA*, 645 F.3d 420 (D.C. Cir. 2011).

¹⁶ U.S. Env'tl. Protection Agency, *Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards*, 79 Fed. Reg. 41,752 (proposed July 17, 2014).

¹⁷ Stuart Parker, *EPA Offers Brick Manufacturers Flexibility For Meeting Air Toxics Proposal*, 25 CLEAN AIR REP. (Inside EPA) 25:18 (Dec. 4, 2014).

¹⁸ Patrick Ambrosio, *EPA Commits to Removing Language On Affirmative Defense From Air Regulation*, 45 Env't Rep. (BNA) 3429 (Nov. 28, 2014).

¹⁹ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units*, 77 Fed. Reg. 9363 (Feb. 16, 2012).

²⁰ Chris Knight, *Utilities Urge EPA To Extend 'Startup' Time Exempt From Air Rule Limits*, 24 CLEAN AIR REP. (Inside EPA) 18:14 (Aug. 29, 2013).

²¹ *Id.*

²² Stuart Parker, *EPA Utility MACT 'Startup' Waiver Conflicts With SSM Ruling, Critics Claim*, 26 CLEAN AIR REP. (Inside EPA) 6:10 (Mar. 12, 2015).

provisions.²³ The rule resulted in a variety of challenges including SSM issues, but they were held in abeyance pending the result of challenges to the mercury rule based on the costs imposed on the power industry.²⁴ The D.C. Circuit upheld the rule,²⁵ but the case was appealed to the Supreme Court, now titled *Michigan v. EPA*. On June 29, 2015, the Court in a 5 to 4 decision written by Justice Scalia held “The Agency must consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary.”²⁶ On August 18, 2015, the D.C. Circuit halted lawsuits over the power plant startup provisions until a decision is made concerning whether the mercury and air toxic standards should remain in place.²⁷

While the mercury rule was being appealed, the D.C. Circuit on April 18, 2014, returned to the SSM issue in *Natural Resources Defense Council v. EPA*.²⁸ The case involved a challenge to the EPA’s NESHAP for Portland cement plants. In 2010 the EPA issued a rule that included an affirmative defense for violations of emissions standards due to an unavoidable malfunction, which can be used to avoid liability in private civil suits brought under the citizen suit provision found in CAA § 304(a).²⁹ In 2013 the EPA made changes to the Portland cement NESHAP and NSPS, but retained the affirmative defense provision for an unavoidable malfunction.³⁰ The citizen suit provision was modified in 1990 to allow district courts to impose appropriate civil penalties, which may include monetary penalties.³¹ The D.C. Circuit ruled that the judiciary has the right to determine penalties and EPA cannot use regulations such as the affirmative defense provision to

²³ U.S. Env’tl. Protection Agency, *Reconsideration of Certain Startup/Shutdown Issues: National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units*, 79 Fed. Reg. 68,777 (Nov. 19, 2014).

²⁴ Patrick Ambrosio, *Alternative Compliance Rule for Mercury, Air Toxics Challenged by Utility Industry*, 46 Env’t Rep. (BNA) 561 (Feb. 27, 2015); Stuart Parker, *Utilities Say EPA Violated Air Law in Revisions To MACT’s SSM Provisions*, 26 CLEAN AIR REP. (Inside EPA) 5:25 (Feb. 26, 2015).

²⁵ *White Stallion Energy Center v. EPA*, 748 F.3d 1222 (D.C. Cir. 2014).

²⁶ *Michigan v. EPA*, S. Ct. 135 S.Ct. 2699 (2015).

²⁷ Patrick Ambrosio, *Court Halts Power Plant Startup Lawsuits Pending Decision on Status of MATS Rule*, 46 Env’t Rep. (BNA) 2478 (Aug. 21, 2015).

²⁸ 749 F.3d 1055 (D.C. Cir. 2014).

²⁹ U.S. Env’tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants from Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants*, 75 Fed. Reg. 54,970 (Sept. 9, 2010).

³⁰ U.S. Env’tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants from Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants*, 78 Fed. Reg. 10,006 (Feb. 12, 2013).

³¹ CAA § 304(a), 42 U.S.C. § 7604(a).

control a court's power to determine penalties. Any regulatory affirmative defense is limited to being used in administrative penalty actions and is not a limit on a court action.³² The EPA then committed to removing the affirmative defense language from its other NESHAPs. On January 21, 2015, the EPA proposed rules to remove the SSM affirmative defenses from the boiler NESHAP and from the commercial and industrial solid waste incinerator rule.³³ On July 27, 2015, the EPA finalized the Portland cement NESHAP rule it had proposed on November 19, 2014.³⁴ The rule removes the affirmative defenses that were invalidated by the D.C. Circuit in *NRDC v. EPA*.³⁵

SSM IN SIP PROVISIONS

In addition to the use of a SSM exemption in the EPA's direct regulation of air emissions, the Agency for many years approved state implementation plans (SIPs) with SSM enforcement exemptions. SIPs are legally enforceable plans to bring nonattainment areas into compliance with the national ambient air quality standards (NAAQS) and are used to prevent significant deterioration of air quality in areas that meet the NAAQS (PSD areas). The state's SIP includes the requirements that must be met by emission sources. For example, Utah's SIP was approved in 1980³⁶ that contained the Unavoidable Breakdown Rule (UBR), which provides "emissions resulting from an unavoidable breakdown will not be deemed a violation of these regulation."³⁷ This Rule applies to all regulated pollutants.

On April 18, 2011, the EPA published a SIP call aimed at Utah.³⁸ The

³² 749 F.3d at (16).

³³ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*, 80 Fed. Reg. 3090 (proposed Jan. 21, 2015); U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers*, 80 Fed. Reg. 2871 (proposed Jan. 21, 2015); U.S. Env'tl. Protection Agency, *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incinerator Units*, 80 Fed. Reg. 3018 (proposed Jan. 21, 2015).

³⁴ U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants*, 80 Fed. Reg. 44,772 (July 27, 2015); U.S. Env'tl. Protection Agency, *National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants: Amendments*, 79 Fed. Reg. 68,821 (proposed Nov. 19, 2014).

³⁵ *NRDC v. EPA*, 749 F.3d at 1063-64.

³⁶ 45 Fed. Reg. 10,761 (Feb. 19, 1980).

³⁷ Utah Adm. Code R307-107-1.

³⁸ U.S. Env'tl. Protection Agency, *Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision*, 76 Fed. Reg. 21,640 (Apr. 18,

EPA may issue a SIP Call to require an approved SIP to be modified if it “is substantially inadequate to attain or maintain the relevant [requirements] or to otherwise comply with any requirement of [the CAA].”³⁹ This SIP Call was the result of a change in EPA’s policy concerning SSM after the Agency determined the SSM affirmative defenses to enforcement rendered the Utah SIP substantially inadequate.⁴⁰ EPA’s position was based on its conclusion that the SSM provisions violate the CAA requirement that emission controls be continuous.

The EPA determined that Utah’s regulation R307-107 was inadequate. The EPA was concerned that Utah’s rule: (1) did not treat all exceedances as violations; (2) the rule could be interpreted to give excessive authority to its executive secretary; and (3) it improperly applied to federal NSPS and NESHAPS emission standards.⁴¹ While the State of Utah was willing to work with the EPA to modify its SIP, a corporation that was potentially subject to more stringent emissions restrictions sued to prevent the SSM affirmative defenses from being removed.⁴² The U.S. court of Appeals for the Tenth Circuit, on June 17, 2011, denied the petition for review of the SIP Call and held the EPA could issue a SIP Call if it determines a SIP is no longer consistent with the EPA’s understanding of the CAA.⁴³ On July 31, 2012 Utah amended its “Breakdowns” rule and on August 16, 2012, Utah submitted to the EPA its revisions to R307-107 to correct the deficiencies described in the SIP call. As revised, R307-107 only pertains to the State’s exercise of its enforcement discretion and has no effect on a decision to enforce the CAA by the EPA or through citizen suits.⁴⁴ The EPA proposed to approve the revisions on May 9, 2013,⁴⁵ and promulgated its final approval on February 6, 2014.⁴⁶

The amended breakdowns rule applies to malfunction, not startup or shutdown situations. It requires notification to the director within 24 hours of an incident.⁴⁷ It applies to equipment malfunctions beyond the reasonable control of the owner or operator that results in excess emissions that could

2011).

³⁹ CAA § 110(k)(5), 42 U.S.C. § 7410(k)(5).

⁴⁰ *Ariz. Pub. Serv. Co. v. EPA*, 562 F.3d 1116, 1130 (10th Cir. 2009).

⁴¹ 79 Fed. Reg. at 7069.

⁴² *U.S. Magnesium v. EPA*, 690 F.3d 1157 (10th Cir. 2012).

⁴³ *Id.*

⁴⁴ U.S. Env’tl. Protection Agency, *Approval and Promulgation of Implementation Plans; Utah Revisions to Utah Rule R307-107; General Requirements; Breakdowns*, 79 Fed. Reg. 7067 (Feb. 6, 2014).

⁴⁵ 78 Fed. Reg. 27,165 (May 9, 2013).

⁴⁶ *Approval and Promulgation of Implementation Plans; Utah Revisions to Utah Rule R307-107*, *supra* note 42.

⁴⁷ Utah Adm. Code R307-107-1.

not be avoided by better operation, maintenance or improved design of the malfunctioning equipment.⁴⁸ Repairs must be made as quickly as practicable with all practicable steps taken to minimize the potential impact on ambient air quality.⁴⁹ The director is to evaluate the information supplied concerning the incident in order to determine whether to pursue an enforcement action.⁵⁰

Permitted facilities that have unavoidable increases in emissions while being properly operated have an affirmative defense to an action for noncompliance if the permittee takes all reasonable steps to minimize emissions and takes the other steps listed in the regulations governing emergencies.⁵¹ This protection is not available if noncompliance was caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.⁵² The burden of proof is on the permittee to show the emergency provisions that provide legal protection have been met.⁵³ If there is an upset, prompt reporting is required as well as information on the probable cause of any deviation and any corrective measures taken.⁵⁴ This appears to be the approach most states use. The EPA appears to be more aggressively reviewing operating permits for their SSM provisions. On May 8, 2014, EPA objected to operating permits issued by Georgia because the permit would have allowed three power plants to avoid emissions monitoring during SSM events.⁵⁵

While Utah was dealing with its SSM SIP call, the Sierra Club, on June 30, 2011, had petitioned the EPA to rescind its policy on SSM and require 39 states to remove the provisions relating to SSM in their SIPs because the affirmative defense is inconsistent with the CAA.⁵⁶ On February 22, 2013, the EPA promulgated a proposed rule as a response to the Sierra Club's petition, which amended the SSM approach that the Agency had approved in SIPs and in emission standards for many years.⁵⁷ The proposed rule granted all or part of the relief requested by the Sierra Club's by proposing to issue SIP Calls concerning SSM provisions in 35 states and the

⁴⁸ Utah Adm. Code R307-107-2.

⁴⁹ *Id.*

⁵⁰ Utah Adm. Code R307-107-3.

⁵¹ Utah Adm. Code R307-415-6g.

⁵² *Id.*

⁵³ *Id.*

⁵⁴ Utah Adm. Code R307-415-6a(3)(c).

⁵⁵ Chris Marr, *EPA Will Object to Parts of Permits For Five Plants Owner by Georgia Power*, 45 Env't Rep. (BNA) 1401 (May 9, 2014).

⁵⁶ Jessica Coomes, *36 States Would Need Revised Plans For Excess Emissions Under EPA Proposal*, 44 Env't Rep. (BNA) 470 (Feb. 22, 2013).

⁵⁷ U.S. Env'tl. Protection Agency, *State Implementation Plans: Response to Petition for Rulemaking; Finding of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction*, 78 Fed. Reg. 12,460 (Feb. 22, 2013).

District of Columbia's SIPs.⁵⁸

The EPA rejected the petition to include Nebraska, Idaho and Oregon.⁵⁹ Utah was not included because had been the subject of an SSM SIP Call that had been resolved.⁶⁰ However, other states in Region 8 (Colorado, Montana, North Dakota, South Dakota, and Wyoming) are subject to the proposed rule.⁶¹ By June 2015, Kentucky, Wyoming and North Dakota submitted changes to the EPA that were accepted.⁶² The proposed rule would allow affirmative defenses for malfunctions. Startup and shutdown emissions that are a normal part of a facility's operation would not be allowed affirmative defenses, but unplanned startups or shutdowns could be allowed to use affirmative defenses.⁶³ After the rule is finalized, the EPA must make a finding of substantial inadequacy and issue a SIP Call for each of the states identified in the proposed rule, which will begin the 18-month process for a state to respond with its SIP revision.⁶⁴ However, the proposed rule triggered widespread opposition from industry.⁶⁵

On March 25, 2013, the Fifth Circuit Court of Appeals decided *Luminant Generation Co. LLC v. EPA*.⁶⁶ The case involved both industry and environmental petitioners challenging the EPA's final rule partially approving and partially disapproving revisions to the Texas SIP concerning an affirmative defense against civil penalties for excess SSM events.⁶⁷ EPA approved the revision providing for an affirmative defense for unplanned SSM events that could not be prevented through planning and design, were not part of a recurring pattern, and did not cause or contribute to an exceedance of the NAAQS. The EPA disapproved the affirmative defense for planned SSM events.⁶⁸ The Fifth Circuit denied the petitions for review and upheld the EPA's partial approval and partial disapproval of the Texas SIP revision.⁶⁹ There is an unresolved issue after the *NRDC* and *Luminant* decisions because the *Luminant* allows affirmative defenses for unplanned

⁵⁸ *Id.*

⁵⁹ *Id.* at 12,466.

⁶⁰ U.S. Env'tl. Protection Agency, *Approval and Promulgation of Implementation Plans; Utah Revisions to Utah Rule R307-107; General Requirements; Breakdowns*, 79 Fed. Reg. 7067 (Feb. 6, 2014).

⁶¹ 78 Fed. Reg. at 12,466.

⁶² Stuart Parker, *EPA Orders 36 States To Remove SSM Provisions From Air Quality Plans*, 26 CLEAN AIR REP. (Inside EPA) 12:9 (June 4, 2015).

⁶³ 78 Fed. Reg. at 12,465.

⁶⁴ *Id.* at 12,467.

⁶⁵ *EPA Delays Startup, Shutdown, Malfunction Emission Decision One Month*, 24 CLEAN AIR REP. (INSIDE EPA) 26:28 (DEC. 19, 2013).

⁶⁶ 714 F.3d 841 (5th Cir. 2013), *cert. denied* Oct. 7, 2013.

⁶⁷ *Id.* at 847.

⁶⁸ *Id.* at 859.

⁶⁹ *Id.*

SSM events involving a SIP, but the *NRDC* Portland cement decision, previously discussed, allows no affirmative defenses for judicially enforced SSM events involving the violation of hazardous air pollutant emission limits.⁷⁰

On September 17, 2014, EPA issued a supplemental notice of proposed rulemaking to impose a SIP Call applicable to seventeen states to require removal of the affirmative defense provisions for SSM events.⁷¹ This effort was opposed by 17 states and several industry groups; Texas is also challenging the rule as it applies in Texas.⁷² On June 12, 2015, the EPA issued a “SIP call” applicable to 45 statewide and local jurisdictions in 36 states requiring corrective SIP revisions to deal with how excess emissions during SSM events are treated.⁷³ The states have until November 22, 2016 to remove the language in their SIPs that allows SSM exemptions and a related affirmative defense.⁷⁴ This SIP call has been challenged in the D.C. Circuit by the Southeastern Legal Foundation, an organization that advocates limited government and the free enterprise system.⁷⁵ Luminant Generation Company also is challenging EPA’s rule as it applies to Texas.⁷⁶

The treatment of SSM events requires balancing competing policies. Environmentalists are concerned that SSM events can be used to undermine emission standards that are based on the expectation of continuous control. Moreover, enforcement efforts can be compromised if sources can use claims of malfunction to avoid penalties. This issue is minimized by the strict regulatory requirements imposed on those that seek to use a malfunction defense and by the permittee carrying the burden of proving compliance with

⁷⁰ See *supra* 27 and the associated text.

⁷¹ U.S. Env’tl. Protection Agency, *State Implementation Plans: Response to Petition for Rulemaking; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction; Supplemental Proposal To Address Affirmative Defense Provisions in States Included in the Petition for Rulemaking and in Additional States*, 79 Fed. Reg. 55,920, 55,924 (proposed Sept. 17, 2014).

⁷² Patrick Ambrosio, *17 States Join Litigation Over EPA Rule Requiring Removal of Civil Penalty Shields*, 46 Env’t Rep. (BNA) 2413 (Aug. 14, 2015); Lea Radick, *Industry, States Oppose EPA Bid To End ‘Affirmative Defense’ In Air Plans*, 25 CLEAN AIR REP. (Inside EPA) 24:8 (Nov. 20, 2014).

⁷³ U.S. Env’tl. Protection Agency, *Restatement and Update of EPA’s SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction*, 80 Fed. Reg. 33,840 (June 12, 2015).

⁷⁴ Stuart Parker, *EPA Rule To End SSM Air Exemptions Spurs Legal, Regulatory Confusion*, 26 CLEAN AIR REP. (Inside EPA) 15:9 (July 16, 2015).

⁷⁵ Patrick Ambrosio, *Lawsuit Asks D.C. Circuit to Review Removal of Affirmative Defense From Pollution Plans*, 46 Env’t Rep. (BNA) 1829 (June 19, 2015).

⁷⁶ Patrick Ambrosio, *Luminant Sues EPA Over Rule Requiring Texas to Pull Affirmative Defense Provision*, 46 Env’t Rep. (BNA) 1829 (Sept. 17, 2014).

the requirements. Industry is concerned that emission standards have been based on the results obtained from using the best technology. However, no technology works all the time, and the legal system should be structured to accommodate predictable deviations. Moreover, the startup and shutdown of operations usually involves an increase in emissions. For startup and shutdown events, Utah imposes work practice requirements in a facility's operating permit.⁷⁷ Including startup and shutdown procedures in a source's operating permit is a pragmatic way of dealing with this issue. But this approach is far from perfect.

In Utah there are 71 CAA operating permits issued to major sources.⁷⁸ Operating permits are to be issued for a fixed term, not to exceed five years.⁷⁹ This means that after a change occurs in air pollution laws and regulations it will take time to incorporate the changes into permit requirements. But, even recently issued permits may not fully deal with startup and shutdown issues. For example, the PacifiCorp-Huntington Power Plant's permit was last revised June 9, 2015. This is one of Utah's most serious sources of air pollutants. The permit is 60 pages, but it incorporates by reference other statutory and regulatory provisions that add to its complexity. It provides protection for responding to emergencies, but an emergency does not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.⁸⁰ There are source-wide conditions that include Condition II.B.1.f:

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any permitted plant equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.⁸¹

An annual projection of planned outages for stem boilers and associated pollution control equipment is to be submitted to the Director not

⁷⁷ Utah Adm. Code R307-415-6c(5).

⁷⁸ Utah Dept. Of Environmental Quality web site.

⁷⁹ CAA § 502(b)(5)(B), 42 U.S.C. § 7661a(b)(5)(B).

⁸⁰ Utah Title V Operating Permit #1501001004 (June 9, 2015) at 10 (citing R307-415-6g(1)).

⁸¹ Citing 40 C.F.R. pt. 60, subpt. A, R307-401-8(2).

later than January 30 for each calendar year.⁸² Other outages must be reported promptly.⁸³ The permit holder is required to comply with the emission and operating limits except during periods of startup and shutdown as defined in 40 C.F.R. 63.10042.⁸⁴ This includes either meeting the work practice in Table 3 of 40 C.F.R. Part 63, Subpart UUUUU applicable during periods of startup, or shutdown or an alternative work standard approved by the Administrator.⁸⁵ Startup and shutdown are defined in the permit. The permit includes many details concerning operations that may affect SSM conditions. The permit gives substantial discretion to the Division of Air Quality and to a lesser extent to the EPA, but the complexity of the permit process and the extent of the enforcement authority's discretion to interpret the requirements makes it difficult, perhaps impossible, for outsiders to have any meaningful oversight of the facilities performance concerning SSM compliance.

CONCLUSION

The work practice approach used in the permits is a pragmatic solution to dealing with SSM events, but the price is the lack of transparency concerning facility operation. In most situations, the public may never know whether compliance is continuous. The public has no choice except to depend on the state enforcement personnel to assure compliance. But continuous compliance may not occur unless a state has the budget, personnel and political support needed for effective scrutiny of major source operations. This may not be occurring. In Utah, for example, seven field inspectors work in the major source compliance section. Thus, limited support for the Division of Air Quality makes it difficult to ascertain whether the work practice approach is effective.

⁸² Utah Title V Operating Permit, *supra* note 77, at II.B.1.f.3

⁸³ *Id.*

⁸⁴ *Id.* at II.E.

⁸⁵ *Id.* at II.B.2.g.