TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 28, 2013

EPA Docket Center (EPA/DC)
U.S. Environmental Protection Agency
Mailcode 2822T
1200 Pennsylvania Ave. NW.
Washington, DC 20460
Attn: Docket ID Number EPA–HQ–OAR–2010–0505

Mr. Bruce Moore
Sector Policies and Programs Division (E143–05)
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

Re: Title 40 Code of Federal Regulations (CFR) Part 60 Oil and Natural Gas Sector: Reconsideration of Certain Provisions of New Source Performance Standards; Proposed Rule

Dear Sir or Madam:

The Texas Commission on Environmental Quality (TCEQ) appreciates the opportunity to respond to the U.S. Environmental Protection Agency's proposal published in the April 12, 2013, issue of the *Federal Register* entitled: "Oil and Natural Gas Sector: Reconsideration of Certain Provisions of New Source Performance Standards; Proposed Rule."

Enclosed, please find the TCEQ's detailed comments relating to the rulemaking referenced above. If you have any questions concerning the enclosed comments, please contact Mr. Michael Wilson, P.E., Director, Air Permits Division, Office of Air, (512) 239-1922, or at mike.wilson@tceq.texas.gov.

Sincerely,

Zak Covar
Executive Director

Enclosure

Texas Commission on Environmental Quality Comments on Oil and Natural Gas Sector: Reconsideration of Certain Provisions of New Source Performance Standards; Proposed Rule

Docket ID Number EPA–HQ–OAR–2010–0505

Background

The U. S. Environmental Protection Agency (EPA) has proposed reconsideration amendments to the new source performance standards (NSPS) for the oil and natural gas sector (78 FedReg 22126, April 12, 2013). EPA promulgated the original oil and gas sector NSPS regulations (40 Code of Federal Regulations (CFR) Part 60, Subpart OOOO) on August 16, 2012 (77 FR 49490), but a number of parties, including the Texas Commission on Environmental Quality (TCEQ), submitted petitions for reconsideration of various aspects of the standards. The proposed amendments pertain to the storage vessel provisions of the NSPS, and would affect the applicability, emission control requirements, and monitoring and testing requirements applicable to storage vessels. The proposed rules are significant to TCEQ because Texas has many thousands of affected sites, and TCEQ will be the authority responsible for monitoring compliance. TCEQ provides the following comments on the proposed April 12, 2013, amendments.

TCEQ Comments on Proposed Amendments

I. Applicability and Control Requirements

In this proposal, EPA acknowledges its underestimation of the number of potentially affected sources and the lack of availability of controls required to comply with the rule and thus this proposal attempts to address these flaws.[1] However, the approaches taken to address these problems are fraught with greater flaws. EPA estimates that sufficient controls may not be available until 2016.[2] If drilling continues at the current pace, it is predicted that between 8,000 and 16,000 new wells will come on line in Texas alone in

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[1] EPA acknowledges their underestimation of the number of affected sources stating: "Further, we now realize that historical trends we have used in the past to project industry growth are not applicable to the oil and natural gas sector going forward. This also contributed to our underestimate of affected storage vessels in the final rule analysis. In summary, the much higher production wells and correspondingly higher storage vessel emissions, combined with the great increase in the number of wells and associated storage vessels, resulted in the number of affected storage vessels to be greatly underestimated." 78 FR 22130.

[2] EPA estimates that an average of 11,600 storage vessels per year will be subject to the rule. 78 FR 22130. For controls, EPA projects "The information available to the EPA leads us to conclude that, even with the uncertainty described above, the control device industry will be able to ramp up production each month by about 100 units over the previous month, beginning now, with our proposed revisions to the manufacturer test protocol, to a production capacity of about 1,400 per month, or about 17,000 per year, by April 15, 2014. With these projections in mind, it is clear that there will be an insufficient number of control devices on the market to meet the demand for control devices by the current compliance date of October 15, 2013, in addition to the ongoing demand for control devices from units that become affected after October 15, 2013. In fact, given these projections, it is unlikely that supply of control devices will meet existing and new demand until 2016. 78 FR 22130-22131.

each of the next few years.[3] This continued exploration and drilling will likely keep control devices in short supply much longer than EPA anticipates.

EPA proposes two approaches to address the current lack of control equipment available to meet the rule: (1) Delay the requirement to control emissions for tanks constructed, modified, or reconstructed between August 23, 2011 and April 12, 2013 (also known as Group 1) until an "event" occurs that could reasonably be expected to increase VOC emissions[4]; and (2) Allow sources constructed, modified, or reconstructed on or after April 12, 2013 to remove controls after documentation that uncontrolled VOC emissions would be below 4 tons per year (tpy) for an entire year. Both approaches are flawed.

EPA's approach to use an "event" as a trigger for the requirement to install controls may create a disincentive for companies to perform certain actions (including maintenance activities) and may greatly constrain the operational flexibility needed to manage the site. This approach may also have the effect of slowing production in the US at a time when increasing energy independence is on the list of the President's agendas.[5] The approach may also leave many operators, including a disproportionate number of small businesses, in a state of non-compliance. In addition, the overlapping applicability date ranges, the different potential to emit (PTE) thresholds, varying controlled and uncontrolled exemptions or alternative emission limitations, and the ongoing need to recheck and document these changes would create confusion, making the task of ensuring compliance and enforcing the rule overly burdensome for regulatory agencies.

Removal of controls is also a flawed notion in three respects. First, if controls are not available or are in short supply, companies are not likely to remove them for fear of future non-compliance should the company be required to reinstall controls. Second, companies will not likely remove controls if the burden to reauthorize or update permit representations presents an undue administrative burden when the storage vessel is still subject to the rule and thus the operator is required to keep records and submit reports.[6] Third, the time allotted for reinstallation of controls is unreasonably short, and the requirement is not consistent with existing rules. EPA solicited comment on whether a 30 day period is needed for owners and operators to reinstall controls and what appropriate measures should be taken during the interim period to control emissions. Should a previously affected facility need to reinstall controls, the ability to find one in

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[3] R.R. Comm'n of Texas, Texas Drilling Statistics, http://www.rrc.state.tx.us/data/drilling/txdrillingstat.pdf. Between 2008 and 2012, the Railroad Commission of Texas issued an average of 19,584 drilling permits resulting in a combined average of 12,700 oil and gas well completions. The highest of any single year was 2008 when 16,569 oil and gas wells were completed, followed by 2009 and 2012 where over 14,500 oil and gas wells were completed in each year. In 2011 and 2012, over 22,400 drilling permits have been issued and thus it is expected that the number of well completions in the coming years will remain high.

[4] 40 CFR § 60.5395; See also 78 FR 22128.

[5] See http://www.whitehouse.gov/energy/securing-american-energy.

[6] EPA considered comments regarding the effects on permitting in the context that some commenters were concerned about these requirements triggering major and minor NSR permitting. 78 FR 221632-22133. The focus of the comment was on the replacement of tanks which is different from the example cited where facilities would be required to update their permit conditions if they choose to remove controls and utilize the alternative emission limit.

less than 30 days could prove extremely difficult. It is recommended that additional time be granted in this instance. Based on reasonable assessment of device availability and permit reviews, 180 days would be sufficient time for a site to find a control device. Moreover, this deadline is consistent with the 40 CFR §60.14(g) definition of modification which allows 180 days following the completion of any physical or operational change subject to control measures to comply with all applicable standards.

Furthermore, the uncontrolled 4 tpy threshold for removal of controls and required reinstallation of controls is flawed in three respects. First, EPA's choice of uncontrolled 4 tpy as the threshold is arbitrary and unsupported. EPA provided no engineering basis, credible health benefit estimate, or other justification for why the 4 tpy applicability threshold is appropriate.[7]

Second, EPA also does not provide any justification or analysis demonstrating that control at 4 tpy is cost effective. EPA notes that this analysis was done for the federally-enforceable 6 tpy applicability threshold, but no information is provided for the 4 tpy control requirement.[8] Furthermore, this approach will create situations of great inequity where neighboring facilities may have identical PTE VOC emissions from a single tank or tank battery emissions, but very different regulatory burdens.[9] For example, a site with emissions of 5.95 tpy is not subject to any of the notification, reporting, or control requirements of this NSPS. A neighboring site with initial production emissions of 6.1 tpy must extensively notify, control, monitor, record, and report to comply with this NSPS. This second site would be required to control emissions by 95%. As natural production declines occur, after a year of uncontrolled emissions of 3.95 tpy (below the 4 tpy threshold), the additional controls may be removed, but the burden of reporting and recordkeeping continues indefinitely for this site.

This approach may also drive companies to design their sites in a way that results in increased emissions overall, defeating the goal of the rule itself. For example, to avoid applicability of the rule as a whole, new sites will likely be designed with more tanks such that no single tank will exceed the 6 tpy applicability threshold but emissions from the larger number of small tanks may have higher overall emissions. This in turn may exacerbate the shortage of storage tanks that already exists and may further delay production due to the lack of tank availability. Further, it may lead to hastily constructed tanks that may not be as soundly designed and constructed creating a potential for concerns for public health and safety as well as air quality.

Third, EPA focuses on the concept of any planned event that has the potential to increase emissions to or above 4 tpy. However, this does not account for any potential

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[7] 78 FR at 22133

[8] 78 FR 22133.

[9] EPA removed the recordkeeping and reporting requirements for facilities that do not initially trigger the 6 tpy applicability threshold stating: "We believe these associated burdens are not necessary for storage vessels with VOC emissions below 6 tpy, which are not subject to the control requirement." 78 FR 22132. However, EPA has confirmed that sources that use the 4 tpy alternative emission limit would remain affected sources subject to the rules. 78 FR 22129.

short term activities that may trigger reinstallation of controls such as degassing, refilling, inspection or maintenance, when emissions in the long term would otherwise remain below the 4 tpy level. As explained above, this may result in the delay of appropriate maintenance or other actions that would otherwise be conducted but for the need to reinstall controls. Building on the example of neighboring sites described above, if the second site wanted to confirm tank integrity by inspection and cleaning, one-time emissions will raise the annual uncontrolled PTE to over 4 tpy, thus triggering not only reinstallation of controls but all associated monitoring, recordkeeping and reporting requirements.

As the only example in the proposal is based on uncontrolled PTE, TCEQ also requests that EPA confirm that the 95% control requirement is based on the uncontrolled PTE for the tank.[10] If EPA does not agree with this interpretation, EPA should provide justification and explanation of how compliance with the control requirement should be determined.

II. Monitoring and Testing Requirements

EPA proposed to revise the combustor control device manufacturer test protocol in the NSPS to align it with a similar protocol in the Oil and Natural Gas NESHAP (40 CFR 63, subpart HH). EPA's intent in the final NSPS was to make the NSPS and NESHAP protocols consistent. EPA solicited comment on a potential compliance approach based on the use of these manufacturer-tested combustor models.[11] Section 60.5413 (d)(6)(i)(B) states that flow must be measured using Methods 1 and 2. This requires physically traversing two ports with an "S"-type pilot tube. The temperatures are likely to be in the 1,600 °F range and the differential pressure (ΔP) will be very low. TCEQ has observed Method 1 data for an enclosed flare burner where the ΔPs ranged from 0.004 to 0.0004 inches of water. These are extremely low pressures so there is a significant potential for measurement error. Also, these are extremely high temperatures, so safety is an issue. EPA Method 19 should be considered as an alternative flow measurement method. This method uses either the O_2 or CO_2 concentration, the fuel "F" factor, and fuel flow rate to calculate the emission flow rate using stoichiometric calculations.

Section 60.5413 (d)(7)(i) specifies collecting the gas sample in a bag for analysis using a gas chromatograph-thermal conductivity detector. Collecting samples in a bag can create a number of problems. The rule should offer the option of pulling the sample directly from the source into the instrument via a heat-traced sample line.

Section 60.5413 also specifies Method 4 for determining moisture. This method requires pulling stack gas through chilled impingers containing water and silica gel and measuring the sample volume with a calibrated dry gas meter. The percent moisture is calculated using the volume/weight gain in the impinger train. Currently there are several instrumental methods available that can monitor stack moisture. 40 CFR 75,

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[10] 78 FR 22133. EPA provides the following example: "At 6 tpy uncontrolled emissions, 95 percent control would result in an emission rate of 0.3 tpy."
[11] 78 FR 22135.

§75.11(b)(2) describes several options that are currently in use. Advances in instrument technology, such as Fourier Transform Infrared (FTIR) Spectroscopy, can monitor multiple analytes, including moisture. FTIR instrumentation using EPA Method 320 or ASTM D 6348-12 should also be considered an alternative test method where it is applicable.

EPA requested comment as to whether enclosed combustors could be sold as "compliance ready," whether such an approach would ease compliance, and welcomed comment on other compliance options. The TCEQ generally supports the concept of certifying a unique control device model based on a single set of tests as stipulated in proposed §60.5413(d). The model of control device that will receive a certification based on testing of the same model should have the same physical and operational characteristics such that the same (successful) compliance test would have resulted if the manufacturer had actually run the same tests on each certified device.

III. Storage Vessel Design Requirements

EPA solicited comment on whether to include requirements for proper design and sizing of storage vessels and associated closed vent systems, stating: "Although we are not proposing today to add requirements for proper design of storage vessels and associated closed vent systems and control devices, we solicit comment on whether such provisions should be included in the final rule." [12] TCEQ does not recommend specific requirements for proper design of storage vessels and associated control systems be included in the final rule if the goal is to specify certain design requirements for the vessels rather than requiring documentation that the tanks have been properly designed. Specifying design requirements in regulation will stifle innovation and create a plateau for new products. Such restrictions will not allow for economic or technological creation of new methods or equipment. As the industry grows and changes, so too should the facilities and equipment associated with it, but proscriptive design requirements would not allow this to happen. Emerging technology should be embraced and encouraged, and unnecessary design requirements would cause the opposite to happen. Also, due to high variability of materials and situations in the field it seems illogical and inappropriate to deem only certain designs of facilities and equipment acceptable or not. Each site, within each formation, within each region of the state is different and what may work in one area may not be possible in another. Design requirements specified by rule could cause certain facilities or regions to be unable to implement engineering solutions necessary to account for site- or region-specific conditions. Overall, flexibility in design is key to promoting innovation and proper management of equipment at oil and gas facilities.

IV. Applicability Clarification Relating to Custody Transfer

The TCEQ requests clarification on the applicability of the NSPS to storage tanks after custody transfers.[13] It appears the NSPS states that storage vessels downstream of the

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[12] 78 FR 22136.
[13] 78 FR 22133.

point of custody transfer are no longer subject to the rule. For example, consider the following situation where multiple companies are involved with the handling of oil and gas products and the chain of custody includes a wellhead, a gathering station, and a processing plant. Company A owns the wellhead and transfers liquids offsite via pipeline to a gathering station owned by Company B. Company B sends the liquids on to a processing plant owned by Company C. In this example, the NSPS appears only to apply to storage vessels operated by Company A, and would not apply to vessels at Companies B or C because those vessels are after the point of initial custody transfer. TCEQ requests that EPA confirm this interpretation, or clarify their intent as to how custody transfer affects the applicability of the NSPS to storage vessels.