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The National Association of Clean Water Agencies (NACWA) appreciates the opportunity to comment on the proposed Federal Plan Requirements for Sewage Sludge Incineration Units Constructed on or Before October 14, 2010 (80 *Fed. Reg.* 23402; April 27, 2015). NACWA represents nearly 300 public wastewater treatment agencies across the United States, including more than 40 utilities that rely on incineration to manage their sewage sludge.

Since the U.S. Environmental Protection Agency (EPA) first published new source performance standards (NSPS) and emission guidelines (EG) for sewage sludge incinerators (SSIs) on March 21, 2011, NACWA's members have been working to come into compliance with the new requirements. For the past several years, NACWA's SSI members and the other SSI utilities have identified a number of issues and questions about the March 2011 rule. The delay in releasing a proposed Federal Implementation Plan (FIP) has exacerbated the difficulties our members have faced in implementing the rule, especially given the fact that a majority of states have chosen not to develop their own State Implementation Plans (SIP). NACWA encourages EPA to move expeditiously to finalize the FIP.

Before finalizing the FIP, however, EPA must address both NACWA's Petition for Reconsideration of the SSI rule submitted to the Agency on May 29, 2014 and the rule remand included in the U.S. Court of Appeals for the District of Columbia Circuit's (D.C. Circuit) August 2013 decision in *National Association of Clean Water Agencies (NACWA) v. EPA*, 734 F.3d 1115.

Final Action on FIP Inappropriate in the Absence of EPA's Response to Remand

As EPA acknowledges in the preamble to the FIP, the D.C. Circuit issued a ruling in NACWA's challenge of the March 21, 2011, SSI rule remanding portions of the rule back to EPA. EPA has chosen to ignore its obligation to address the remanded provisions, choosing instead to note in the preamble that it will address the D.C. Circuit's remand "in a timely manner." EPA's failure to address the D.C. Circuit's remand ordered in *NACWA v. EPA* has now put the approximately 100 utilities across the country relying on SSIs in an untenable position – they must commit tens of millions of dollars to upgrade their SSIs to comply with emissions standards that the D.C. Circuit has ruled do not clearly meet Clean Air Act (CAA) statutory mandates.

As NACWA laid out in its Petition for Reconsideration, EPA must either fully address the Court's remand and adjust the final emissions standards as warranted or delay the compliance deadline for the rule to prevent this potentially wasteful expense of ratepayer dollars.

NACWA List of Issues, Questions, and Needed Clarifications in the FIP

Our comments below detail many of the questions and concerns that our members have raised since the March 21, 2011, rule was released. NACWA has sought input on many of these issues from EPA Headquarters on an ad hoc basis, but requests that EPA provide formal clarification in the final FIP.

Compliance Schedules

The draft FIP proposes compliance periods of either (A) one year after publication of the final FIP in the *Federal Register*, or (B) for affected sources planning to comply more than one year after the final FIP, meeting increments of progress for submitting a final control plan within three (3) months after the final FIP is published and final compliance by March 21, 2016. See §§ 62.15875, 62.15880, and Table 1. However, the March 21, 2016 date in Table 1 is less (and very likely significantly less) than one (1) year from the date the final FIP will be published. NACWA requests that these provisions be revised in the final FIP as follows:

(A) one (1) year after publication of the final FIP in the *Federal Register*, or

(B) for affected sources planning to comply more than one (1) year after the final FIP, meeting increments of progress for submitting a final control plan within six (6) months after the final FIP is published and final compliance by two (2) years after the publication of the final FIP in the *Federal Register*.

Given the delays in the SSI reconsideration and FIP development, and the impact these delays will continue to have on utilities' compliance planning, NACWA also requests that the final FIP contain a mechanism modeled on the provisions at 40 CFR § 62.14536 allowing operators to petition for compliance extensions on a case-by-case basis.

Setting Operating Parameters – 85% Requirement

On page 23404 of the *Federal Register* notice announcing the proposed FIP, EPA sought comment on the provisions in 40 CFR 62.16015 regarding performance testing:

4. Solicitation of Comments

The EPA is aware of concerns regarding the 40 CFR 62.16015 provision requiring the SSI to operate at a minimum of 85 percent of the maximum permitted capacity during testing. We are specifically soliciting comments and additional data on whether the 85 percent threshold warrants a revision due to operational limitations or other factors.

This is an important issue for many of NACWA's members. In some cases, NACWA members have been required to store sludge for extended periods of time to accumulate enough material to meet this requirement, as many SSIs routinely operate significantly below their maximum permitted capacity. In other cases, SSIs have not been able to maintain feed rates at 85% of their permitted maximum capacity and also maintain other operating conditions during testing, resulting in test runs that do not meet the regulatory requirements. For example, sludge volatile solids content (and other sludge characteristics) can vary significantly and feed rates must be adjusted to maintain target combustion temperatures.

Also troubling is that some of the operating parameters set at 85% of permitted capacity will not be continuously achievable under typical or average feed rates. For example, at higher feed rates SSIs have higher air flows and, therefore, higher pressure drops, one of the operating parameters that must be established. Under normal feed rates SSIs will have lower air flows and lower pressure drops. In addition, it may be necessary for some utilities attempting to achieve combustion zone temperature limits established for higher loading conditions to use auxiliary fuel to artificially increase bed temperature to meet the operating limit at lower loading conditions. Maintaining a level of 85% during normal operations, to ensure that operating parameters set at this level are consistently met, is not practical or economical. In addition, attempting to maintain this level will result in increased energy consumption and greenhouse gas emissions to meet an unnecessary and artificially-developed operational parameter. It will provide no improvement in incinerator operation and no benefit to the environment.

Many utilities simply do not generate enough sludge to burn at 85% of permitted capacity consistently. In addition, if an operating facility has to store sludge to meet the 85% feed rate, the stored sludge will have different characteristics, resulting in different operating requirements and performance than non-stored sludge processed during average conditions.

Operating at this higher level will require frequent start/stop cycles which accelerates the thermal aging of the system, shortens the useful life of the unit, results in highly variable feed composition, and uses more auxiliary fuel for stable operation. All of these consequences increase operating costs and adversely impact emissions from SSIs due to excessive fuel use and increasing the frequency of startup and shutdown modes.

Sludge is fed at a rate to maintain a specific and narrow combustion temperature range. Variations in sludge composition will vary the feed rate. For example, during a recent test run at a NACWA Member Agency SSI, the sludge's percent volatile solids and BTU content were significantly higher than normal. This resulted in feed rates less than 85%, as the SSI's BTU input capacity was reached.

That is why in NACWA's comments on the proposed SSI emissions standards, we stressed that EPA's assumption that SSIs operate at 75% of the rated capacity was probably too high and that EPA needed to do

more research on this. Our comments also raised concern about requiring a specific operating parameter for feed rate:

“EPA has also set operating parameters that will be impossible for most SSI operators to meet. EPA proposes to set operating limits based on the operating parameter values during stack tests. As indicated above, stack tests take a snap shot of a highly variable process. It is unreasonable for operating parameters to remain within plus or minus 10 percent of the minimum or maximum value generated during a stack test. SSI feed rates and moisture contents necessarily vary widely depending upon the amount of wastewater that is coming into the POTW. During storms and other high flow events, the POTW is working hard to keep up with the influent and the sewage sludge feed rates and moisture content are necessarily on the higher end of the normal range. During low flow periods, SSIs may operate significantly below maximum feed rates with sewage sludge moisture at the low end of the normal range. POTWs are responding to external events and cannot control these variables sufficiently to stay within a designated range. To accommodate site-specific variation, operating and maintenance parameters should be established in site-specific operating plans that focus on the parameters that correlate with control device efficiency.”

It appears that the 85% requirement was added at the final rule stage as EPA was attempting to address our concerns on this issue. EPA removed the operating parameter for sludge feed rate and the requirement to regularly operate within that range, but the Agency then added the 85% requirement for performance testing.

NACWA is requesting that the requirement in the FIP be revised to eliminate the 85% requirement and instead require the use of a minimum feed rate based on actual historical operating averages (i.e., the baseline would be each SSI's historical operating baseline, instead of permitted capacity).

EPA has previously suggested in email and phone conversations that testing be conducted at both 85% of permitted capacity and at the historical operating average feed rates in order to establish the operating parameters at regular or normal feed rates. This would require two separate compliance demonstration source tests and effectively double the cost of source testing. There is no valid regulatory purpose for establishing operating parameters at higher operating capacities (e.g., 85%) than are normally encountered, so EPA should revise this requirement to instead require testing based on actual/historical operating averages.

Setting Operating Parameters – ‘Combustion Chamber’ Clarification

The 2011 Emission Guidelines and proposed FIP include the following parametric monitoring requirements for good combustion:

62.15960 What Operating Limits and Requirements must I Meet and By When?

(a) You must meet a site-specific operating limit for minimum operating temperature of the combustion chamber (or afterburner combustion chamber) that you establish in 62.15985.

A definition of “combustion chamber” is not provided in 62.16045, though the definition for “Fluidized Bed Incinerator” makes mention of “combustion chamber.” A multiple hearth sewage sludge incinerator typically includes drying, combustion and cooling zones and could also include an afterburner for carbon monoxide removal. It is unclear whether the requirement under 62.15960 to establish a minimum operating temperature applies:

- (i.) To the combustion chamber within a fluidized bed incinerator and the afterburner in a multiple hearth incinerator only, or
- (ii.) To all hearths/zones within a multiple hearth incinerator as well as (i) above, or
- (iii.) To only the combustion zone within a multiple hearth incinerator as well as (i) above, or
- (iv.) Does not apply at all to any of the hearths/zones within a multiple hearth incinerator.

It is important that this requirement be clarified so that facilities do not needlessly develop site monitoring plans for temperature sensors that are unaffected under 62.15995 (3)(ii)(D).

Operator Training

Operator training is a significant implementation concern among NACWA's Member Agencies. NACWA appreciates the new language in the FIP with regard to operator training and the additional phrase "or instructor administering the subjects in paragraph (c)(1) of this section," as detailed below:

Model Rule - 60.5130(c)(2)

(2) An examination designed and administered by the state-approved program.

Federal Implementation Plan - 60.15920(c)(2)

(2) An examination designed and administered by the state-approved program or instructor administering the subjects in paragraph(c)(1) of this section.

Based on email communication with EPA, we understand that this language in the FIP means that a third party or utility developed training program and exam need not be approved by the state or EPA. Specifically, a facility can develop their own training (or use a third party to conduct the training) as long as it meets the requirements described in the SSI Federal Plan § 62.15920 paragraph (c). They do not need approval from the state.

We understand that this is only with respect to states that do not have approved state plans in place. And that once a state plan gets approved by EPA, upon the effective date of a state plan, the Federal Plan would no longer apply to SSIs covered by such a plan and the state or local agency would implement and enforce the state plan in lieu of the Federal Plan. So any operator training requirements would have to comply with the SIP.

This clarification of the language in the FIP is helpful and has already provided a number of NACWA Member Agencies with additional options for meeting the operator training requirements. NACWA appreciates the Agency making these requirements clearer in the draft FIP and requests that this language remain in the final FIP.

Fugitive Visible Emissions from Ash Handling

NACWA and EPA have had numerous discussions about the SSI Rule's requirement relating to fugitive visible emissions from ash handling. Other MACT standards specifically state that this requirement applies to emissions from the building to the atmosphere, not from equipment within the incinerator building, and EPA has confirmed in phone conversations with NACWA that the same is true for the visible emissions requirements for ash handling in the SSI rule. NACWA requests that this be clearly stated in the FIP. Any attempt to apply the fugitive ash requirement within the incinerator building would be unjustified and lead to major compliance issues.

Operating Parameters – Duration of Test Runs

According to the SSI Rule and FIP, all of the operating parameters, with the exception of scrubber water pH, are to be equal to the lowest 4-hour average measured during the most recent compliance test. EPA staff have indicated that when writing the rule, EPA personnel assumed that each of the three required test runs would be 4-hours in duration. However, EPA included air emission test protocols in the final rule for performance testing that allow three, 1-hour test runs. EPA staff agreed that 1-hour test runs were acceptable for establishing the operating parameters. The lowest 4-hour average should be deleted and replaced with the 1-hour test run average already agreed to in principal, but not yet in writing. Please confirm this in writing in the FIP and through the appropriate process to update any SIPs, as well as in Subpart LLLL.

Operating Parameters – Additional Guidance Needed

NACWA's Member Agencies have raised a number of questions regarding setting and implementing operating limits. For example, during a recent performance test at one facility to establish venturi water flow rate, the flow rate was recorded at 344 gpm. Must the flow rate be set at that level or can the utility set it at 340 gpm? Conversely, is it a violation if 344 gpm was the limit, but there was period of time where the flow rate 343 gpm? NACWA's members are not familiar with these provisions and would benefit from any additional guidance EPA can provide. There must be some leeway for measurement variability. Compliance with the parametric limit should be based on the average high/low value (as appropriate) plus or minus 30%, consistent with the existing 40 CFR Subpart O requirements.

NACWA requests that EPA clarify how averages are to be calculated. Utilities need to know how the x-hour averages are calculated for each operating parameter. Scrubber flow rate, liquid pH, combustion chamber operating temperature, etc. limits all depend on knowing how this calculation must be performed.

Operating Parameters – Setting Flow Rates for Non-continuous Flows

The Rule and FIP require the establishment of a minimum water flow rate at the outlet of the electrostatic precipitator. The data are supposed to be measured and recorded on an hourly basis, and compliance is determined on a 12-hour block average. However, water does not continuously run through a wet ESP. A wet ESP is only flushed with water approximately once every six hours. The rule requires a minimum water flowrate for the wet ESP in gallons per minute, just like the scrubber water flowrate. Scrubber water, however, flows continuously while wet ESPs are only flushed once every six hours. Since the flushing water is not continuous, POTWs are having difficulty developing a minimum flowrate. In addition, a wet ESP gravity effluent pipe with a diameter of 4" or 6", necessary to avoid clogging in some configurations, is too large for a meter to accurately measure the low rate of flow. And in some cases wet ESP effluent flows into a common drain pipe where backflow into the drain can affect the accuracy of the reading.

One of NACWA's members has requested that they be allowed to measure the water feed to the wet ESP, instead of measuring the flow at the outlet of the ESP. The influent flow rate will be greater than or equal to the effluent rate due to possible evaporation within the unit.

However, NACWA has a more basic question as to why the rule requires a minimum wet ESP effluent water flow rate as a site-specific operating parameter. Based on the information we have collected, water flow does not change the wet ESP's collection efficiency. In fact, at some times, there can be more water draining out of

the wet ESP then is being added to it. The exception is when flushing occurs. This is due to the condensation of the moisture in the exhaust gases that have been saturated in the wet scrubbers.

NACWA requests clarification on these issues in the FIP.

Interaction between Subpart O and LLLL/MMMM

Some of NACWA's Member Agencies are subject to the standard for particulate matter under 40 CFR 60, Subpart O, which establishes emission limits, monitoring requirements, and recordkeeping requirements that are different from those in Subparts MMMM and LLLL. For example, the requirement for pressure drop is different between the two provisions – Subpart O pressure drop is a 15-minute average while LLLL is a 12-hour average. At least one of our members has submitted a request to EPA to allow the utility to demonstrate compliance with Subpart O by demonstrating compliance with Subpart LLLL or MMMM. NACWA would like clarification as to whether Subpart O is superseded by the requirements of Subpart LLLL/MMMM, if both sets of site-specific limits and reporting requirements apply, and whether a site-specific determination is necessary to avoid having to demonstrate compliance with both sets of requirements independently.

Status of State Plans List

Table 2 in the preamble to the FIP lists the status of state plans. The table lists Indiana as the only state with an approved SIP, but NACWA understands that Virginia has also received approval for its SIP. NACWA requests that EPA revise and republished the status of state plans.

Additional Comments/Concerns

- Similar to the other performance requirements, NACWA requests that the incinerator loading requirement be the average of the three test runs.
- NACWA requests that EPA consider building in some measure of flexibility into the site-specific operating limits – specifically that the enforceable site-specific operating limit could be higher or lower than the limit established during the compliance tests within some defined boundaries. For example, if the lowest total pressure drop during the testing is 40" and the PM and metal emission rates are all at or below 75% of the MACT standards¹, would EPA be willing to reduce the total pressure drop operating limit to 36"? EPA has allowed this type of flexibility in its 40 CFR Part 60, Subpart O and 40 CFR Part 503 rules.
- POTWs are concerned that they will be required to meet the SSI MACT limits and the operating parameters immediately after the initial compliance test. Based on conversations with Regional EPA staff, we understand that as long as an SSI continues to operate as specified in an existing Title V permit or other authorizing document (where there is no Title V permit), they are not required to operate the control equipment under the established parameters of the SSI MACT initial compliance test until the compliance date of March 21, 2016 (or other date specified by the state). We would like to confirm this in writing.

¹ NACWA acknowledges that the SSI MACT rule does allow for reduced frequency of testing for pollutants that are at or below 75% of the emissions limits for at least 2 consecutive years.

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- Following the publication of the FIP and EPA's June 2, 2015 webinar for regulators, there continues to be a lack of clarity regarding the different roles for "States" and "Locals". This is particularly an issue in those states where there are both state and local air agencies, but the states have chosen not to develop a SIP. NACWA requests that EPA continue to work with state and local regulators to address these concerns.

Thank you for the opportunity to comment on the draft Federal Implementation Plan. We would be happy to meet with EPA to discuss these comments and concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Hornback", written in a cursive style.

Chris Hornback
Senior Director, Regulatory Affairs