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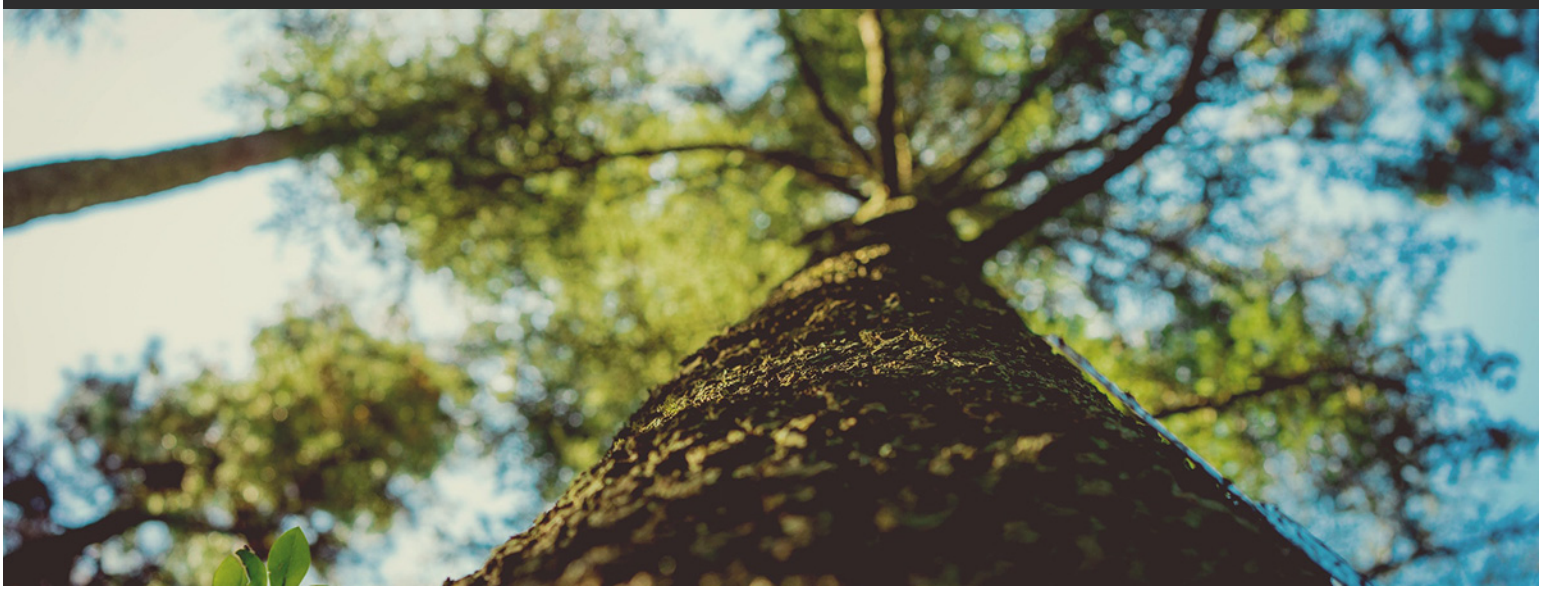
EPA's Methane 'Super-Emitter' Proposal: Getting Outside Help



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By David G. Mandelbaum | December 30, 2022 | The Legal Intelligencer

Earlier this month, the Environmental Protection Agency (EPA) published a "supplemental notice of proposed rulemaking," calling for comments on air pollution standards for control of methane emissions from new and existing facilities in the oil and natural gas industry. See 87 Fed. Reg. 74,702 (Dec. 6, 2022). Among those standards are specific rules concerning "super-emitter" events, events with emissions of more than 100 kilograms (about 6,400 cubic feet) of methane per hour. The EPA assesses that these events account for about half the methane emitted by the industry.

Coincidentally, the Pennsylvania Department of Environmental Protection issued an order on Dec. 8 reacting to a release from a well connected to a natural gas storage field in Cambria County. The well apparently released natural gas to the atmosphere for two weeks in November.

Natural gas emits less carbon dioxide when burned for the equivalent energy production than do alternative fossil fuels. Many would say that any development of fossil fuels, even natural gas, ought to be restricted to achieve climate goals. If someone produces the fuel, someone else will use it.

But even among those who advocate for moving the economy off fossil fuels ultimately, many endorse natural gas production. By ordinary operation of the energy markets, when supplies are plentiful and gas prices are low, natural gas tends to displace other fuels that result in higher carbon dioxide emissions.

Restricting supply impedes other goals. Recall the political reaction to increased fuel prices when oil and gas supplies were abruptly constricted earlier this year. The political support for controlling fossil fuel use by limiting natural gas supply may not be broad.

But even those who support natural gas development as the politically and practically feasible alternative to other fossil fuels have come to recognize that the production and transportation of natural gas results in the emission of a lot of unburned methane through emissions during well completion, leaks, fugitive emissions, ordinary operations of various sorts of equipment, pipeline blow-downs, flares that do not flare, failures to plug old wells, and so forth. Because methane is a much more potent greenhouse gas than carbon dioxide, the losses of natural gas from the industry's facilities can offset the climate mitigation advantage of natural gas over other fuels.

Accordingly, the best case for natural gas development as a second-best to zero-carbon fuel includes some component of methane emission control. Also, because the methane is the product of the natural gas industry, gas producers and pipeline companies generally favor not leaking it away.

In November 2021, the EPA proposed to adopt emission standards for existing and new sources of methane emissions in the oil and gas industry under Section 111 of the Clean Air Act. This latest action refines that proposal and seeks additional comments on a number of its features. Most of the standards have to do with monitoring and operation practices for routine operations. Implemented conscientiously, those standards would reduce miscellaneous, chronic emissions from the upstream and midstream parts of the industry. But those emissions appear only to account for about half the total.

The remaining half of emissions apparently comes from primarily not-routine operations or accidents that the EPA has dubbed "super-emitter" events. Because these are for the most part not usual, the regular monitoring otherwise proposed by the EPA would not necessarily catch them. Indeed, because many natural gas wells and transmission facilities are not staffed all the time, a problem could arise and no one would see it for days or weeks. Moreover, because by definition a super-emitter emits methane at a high rate, waiting to address the problem until regularly scheduled maintenance events would be problematic. If one wanted to do something about super-emitters, one would have to have a system other than regular inspection and monitoring to detect them and a system other than regular maintenance to repair them. The EPA proposes to authorize third-parties who have remote sensing technologies to provide notice to the owner or operator of a facility that has experienced a super-emitting event. The technologies that the EPA has in mind are not fence-line cannisters or the like, but, for example, satellite-based systems. The EPA would vet the third-party and the technology, and upon approval of that person, that person would be authorized to provide notice directly without passing the notice by the EPA.

Upon receipt of notice, the owner or operator of the facility that experienced the ostensible super-emitter event would be required to conduct a root cause analysis of the event and to implement corrective action, both within five days of receiving notice. The notice would be placed on a publicly available EPA database. The owner or operator would have to report on its root cause analysis and corrective actions, and that report would also be placed on the publicly available database.

THe EPA does propose to allow a person notified of super-emitter emissions to demonstrate that the notice contained errors: either that there had been no emission or that the notice identified the wrong facility. In the event of an error, no root cause analysis or corrective action would be required, although how the timing

of all of that would work is a little obscure. If the same third-person made three errors with respect to the same facility, it would lose its authority to give notices.

The notifying person could be governmental or private, but would have to have access to appropriate technology. I am not aware of a similar instance where someone other than the regulator can impose regulatory obligations directly, without the intervention of the agency or a court.

Interestingly, the recent DEP order also enlists third-party help, although in a somewhat different way. The DEP orders the operator of the storage reservoir to cap the leaking well, to withdraw the gas from the reservoir, and to monitor emissions from the storage field continuously until those tasks are completed. But in addition, the DEP orders the operator to commission an independent audit of all of that operator's gas storage operations anywhere in Pennsylvania.

The EPA is proposing a rule under Section 111 of the Clean Air Act and is attempting to identify the "best system of emission reduction" for control of these kinds of unexpected events. That is, the EPA takes the position that the third-party monitoring and notification is that BSER. The DEP will, of course, have to implement the Clean Air Act standards when adopted, but the DEP's Dec. 8 order calling for a third-party audit seeks to enforce not the Pennsylvania Air Pollution Control Act, but the Oil and Gas Act.

In each case, the regulator appears to be casting about for a way to regulate events that no one intends, that no one can predict and that occur only sporadically. Each regulator has seized upon third-party resources to accomplish that task. Third-parties in an enforcement role are not unknown. Some environmental-management systems include an audit function, and some enforcement settlements require retention by the regulated party of an independent monitor. Is this where we are headed for this kind of problem—outside enforcement or voluntary-management systems? Stay tuned.

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