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Inside EPA's Plan For Startups, Shutdowns And Malfunctions

Law360, New York (April 02, 2013) -- On Feb. 22, 2013, the U.S. Environmental Protection Agency proposed a state implementation plan call requiring 36 states to revise state law provisions governing excess emissions associated with emission unit or control device startups, shutdowns and malfunction events (SSM events).[1]

In petitioning for this SIP Call, Sierra Club argued that state law exemptions and affirmative defenses for SSM events in effect allow sources to operate during startups, shutdowns and upsets with little or no pollution controls, thereby threatening the state's ability to obtain or maintain compliance with National Ambient Air Quality Standards (NAAQS).

Industry argues that SSM event provisions are necessary to account for unplanned upsets beyond the control of operators or the fact that lower operating temperatures and combustion efficiency during startup of an emission unit or control device can result in emission excursions above permitted levels.

In the proposed SIP Call, the EPA effectively offers to split the difference — the EPA's proposed action would prohibit states from allowing blanket exemptions for SSM events or affirmative defenses for excess emissions associated with startup and shutdown but would allow states to promulgate affirmative defenses for unplanned malfunctions and to create special emission limitations or other control measures in lieu of limiting emissions to normal permitted levels during startup and shutdown events.

This article examines the events leading to the EPA's recent SIP Call, key points in the recently issued regulatory notice, and possible problems that the EPA and industry will need to address as states adjust their SIP SSM provisions.

Events Precipitating the EPA's Recent SIP Call

The Sierra Club's efforts to shrink the scope of available SSM defenses started many years before their petition leading to the EPA's recent SIP Call. In 2003, Sierra Club and NRDC challenged SSM provisions incorporated into the Subpart A of the National Emission Standards for Hazardous Air Pollutants (NESHAP) establishing general conditions for all facilities regulated under a MACT standard.[2]

The EPA's original version of Subpart A exempted facilities from MACT during SSM events so long as the facility had a SSM plan incorporated by reference into their Title V permit and made such plan publicly available. In subsequent amendments, however, the EPA abandoned the requirement that the SSM plan be incorporated into a Title V permit and later the requirement that sources implement their SSM plans during SSM events, citing the general duty to minimize emissions at all times.

Environmental groups challenged these changes to the SSM provisions in Subpart A in Sierra Club v. EPA, 551 F.3d 1019, 1027 (D.C. Cir. 2008). The D.C. Circuit was persuaded by their arguments, holding that the EPA's reliance on the general duty to minimize emissions during SSM events did not satisfy the statute's requirement for continuous emissions standards for hazardous air pollutants. Presumably to soften the blow of the D.C. Circuit's mandate, however, in 2009, the EPA issued guidance explaining that only the NESHAP Subpart A SSM exemption was null (and, by extension, those NESHAPs that incorporated the general provision by reference) but that similar SSM provisions remained in effect.[3]

Having successfully challenged the NESHAP SSM event provisions, Sierra Club then set out to challenge state-specific SSM exemptions while at the same time urging the EPA to issue a SIP Call for all state SSM provisions.[4] The petition leading to the instant SIP Call was filed on June 30, 2011, and advanced some of the same arguments used by Sierra Club in its judicial challenge to the SSM provisions in MACT Subpart A — mainly that the Clean Air Act requires all emission sources to comply with emission limits on a continuous basis and that regulations permitting sources to exceed emissions limits during periods of SSM violate the Clean Air Act. Sierra Club also argued that SSM events significantly impact aggregate air quality but that these events are not captured in quantitative analyses prepared in connection with a state's demonstration of its attainment and/or maintenance of NAAQS.

The Instant SIP Call

On Feb. 22, 2013, the EPA granted Sierra Club's petition in part. The core principle in EPA's SIP Call proposal is that states should no longer incorporate automatic exemptions or "discretionary exemptions" for all SSM events or affirmative defenses for civil penalties that might result from excess emissions during periods of startup or shutdown.

The EPA, however, rejected Sierra Club's petition with respect to malfunctions, explaining that policies underlying the Clean Air Act dictate different treatment for planned and unplanned events. Additionally, the EPA proposed to soften the blow of their new policy regarding startups and shutdowns by allowing states to create special emission limitations or other control measures in lieu of mandating normal, permitted emission limitations during startup and shutdown events.

Under the proposed SIP Call, states could no longer allow:

- "Automatic exemptions" for excess emissions during SSM events (i.e., state law provisions pursuant to which excess emissions during SSM events are not treated as violations).

- "Discretionary exemptions" worded in such a way that a decision by the state not to enforce against a violation could be construed as barring enforcement by the EPA under Clean Air Act § 113 or by citizens under Clean Air Act § 304.

- Affirmative defenses for civil penalties that might result from excess emissions during periods of startup or shutdown.

- Defenses or exemptions from applicable emission limitations during periods of maintenance, "load change," "soot blowing," "on-line operating changes" or other similar modes of operations.

States can include the following provisions in their SIPs under the EPA's proposal:

- Affirmative defenses for civil penalties that might result from excess emissions during periods of malfunction.

- Special emission limitations or other control measures or control techniques that are designated to minimize excess emissions during startup and shutdown.

In distinguishing malfunctions from startup or shutdowns, the EPA explained that a malfunction defense is consistent with the Clean Air Act's requirements for continuous emission standards and are appropriate in "limited circumstances in which excess emissions are entirely beyond the control of the owner or operator."[5] The EPA, however, does prescribe certain criteria for ensuring that the affirmative defense was consistent with the Clean Air Act, including:

- The affirmative defense must be limited only to malfunctions that are sudden, unavoidable and unpredictable.

- The regulated party must have the burden of proof to demonstrate all elements of the defense.

- The regulated party must show:

- Excess emissions were caused by a sudden, unavoidable breakdown of technology, beyond the control of the owner or operator;

- The excess emissions (a) did not stem from any activity or event that could have been foreseen and avoided or planned for and (b) could not have been avoided by better operation and maintenance practices;

- To the maximum extent practicable, the air pollution control equipment or processes were maintained and operated in a manner consistent with good practice for minimizing emissions;

- Repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as practicable;

- The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

- All possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

- All emission monitoring systems were kept in operation if at all possible;

- The owner and operator's actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;

- The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance; and

- The owner or operator properly and promptly notified the appropriate regulatory authority.

Practical Implications

The EPA is accepting comments on the proposed SIP Call but, assuming that the agency proceeds with this proposal, both states and regulated parties will have a number of practical issues to address in implementing new SIP SSM event provisions, including:

- Running pollution control devices during startup, shutdown, and malfunction periods is problematic or impossible for many sources. For instance, both operating temperature and combustion efficiency may impact the availability of control devices for an emission unit. To address this practical issue, sources may need to invest significant resources in control measures designed only for periods of startup and shutdown. Alternatively, state permitting authorities will need to craft special emission limitations or other control measures designated to minimize excess emissions during startup and shutdown (possibly on a source-by-source basis).

- While the EPA cites policy considerations in distinguishing unplanned malfunctions from planned startups and shutdowns, in practice, it often is impossible to distinguish excess emissions caused by malfunctions as opposed to shutdowns or startups. For instance, if a facility has an emission unit malfunction qualifying for an affirmative defense under the EPA's criteria, does the "malfunction defense" also cover excess emissions associated with shutting down a malfunctioning emission unit or starting up an emission unit after it is closed down for unplanned malfunction?

- Almost every major source Title V permit contains numerous provisions addressing SSM events. It is not clear from the EPA's proposal whether permitting authorities would need to update current Title V permits to address these legal changes.

- The EPA's proposed SIP Call leaves open the possibility that states can "reassess[ ] particular emission limitations, for example to determine whether those limits can be revised such that well-managed emissions during planned operations such as startup and shutdown would not exceed the revised emission limitation, while still protecting air quality." If states elect this option, state permitting agencies may well turn to regulated sources to submit modeling data to demonstrate the impact of startups and shutdowns on NAAQS compliance.

- To the extent that the EPA's criteria for malfunctions requires sources to keep emissions monitoring equipment operational, sources may need to update continuous emissions monitoring systems to increase the durability of components during malfunctions.

Next Steps

The EPA currently is accepting comments on its proposed SIP Call. If the agency finalizes a finding of substantial inadequacy for the 36 states subject to the SIP Call, the final action will establish a deadline by which each state must make a SIP submission updating its SSM provisions. The EPA has authority to set a SIP submission deadline up to 18 months from the date of the final finding of substantial inadequacy. Upon receipt of the SIP submissions, the EPA will review the adequacy of the new SSM provisions in the SIPs.

Major sources interested in this topic should consider submitting comments on the proposed SIP Call to the EPA, and, if the SIP Call is finalized, participate in state proceedings to update the SSM provisions.

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[1] 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; Proposed Rule, 78 Fed. Reg. 12460 (Feb. 22, 2013).

[2] See Sierra Club v. EPA, 551 F.3d 1019, 1027 (D.C. Cir. 2008) for a detailed history of EPA's original promulgation of the SSM provisions in NESHAP Subpart A and amendments thereto.

[3] Letter from A. Kushner, EPA, to American Petroleum Institute, the American Chemistry Council, the National Paint & Coating Association, the National Petrochemical & Refiners Association, the American Forest & Paper Association, and the Alliance for Automobile Manufacturers at 2 (July 22, 2009).

[4] See, e.g., Sierra Club et. al. v. Jackson, No. 3:10-cv-04060-CRB (N.D. Cal.).

[5] Courts agree. See Luminant Generation Co. v. EPA, 699 F.3d 427 (5th Cir. 2012) (upholding affirmative defense for malfunctions); Mont. Sulphur & Chem. Co. v. EPA, 666 F.3d 1174, 1191-93 (9th Cir. 2012) (same); Ariz. Public Serv. Co. v. EPA, 562 F.3d 1116, 1130 (9th Cir. 2009).