 

## October 26, 2015

# *Via Electronic Submission: www.regulations.gov*

# Ms. Hillary Ward

# U.S. Environmental Protection Agency

# EPA Docket Center (EPA/DC), Mailcode 28221T 1200 Pennsylvania Ave., NW Washington, DC 20460

Dear Hillary:

**Re: Docket ID Nos. EPA-HQ-OAR-2014-0451& EPA-HQ-OAR-2003-0215**

The National Waste & Recycling Association (NWRA) and the Solid Waste Association of North America (SWANA) are pleased to offer comments on the proposed revisions the Emissions Guidelines and Compliance Times for Municipal Solid Waste Landfills (EG) (80 F.R. 52100, August 27, 2015) and to the supplemental proposal to the Standards of Performance for Municipal Solid Waste Landfills (80 F.R. 52162, August 27, 2015). The NWRA and SWANA represent companies, municipalities and professionals in the solid waste industry. The NWRA is a not-for-profit trade association representing private solid waste and recycling collection, processing and management companies that operate in all fifty states. SWANA is a professional education association in the solid waste management field with members from both the private and public sectors across North America.

General

When NSPS rules were first promulgated in 1996, the industry responded by investing significant capital and resources in new and improved landfill gas collection and control systems (GCCS) and landfill cover systems. These efforts have resulted in significantly reduced emissions. As highlighted in EPA’s *Inventory of U.S. Greenhouse Gas Emissions and Sinks*, between 1990 and 2012 landfills reduced methane emissions by more than 30%. The 1996 NSPS and EG (including the Federal Plan and state EG rules) were very successful in prompting the landfill sector to develop highly effective non-methane organic compound (NMOC) and methane controls.

As EPA writes amendments to the existing regulations, it is important to build on the significant successes the industry has achieved during the past 18 years. We believe EPA should streamline the standards to eliminate the historical bureaucracy that has hampered effective implementation of NMOC/methane controls. EPA should also avoid establishing new requirements that are neither cost effective nor focused on achieving new NMOC/methane reductions. For example, we applaud EPA’s proposal to eliminate wellhead performance standards for temperature and oxygen or nitrogen as these performance standards can hinder the most efficient operation of GCCS and decrease the amount of emissions reductions. With the elimination of these wellhead standards, landfill owners can install GCCS components sooner, connect the GCCS to other structures (e.g. the leachate collection system) and to use horizontal collectors and/or perimeter extraction wells.

EPA has also requested comments on how to identify closed areas of open landfills so that areas with diminished methane generation can “exit” the regulatory regime.

EPA’s rulemaking requests comments on many options and invites suggestions on additional ways to reduce emissions. Please find industry responses to these questions below.

Threshold Reduction

Niki to write something…

The proposed rule lowers the threshold for triggering the requirement for installing and operating a GCCS from 50 megagrams per year (Mg/yr) NMOC down to 34 Mg/yr. The rule also includes operational flexibilities such as the proposed Tier 4 that utilizes site specific monitoring for installation of a GCCS; the removal of oxygen, nitrogen and temperature limitations for wellheads; and the use of surface emissions monitoring for intermittent operations of low-producing areas. Without the added flexibilities, this lower limit will be impossible to achieve.

Wells

*Removal of oxygen, nitrogen and temperature limitations*

We support EPA’s decision to remove wellhead limitations for oxygen, nitrogen and temperature. As acknowledged in the preamble, this will reduce the burden for landfills and will provide flexibility to allow landfills to begin earlier collection in low producing areas.

*Flowrate*

Dave to write a few sentences….The proposed rule requires the addition of flowrate at the wellheads. There are two concerns associated with monitoring flowrate. The first is that the flow is dependent on the size of the orifice plate and flows which provide good results within a limited range. Flows that fall outside the range, either above or below will provide inaccurate results. The second concern is with respect to the use of the information. The inaccuracies associated with the flow meters will multiply over the entire landfill. It is important that the flows not be aggregated to compare with the flow at the control device. This might make it appear that the flows based on wellhead readings are significantly higher or lower than at the control device.

Flowrate measurements can be taken and utilized to gauge performance of the GCCS as a whole but it should be noted that the flows should not be compared to total flows because significant difference will occur which could lead to incorrect conclusions.

*Alternative Timelines*

We appreciate the clarification in the rule preamble that requirements for approval of corrective action timeline requests are limited to corrective actions exceeding 120 days. To address implementation concerns associated with the time allowed for corrective action, the EPA requests comment on an alternative that extends the requirement for notification from 15 days to as soon as practicable, but no later than 60 days from when an exceedance is identified. The EPA is also requesting input on whether 60 days is the appropriate amount of time to allow owners or operators to make the necessary repairs.Thus, by no later than day 60, the landfill would have to either have completed the adjustments and repairs necessary to correct the exceedance, or be prepared to have the system expansion completed by day 120.

We support EPA’s attempt to clarify when alternative timeline requests should be submitted for approval as state/local agency interpretation varies widely. However, up to 120 days is needed to properly diagnose and determine corrective actions. Although the proposed 60 days provides time to diagnose the problem and determine corrective action for some situations, there are many instances where 60 days is not enough time to complete diagnoses or correct the exceedance.

The Landfill NSPS was amended on June 16, 1998 to allow the following:

Section 60.755(a)(3) is being revised to allow an alternative timeline to be proposed for correcting an exceedance in collection header pressure at each well. Consistent with 60.755(c)(4)(v), a sentence is being added to 60.755(a)(3) and 60.755(a)(5) to allow an alternative timeline to be proposed to the Administrator for correcting an exceedance. This revision makes the sections consistent. *Depending on the remedy selected to correct the problem, a different timeline may be needed, but any timeline extending more than 120 days must be approved by the regulatory agency*.” (emphasis added) 63 Fed. Reg. 32743, 32748 (June 16, 1998).

In 1998, EPA also clarified that corrective action timelines exceeding 120 days require regulatory agency approval in effect allowing that those less than 120 days did not require it.

Many delegated agencies currently follow the 1998 rule changes and do not require landfill owner or operator to submit requests if the corrective action/remedy other than expansion is completed within 120 days. The site’s paperwork is minimized and required only for instances where the site needs additional time beyond 120 days to complete the corrective action. Agencies in turn have significantly fewer requests to review and approve. Requiring agencies to change their procedures will result in increased paperwork burden. Further, our experience to date is that many requests are never approved; there should be a period after which absent any agency approval, the request shall be deemed complete.

As previously stated in our 2014 comments, the Asbestos NESHAP rule (40 CFR 61 Subpart M) requires a 45-day notification to the regulatory authority prior to initiating any excavation activity such as well or piping repair, replacement or installation, that has potential to disturb regulated asbestos containing material (RACM). RACM disposal locations are documented upon disposal as required; however, over time due to routine waste settlement, RACM may shift from initial documented location. Potential exists for possible disturbance of RACM during excavation such as well drilling and collection system repair. Therefore, sites may not be able to determine within 60 days whether an alternative timeline request will be necessary. State final landfill cover disturbance requirements can further delay any diagnoses.

There are instances where diagnoses, repairs or expansion cannot be completed within 120 days. We recommend the rules require an alternative timeline request as soon as practicable where corrective actions and/or system expansion will require more than 120 days, consistent with the 1998 preamble and rule provisions.

*Alternative remedy to system expansion for pressure exceedances*

We also recommend that EPA allow for alternative remedy to pressure corrections. An automatic default to gas system expansion may actually be contrary to proper system operation. System expansion may not be the appropriate corrective action to address pressure exceedances. For example, if pressure exceedance are due to header line flooding or freezing, the appropriate remedy…. The rules already allow for alternative remedy to correct surface emissions monitoring exceedances. The rules should require the landfill owner/operator to submit a notification to the agency that identifies and describes the alternative remedy and reasons why system expansion is not appropriate to correct the exceedance.

**Surface Emissions Monitoring**

*Cover Penetrations*

EPA has taken the position that the quarterly monitoring path should include the monitoring of every cover penetration, since “cover penetrations can be observed visually and are clearly a place where gas would be escaping from the cover, so monitoring of them would be required by the regulatory language” (80 FR 52124). We disagree with this interpretation.

To assume that all cover penetrations, including gas extraction wells, are a place where gas is escaping is unwarranted since the gas system is under vacuum. The landfill industry has adopted a procedure whereby cover penetrations are monitored when visual or olfactory observations during SEM and/or cover integrity monitoring events indicate the potential for surface emissions. That is, we smell evidence of gas in the vicinity of a penetration and/or we visually identify where cracks have appeared in the cover around a penetration. Therefore, we are not ignoring penetrations, but simply applying a targeted approach that identifies penetrations where problems are likely to occur and monitors those locations promptly.

The assertion that all cover penetrations are required to be monitored quarterly for surface emissions is contrary to current regulatory interpretation and industry practice that has successfully been in place over the past 18 years under Subpart WWW. The industry is concerned that EPA’s enforcement office and/or state or local agencies will interpret EPA’s mandate to monitor all penetrations to mean that landfills have been in violation of Subpart WWW during this entire time as EPA has stated in the preamble that monitoring of penetrations is “…consistent with EPA’s historical intent and interpretation.” Therefore, to begin with, we request that EPA clarify that monitoring of every cover penetration has not been previously required by Subpart WWW or state/local EG rules and that if it is ultimately included in Subparts Cf and WWW, it is a new requirement. In fact, in November 1998, EPA issued questions and answers on NSPS clarifying that SEM did not require the technician to travel from well to well.

The docket for the proposed rule has no data or technical documentation showing any emissions reductions from this penetration monitoring requirement, only a general suggestion that more surface leaks would be discovered and remediated. Given the significant costs associated with additional penetration monitoring and no quantified emissions reductions to justify the added expense, we recommend maintaining the existing SEM requirements from Subpart WWW whereby penetrations would be treated as other landfill areas where visual observations indicate possible elevated levels of LFG and monitored using the procedures discussed above.

The landfill industry previously submitted a report to EPA comparing SEM requirements under the California AB-32 landfill methane rule (LMR) to those contained within Subpart WWW. As part of that report, an evaluation of penetration monitoring was conducted. Since then, we have conducted additional data collection, review, and analysis to highlight the limited value of mandated quarterly penetration monitoring. We believe that these data demonstrate that quarterly monitoring of every penetration during every monitoring event is not necessary and that a continuation of the program used under Subpart WWW is sufficient. At a minimum, the data demonstrate that quarterly monitoring is not necessary and that annual monitoring would be sufficient.

*Penetration definition*

If EPA maintains the requirement to monitor penetrations, then we request a clear definition and delineation as to what constitutes a penetration or opening. The term “opening” in the preamble is confusing and seems unnecessary. Therefore, we request that the term be removed from the preamble. More importantly, we request that EPA define penetrations in a way that is meaningful in terms of their potential to be a source of surface emissions. There are many temporary and/or shallow field components (e.g., fence posts, stakes, etc.) at landfills that may penetrate into the cover, but not significantly into the waste to be a source of emissions. As such, we request that EPA consider the following definition for penetrations that would require monitoring under the rule.

Landfills have begun installing trees as part of phytocovers. Use of these types of best management practices could be deterred if they were considered penetrations.

We suggest the following for the definition of penetration:

* be artificial;
* be a permanent installation, which will be in place for greater than a year;
* be located in areas that are subject to GCCS control requirements where the waste is five years old (two years old if area is closed or at final grade);
* completely pass through the landfill cover; and
* be installed deeply into waste a minimum of ten feet.

*Penetration monitoring frequency*

If EPA maintains the requirement to monitor penetrations, then we request that monitoring frequency be limited to annual monitoring. This will significantly reduce the additional burden associated with compliance with this requirement. In addition, industry experience, as supported by the additional analysis of LMR data, shows that: (1) only a small percentage of penetrations show exceedance in any monitoring event, (2) the percentage of penetration exceedances reduces over time once they are initially monitored and remediated, and (3) penetrations that are remediated do not have subsequent exceedances within a year. As such, we believe the data support annual monitoring instead of quarterly. Under an annual monitoring program, we could agree to a requirement to test at least 25% of the penetrations each quarter, such that every penetration would be tested at least annually. We believe this would be a much more reasonable and cost effective approach to penetration monitoring.

*Penetration labeling*

If EPA maintains the requirement to monitor penetrations, then we request the unique identification label be limited to GCCS components. There may be other penetrations that are unrelated to the GCCS that will require monitoring.

# *Tighter Traverse and Integrated Methane Concentration*

EPA requests additional comments on a tighter walking pattern for SEM (25-foot spacing) and the addition of integrated monitoring of methane concentrations, which are contained within the California LMR. To summarize the industry’s comment on this issue, we are reiterating some of our previous comments that remain relevant on this issue. EPA responded to commenters on the issue of integrated methane monitoring in November 1998 in its *Municipal Solid Waste Landfill New Source Performance Standards (NSPS) and Emission Guidelines (EG) – Questions and Answers* by stating that point sampling is used to determine where the GCCS is insufficiently designed or operated. Integrated sampling could mask areas of poor performance by dilution and is also more an indicator of emission rate than system performance. We agree with EPA’s original assessment that point sampling provides a direct method of pin-pointed areas that need attention and therefore, we recommend maintaining the SEM criteria utilized in Subpart WWW and contained within the proposed Subpart Cf rule.

Further, the docket for the proposed rule has no data or technical documentation showing any emissions reductions that could be achieved through this enhanced monitoring. However, the docket does contain is the previous report submitted to EPA comparing SEM under the California LMR and Subpart WWW. We continue to stand by the conclusions in this report. Given the significant costs associated with a tighter traverse/integrated monitoring and no measurable emissions reductions to justify the added expense, we recommend maintaining the existing SEM from Subpart WWW.

Wind Speeds

EPA requested comments on establishing a maximum wind speed for SEM. According to SCS, nearly 73% of sites following the LMR required permanent variances for wind speed. This shows that the wind speed limitations are not reasonable. We have included additional comments on wind speed under the Tier 4 discussion. Those comments apply to this section as well.

*Use of GPS*

The current rule proposes to require all SEM exceedances to be marked using a GPS device that has an error of +/- 3 meters. We are not clear on why EPA believes that GPS measurements of SEM exceedance locations are necessary and why a landfill cannot simply mark the exceedance with a marker flag for return corrective action and monitoring. We believe both options should still be allowed in the rule.

With this requirement, we are hopeful that +/- 3 meters is enough of an error range that the use of GPS alone may not allow the operator to return to the exact spot of the exceedance. Therefore, the added expense to purchase a GPS device, use that device in the field, and then plot the GPS data on a map may provide no additional value to the operator in flagging exceedances and may still necessitate both methods. It is unclear from the docket materials if EPA has evaluated GPS equipment that can achieve this level of accuracy, its cost, and its size/weight in terms of requiring a technician to carry yet another field monitoring instrument.

**Startup, shutdown and malfunction**

To be drafted – limiting SSM to the control device…

GCCS operational limitations

With the removal of the 1-hour/5-day SSM exemption, landfills need an alternative allowance for downtime of all or portions of the GCCS without it becoming a rule deviation. This is most critical for low-producing areas of the landfills, or closed landfills with declining gas flows, however, at a given time, any landfill or area of the landfill could be in need this flexibility.

*Wells*

The proposed rule needs to provide operational flexibility to shut-off wells or to temporarily lock out the vacuum to a well in order to deal with declining gas flows, operational issues, filling operations, or other site activities that would require portions of the GCCS to be taken off-line. We believe that these situations can be more efficiently and effectively addressed by following the procedures set out below. These procedures generally follow the current EPA Applicability Determination Index (ADI) control No. 0600062 with some additional details regarding SEM and a modification based on the elimination of the oxygen and temperature wellhead criteria.

* The monthly monitoring will be conducted for the collection point which has been temporarily shut down, but positive pressure will not be considered an exceedance of the wellhead operating standard.
* If monthly monitoring indicates that pressure has built up in the collection point, the well will be opened to relieve the pressure but may be shut down again until it is monitored the following month.
* If monthly monitoring indicates that the gas quality has improved, the well will be brought back on line until the gas quality declines again.
* The quarterly SEM will be conducted in the areas of the non-producing collection points. The well may continue to remain shut down if no SEM exceedances are found within 30-meters of the collection point which cannot remediated without needing to reactivate the collection point. If however, SEM exceedance within 30-meters of the collection point cannot be remediated within the timelines and re-monitoring procedures currently outlined in the rule, then the collection point will be brought back on-line or another alternative will be requested of/approved by the Administrator.

To make the above procedure effective, some additional definitions should be added to the rule. In the industry, decommissioning a well is used to denote the taking of the well off-line temporarily to address operational or maintenance issues. As noted, decommissioned wells should continue to be monitored monthly to determine whether they can be brought back on-line, however, during this time, they should not be subject to wellhead standards. Further, decommissioning should not be considered a design change to the GCCS Design Plan. Decommissioning a well should not requiring agency approval, however, they should be included in the semi-annual NSPS/EG compliance reports. We request that EPA add a similar definition of well decommissioning to the rule.

Well abandonment is used in the industry when a well is taken off-line permanently. It is disconnected from the vacuum but may or may not be physically removed or drilled out and capped, depending on access or site conditions. Once abandoned, it would not be part of the NSPS/EG compliance system. Past records would be kept for the required timeframe. As long as SEM requirements can be met in the area of the abandoned well, the abandonment should not be considered a design change to the GCCS Design Plan. Abandoned wells will be listed in the next semi-annual NSPS/EG compliance report and then taken off of the site’s GCCS map. We request that EPA add a similar definition of well abandonment to the rule.

Re-drills are existing gas wells that are replaced. The re-drilled well may not be in the exact location, and may be based on a slightly different design, but it is functionally equivalent to the well it is replacing. The re-drilling of well will not be considered a design change requiring update of the GCCS Design Plan. Re-drilled wells will be listed in the next semi-annual NSPS/EG compliance report and then added to the site’s GCCS map, replacing the former well, but usually with a slightly different demarcation. We request that EPA add a similar definition of a re-drilled well the rule.

*Entire GCCS –*

Regardless of how well designed, constructed or operated a GCCS is, it will have periods of time when it will be off-line. These can include utility power failures, weather conditions, or other events that can cause automatic or manual shutdown of the GCCS or a portion of it.

To address this issue, and to avoid the numerous conflicting interpretations that already exist on this issue, we request that EPA add rule language an allowance for GCCS downtime without compliance obligations. For example, the Bay Area AQMD’s current EG rule (Rule 8-34) has an allowance for 240 hours of GCCS downtime per year that is exempt from rule requirements. The landfill industry would be willing to consider similar rule language to address GCCS downtime under the NSPS/EG.

Despite triggering GCCS control requirements under the NSPS/EG, there are still some landfills that do not have enough LFG to run their GCCSs continuously and cannot currently qualify for GCCS removal. To address this issue, we request that provisions be added to the rule to allow less than continuous operation under certain circumstances. The California LMR lists such a scenario as one of the alternatives that would be approvable under the rule. The aforementioned Bay Area AQMD EG rule has similar language whereby less than continuous operation petitions can be submitted for approval.

**Closed and Non-producing Areas**

EPA’s proposal to allow for actual gas flows to be used in excluding areas of collection only includes “*nonproductive physically separated (i.e., separately lined) closed areas*”. This should be revised to allow for this demonstration for any closed area, not just physically separate ones. Similarly, the “equipment removal” provisions should be expanded to allow for removal from closed areas, not just closed landfills. EPA “*considers areas to be physically separated is they have separate liners and gas cannot migrate between the separate areas*.”

This concern that gas could migrate from an unclosed area (with GCCS) to a closed area (where GCCS has been removed or excluded) is unfounded. Gas will naturally move from areas of high pressure to areas of low pressure. It is therefore unlikely that gas would migrate from an unclosed area that is under vacuum, toward a capped area that is under reduced vacuum or positive pressure. The more likely scenario is that gas would migrate from the capped area toward the uncapped area, either into the GCCS or out through the surface in the uncapped area. The closed area would be clearly delineated in the field to document the area not subject to NSPS operating standards – SEM would continue to the edges of this area, allowing for detection of any migrating gas. The owner/operator would then be tasked with alleviating the exceedance, either by better cover at the edges of the closed areas; increased collection within the closed area; increased collection in the nearby uncapped area; or install additional collectors in the vicinity of the exceedance.

As landfills become larger regional facilities, incremental closed areas will be certified closed for long periods of time prior to closure of the entire facility. GCCS designs can be configured to allow for isolation of specific areas, so actual flow and/or NMOC generations from closed areas that are not physically separated can be measured. USEPA should allow the provisions for capping or removing the GCCS to be applied to all closed areas (provided they meet the appropriate criteria, see section 2 for an alternative to the 15-year criteria). In addition, USEPA should allow for actual flow/NMOC measurements from all closed areas as a means to exclude those areas under the 1% criteria.

In past proposed rulemakings, EPA requested comments on approaches for removing controls in closed landfill areas, and applicable criteria to determine which areas warrant ongoing control. Based on this input, EPA has provided additional flexibility for these areas, including additional criteria for removing a GCCS as well as the removal of the numeric wellhead standards for oxygen and temperature. In addition, the proposed rule allows the use of actual data rather than estimated emissions for assessing when a landfill area meets the 1% NMOC emission criteria for removal of the GCCS, which we support. However, we believe that additional flexibility is still warranted for closed and non-productive areas.

*First, w*e support EPA’s proposal for the use of SEM to determine when the GCCS can be removed. The EPA recognizes that many landfills or landfill areas are closed or have inactive areas that do not produce as much LFG. The production of LFG naturally declines over time as an area stops accepting waste and the amount of degradable organic content declines.

Instead of shutting down the GCCS completely, landfills could begin to close select wells. SEM would verify that emissions are controlled. If exceedances were experienced, the wells could be reopened. However, as landfill gas generation continued to decline, more wells would be locked out and verified utilizing SEM. This slow decommissioning process is similar to the process of the slow decline of landfill gas generation. We recommend that the rule allow both options for GCCS removal, complete shutdown when warranted or a process of decommissioning, and ultimate abandonment, over time. Our comments on the Tier 4 would apply to SEM for removal.

Second, the rule criteria also continue to include the arbitrary 15-year requirement to operate a GCCS for it can be removed. It is unclear to us why a closed or non-productive landfill or area could not remove its GCCS in year 14 if it met all relevant criteria for emissions. Fifteen has not relevant technical or scientific basis. Further, many closed landfills installed GCCS prior to the current NSPS/ EG requirements. The current rule language states that the minimum 15-year duration for gas system operations begins with the date of the initial performance test. For sites subject to the NSPS, initial performance tests of the control system likely occurred between December 1998 and June 1999. However, for the sites subject to either state/local EG rules or the Federal Plan, the initial performance test dates occurred as late as April 2003. Closed landfills are typically subject to the state EG or Federal Plan requirements and not the NSPS requirements. Therefore, at many closed sites the useful life of the equipment (i.e., 15 years) has already been surpassed, but they may not have 15 years of NSPS/EG operation of the GCCS. The industry further requests that the current 15-year requirement to operate a GCCS be removed. Mandating a uniformly applicable 15-year operational period does not account for the variable site specific conditions that exist across the country. As a result, unnecessary costs, resources, and power are being consumed as a result of the requirement to operate for 15-years. And we certainly do not want the 15-year period to have to restart with the issuance of Subpart Cf and XXX.

In lieu of the 15-year operational criteria, EPA has added an allowance that 15 years does not have to be met if it can be shown that the GCCS could not be operated for 15 years due to declining flow. However, no guidance or criteria area provide as to how a landfill would demonstrate that declining flow makes it so the GCCS could not be operated. Without such criteria, it is difficult for us to evaluate whether this provision would be useful.

As a matter of clarity, we request that the term “non-producing” be changed to “low-producing” as these areas produce some amount of LFG. Non-producing areas are those with inert materials only, and those are already exempt from GCCS coverage per the rule.

With this rulemaking, it appears that EPA is defining closed areas as those physically separate, without shared liner, and without any communication or movement of LFG between the areas. This definition is very rigid and would limit the use of the criteria to only those closed areas that are completely separate “hills.” This represents only a small fraction of the closed areas that require flexibility for declining flows. In our view, it should make no difference whether an area is physically separated as to whether an area is a candidate for removing a GCCS. The key is declining flow. EPA may not realize it but this definition is actually more stringent than current interpretations under the NSPS/EG. Based on this, we request that EPA redefine closed areas as broadly as possible as any closed area that can be adequately identified and separately tracked from other areas of the site.

Beyond the options already contained in the draft rule, there are several potential solutions to address declining gas flows and gas quality at closed landfills or closed landfill units or areas (as well as still active areas) for consideration, which should be clarified in the rule, as follows:

1. It should be clarified that the allowances in the NSPS/EG rules for closed landfill should apply to closed areas of active landfills. This is consistent with how controls are required by area under the 2- and 5-year waste age criteria prescribed in the NSPS rule.
2. A landfill owner/operator should be able to remove NSPS/EG control requirements based on an operational period of 15-years from the initial well installation date for the affected landfill unit or area, not the date of NSPS or EG performance test. Time with a GCCS in operation under state/local regulatory requirements, directive, permits, etc., should be counted against a 15-year minimum on a per unit or area basis.
3. The allowance for completion of annual SEM, instead of quarterly, should apply to closed areas of active landfills, not limited to landfills that are completely closed.
4. EPA, in its various determinations on the topic, has ruled that “late” (beyond 180 days of the Tier 1) Tier 2 analyses could be conducted, but not beyond the final compliance date under the NSPS (30 months from first exceeding the emissions threshold). The proposed rule is silent on this topic, and since Tier 2 is voluntary, we believe that Tier 2’s (or Tier 3’s and Tier 4’s as envisioned in Cf/XXX) should be allowed to be conducted at any time to defer NSPS criteria, as long as NSPS final compliance dates are met. Therefore, whenever it is discovered that a landfill’s emissions are less than the emissions threshold, the GCCS requirement of the NSPS/EG should not apply regardless of when the Tier 2 (or Tier 3 or 4) is done.
5. For a closed MSW landfill, not co-located with other landfill units (active or closed), the closed MSW landfill should be able to remove NSPS control requirements once the site demonstrates that it emits less than the 50 Mg/year emissions threshold based on actual LFG flow and site-specific NMOC concentration in accordance with *§*60.764(b) regardless of the age of the GCCS or how long it has operated.
6. It appears that EPA did not consider a change to the 1% criteria, which was discussed with EPA and industry in the past. We have re-attached previous comments made to EPA demonstrating how difficult it is to meet a 1% threshold, even when using actual flow and NMOC data. We are hopeful that EPA will reconsider this threshold and establish one that can more reasonably be met. Past discussions with EPA revolved around a possible 5% NMOC criteria, which we believe is more reasonable
7. The entire discussion about non-producing areas is based on the premise that they are closed and on the downward side of the gas generation curve. However, there are active areas with low gas production that should be able to avail themselves of some of the above allowances. These could include active areas of landfills in dry climates that recently reached the 5-year waste age criteria but where gas production is limited or active areas with mixed MSW and inert waste where the gas production is much less than typical MSW areas. Since the keys are gas production and emissions, low gas production and emissions in these low producing active areas should be recognized with certain allowances available for closed areas.

*Closed area definitions*

We applaud the EPA’s acknowledgement that closed landfills should be categorized separately. We support the concept of this proposed subcategory for closed landfills. In addition, we support the concept of expanding the subcategory to include landfills that close within 13 months of the publication of the Emissions Guidelines. It is critical that landfills, which are planning to close, have the necessary time to meet all of the criteria and file the required documentation to achieve the status of closed. For clarity, we are recommending changes to EPA’s proposed definition as follows:

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid waste will be placed without first filing a notification to the agency. Once a notification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

Closed landfill area means an area of a landfill in which solid waste is no longer being placed, and in which no additional solid waste will be placed without first filing a notification to the agency. Once a notification has been filed, and additional solid waste is placed in that area of the landfill, the landfill area is no longer closed.

Closed landfill subcategory means a closed landfill that stopped accepting waste on or before 13 months after the publications of the final rule.

In the draft EG rule, EPA is requesting comment on how to define closed areas of open landfills. The proposed rule would affect the treatment of closed areas in two ways:

* Proposing alternative criteria for capping/removing the GCCS in closed areas if the following conditions are met:
  + The landfill is closed or an area of an active landfill is closed.
  + The GCCS has operated for at least 15 years, or the owner/operator can demonstrate that the system will not be able to operate for 15 years due to declining gas flows.
  + Four consecutive quarters of surface monitoring show no emissions of 500 ppm or greater.
* Proposing that the actual flow rate of landfill gas from a “nonproductive physically separated (e.g., separately lined) closed areas” may be used to demonstrate that areas may be excluded from gas collection (i.e., NMOC emissions from the area are less than one percent of total NMOC emissions).

In order to provide comment on these proposals, the various “closed area” scenarios should be addressed.

1. *Separately Permitted Facilities*

This scenario is somewhat of an outlier as EPA’s “common control” interpretation has evolved. GROWS/GROWS North/Tullytown (PA) is an unusual case – the landfills are in close proximity, but comprise separate hills. Each is issued a separate air permit, and a separate GCCS is installed at each. For this scenario, the process for removal of the GCCS from each facility would seem to be straightforward: as long as the landfill is closed; the system has been operating for 15 years(or demonstrated to be unable to operate for 15 years); and EITHER of the following scenarios occurs:

* Four consecutive quarters of surface monitoring with no exceedances >500 ppm detected; OR
* NMOC emission rates are calculated to be less than 50 Mg or 34 Mg, depending on applicability.

Allowing the use of surface monitoring in lieu of NMOC testing does provide additional flexibility and incentive to optimize methane collection. The 15 year date remains somewhat arbitrary, and demonstrating that the system is unable to operate for 15 years would require additional reliance on modeling rather than actual data.

1. *“Common Control” Facilities*

This is the more common scenario for landfills that are separately permitted by the solid waste permitting agency, but are aggregated into a single air permit under “common control”. Orchard Ridge RDF (WI) is one such facility. The air permit for the facility includes the following landfills:

* Boundary Road Landfill – began accepting waste in 1959, closed 1971.
* Omega Hills Landfill – began accepting waste in 1960’s, closed 1971.
* Parkview RDF – began accepting waste 1989, closed 1995.
* Orchard Ridge RDF – began accepting waste in 1994, remains open.

A separate flare is used at Boundary Road Landfill. Gas from Omega Hills, Parkview, and Orchard Ridge is routed to a WMRE turbine facility, with a flare backup.

Since the various landfills are separately lined and a gas collection system is installed on each, the closed landfills can be evaluated separately for removal from NSPS. The SEM option will be beneficial in this case – historically, excluding the old closed landfills under the 1% criteria has proven difficult.

This scenario does illustrate the difficulties in separately-permitted landfills (under solid waste) versus air classification in permitting and NSPS compliance. As written, Boundary Road, Omega Hills, and Parkview landfills would not be eligible for classification in the “closed landfill subcategory” and would thus be subject to the 34 Mg/yr NMOC threshold, not the 50 Mg/yr. SEM does provide an alternative to removal for these sites, and we should wholeheartedly support that option.

The 15-year timeframe remains arbitrary, especially for these closed landfills whose system was installed well ahead of NSPS, but whose 15-year clock does not start until the NSPS performance test date. The ambiguous requirement that the operator “must demonstrate that the GCCS will be unable to operate for 15 years due to declining gas flows” is still problematic. Gas from sites like Omega Hills and Parkview is routed to a common plant along with gas from the active Orchard Ridge, so these sites are not necessarily required to sustain a control device on their own. Even if they did, what does “unable to operate” mean? Collected flow below the minimum capacity of the control device? Sites that have planned ahead during post-closure and installed smaller flares would be punished under this interpretation.

We need clarification on what “unable to operate” means for these scenarios. Establishment of a minimum gas flow threshold (e.g., collected LFG less than XX scfm per acre) would allow additional flexibility in these scenarios. This would dovetail with EPA’s desire to use actual gas flows to exclude areas from collection.

1. *Closed Monofill*

This should be the most straightforward of the closure scenarios. A monofill containing ash, drywall, or other non-degradable waste would continue to be excluded from collection as allowed under the rule (records documenting the nature, age, and amount of material would still need to be available upon request to the Administrator). Any gas collection in this area (e.g., odor control) would not be subject to NSPS/EG requirements from the start, and no separate demonstration for removal of the collection system in this area would be required.

1. *Closed Areas at Active Landfill*

This will be the most common scenario for “closed areas”. Sections of the landfill are incrementally closed as operations progress. In most cases, incremental closure is based more on capital allocations than timing. As areas of the landfill reach final grade, the approved cap (composite or soil) is installed in that area. Closure is typically delayed after reaching final grade to allow for waste settlement. This serves two purposes: additional airspace may be utilized after settlement; and settlement after capping is lessened, thus reducing drainage problems in post-closure.

*Subtitle D reference – not all NSPS landfills closed under Sub D & letter of closure should be good enough*

The final cap is a closure step under the solid waste rules (intermediate cover is not), and states require certification of the cap and the closed area. This includes a survey of the area that is being certified closed, so the acreage is well-defined. For this reason, and for consistency, it may be best to tie the definition of “closed area” to the solid waste rules. 40 CFR 258.60(h) requires the following for landfill closure:

*Following closure of each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by Director of an approved State, verifying that closure has been completed in accordance with the closure plan, has been placed in the operating record.*

Cross-referencing Part 258 could be problematic, since I’m not certain that this rule is the basis for closure requirements in each state’s solid waste rules. Would defining “Closed area” as “*a landfill area in which solid waste is no longer being placed, and in which no additional wastes will be placed without first obtaining a modification from the Administrator*” be inclusive of both air and solid waste agencies? “Un-closing” an area (i.e., removing certified cap) requires more than a notification on the solid waste level, since the site’s closure and post-closure funding requirements would require adjustment. Maintaining different records of closed areas for purposes of air and solid waste would be challenging, to say the least.

**Design Plan Approvals**

In 2006, EPA proposed addressing an on-going issue related to design plan approvals. They proposed a “de facto” approval if a state agency did not review the design plan in a timely manner. At the time, the industry supported this proposal. In addition, based on written comments received from state agencies, it appears that there were no objections. The industry appreciated that EPA acknowledged and recognized a long-standing problem associated with design plans. At that time, the industry referenced EPA’s February, 1999 document “*Municipal Solid Waste Landfills, Volume 1: Summary of the Requirements for the New Source Performance Standards and Emission Guidelines for Municipal Solid Waste Landfills*” which states the following (page 2-38):

“*The implementing agency must approve the design of a gas collection and control system prior to installation. The review and comment interval for approving a design plan is expected to take approximately 6 months from the date the plan is submitted, leaving approximately 12 months for installing the alternative gas collection and control system*.”

However, the proposed rule not only does not include de facto approvals, it actually requires more design plans approvals. EPA now proposes requiring design plans for situations that had previously not required design plans, such as prior to implementing an HOV. As discussed above, only 15% to less than 40% of design plans have been approved. One consultant surveyed thirty landfills and found that only five received approval. Of those, approval times sometimes exceeded ten years. Given the difficulty of obtaining initial design plan approvals, it is unduly burdensome and unreasonable to require additional design plan approvals for intermittent issues.

Landfill owners do not have the luxury to wait for their design plans to be approved since they are still subject to the 30-month timeline requirement for GCCS installation. Without approval, landfills owners are at risk to be subject to subsequent costly changes to the GCCS.

We recommend that initial design plans have a 6-month window for de facto approvals. Amended design plans should receive de facto approvals within a shorter timeframe, such as 60 days. Finally, rather than mandating an updated design plan for HOVs that requires any approval, EPA instead should simply require HOVs to be documented in the semi-annual report.

An alternative approach would be to use the procedures for flare management plans found in the refinery NSPS 40 CFR 60 Subpart Ja. Subpart Ja requires submittal of a flare management plan identifying elements that the plan needs to address. The state agency is not required to approve the plan but can find the plan “not adequate.” Unlike the plan required under Subpart Ja, the GCCS plans require certification by a professional engineer so any changes the Administrator later request need to be limited to the completeness of the plan and not the material content. This approach is appropriate given not all delegated authorities have the internal expertise or resources to effectively implement the GCCS design plan approval process. This is also consistent with EPA’s longstanding policy of allowing sources to comply with permit applications that have been submitted, even while those applications remain pending, to ensure administrative delays by states or EPA do not result in unintended consequences on the regulated community. *See, e.g.*, 40 C.F.R. § 70.7(b) (“[I]f a part 70 source submits a timely and complete application for permit issuance (including for renewal), the source's failure to have a part 70 permit is not a violation of this part until the permitting authority takes final action on the permit application …”); 40 C.F.R. § 70.5(a)(2) (“The source's ability to operate without a permit, as set forth in § 70.7(b) of this part, shall be in effect from the date the application is determined or deemed to be complete until the final permit is issued, provided that the applicant submits any requested additional information by the deadline specified by the permitting authority.”).

*Enforceability*

Regardless of whether design plans require approval, regulators retain the authority to regulate the system and enforce compliance requirements.

**SEM for Tier 4 & Low-producing areas**

We applaud the EPA for proposing the use of Tier 4 as an alternative site-specific emission threshold determination for when a landfill must install and operate a GCCS. As proposed, Tier 4 would be based on surface emission monitoring (SEM), which demonstrates that surface emissions are below 500 parts per million (ppm). Tier 4 would allow landfills to demonstrate that site-specific surface methane emissions are low, despite modeled emissions from Tier 1, 2 or 3 exceeding the non-methane organic compound (NMOC) threshold. Tier 4 would require landfills to demonstrate that surface emissions are below 500 ppm for 4 consecutive quarters. If the landfill successfully demonstrated that, it would not need to install a GCCS and could continue to avoid the GCCS requirement by continuing to conduct successful SEM on a semi-annual basis.

The draft rule appears to include two instances when a Tier 4 could be used, including determining an initial GCCS must be installed at a landfill, which just exceeded the NMPC threshold, or to determine when a GCCS can be taken off-line in a close, non-producing area of the landfill. It would also seem like Tier 4 would be a reasonable procedure to determine when a GCCS must be installed in an area of the landfill that meets the 2- or 5-year waste age criteria. If these areas could meet SEM criteria in the absence of GCCS, this would suggest that a GCCS is not yet required simply because the waste meets an arbitrary waste age. Such an allowance would be very helpful for dry climate landfills where many areas with 5-year old waste are still not generating significant enough quantities of gas to warrant collection. Therefore, we request the allowance to use Tier 4 for this purpose.

*Proposed changes to Tier 4 and SEM for low-producing areas*

In order for Tier 4 to be utilized, we recommend a few changes to the proposed methodology. As EPA acknowledges, the use of Tier 4 would incentivize best practices such as the use of oxidative landfill covers, interim gas control measures, and/or organic waste diversion, so its use should be encouraged. The criteria for implementing Tier 4 SEM are too strict. Given that, Tier 4 may experience very limited use. Therefore, we recommend the following modifications:

1. Wind – We recommend eliminating the limitation to conducting SEM using the wind criteria. Instead, the criteria should be the same as for SEM monitoring on a landfill with a GCCS. That is, monitoring should be performed during “typical meteorological conditions.” This eliminates concerns about performing SEM during extreme weather events, but allows SEM to be performed in accordance with the rules. In order to evaluate the data, EPA wind data could be included with the SEM results.

As we previously commented, it is difficult to schedule and reschedule sampling crews for acceptable wind conditions and some sites may never meet such criteria due to local wind conditions. If notification to the regulators is required to allow for their participation, scheduling complications are even further exacerbated.

According to SCS Engineer’s report “A Comparison of Monitoring Results for California Landfills under the New Source Performance Standards and the California Landfill Methane Rule,” the CA LMR includes specific wind and precipitation limits for conducting SEM monitoring. However, review of the data set indicates that these requirements have been difficult to meet. Of the sites evaluated, almost three out of four (72.6%) required a permanent alternative for wind speed due to specific site conditions. When more than half the facilities are unable to comply with the rule as written, it seems that the rule is not warranted. As such, the wind speed criteria seem misplaced if three-fourths of the sites need alternatives from it. And without an allowance for an alternative, the proposed rule is much more restrictive than the CA LMR.

Further, the inlet to the instrument is required to be held at 0.04-0.10 m above ground where wind speed is typically low. In the paper, “Modeling the Variation of Wind Speed with Height for Agricultural Source Pollution Control,” wind speed data was acquired at elevations varying from 0.1 meters to 10 meters on six separate occasions. The results showed that wind speed increases with height. Winds at the lowest height, 0.1 meters were lowest, ranged from 11 to 32% of the wind speed at 10 m. Weather station anemometers are generally located 10 m above the ground; therefore, they are not actually representative if wind conditions where SEM is occurring.

Furthermore, it is unclear from the docket information if EPA evaluated the cost to install and maintain a meteorological (met) station, the accuracy of data from met station as being representative of ground level conditions (i.e., 5 to 10 centimeters of the landfill surface), and weather winds at these levels actually affect SEM results and by how much. In the absence of real data on these issues and in light of the additional cost, we request that the wind speed requirement be excluded from the rule. Tier 4 SEM should be conducted under the same typical meteorological conditions as other SEM under the rule. If it is included, then we request that EPA include an explicit allowance for exemption or alternatives from the requirement.

1. Corrective action – We recommend that the Tier 4 SEM be modified to allow some level of corrective action. When conducting SEM over a large area collecting thousands of data points, a single exceedance does not mean that sufficient quantities of landfill gas is present to necessitate installation of a GCCS. The exceedance could represent a small crack that recently formed in the cover due to rain, vehicle traffic across the cover, or some settlement and could very easily be corrected once discovered. However, this would not be allowed under the rule as written. In fact, it could be a small leak at a single point that would be easily correctable with simple cover repair, which, in many cases, can be completed within minutes of detecting the exceedance.

The EPA selected a 500 ppm threshold for Tier 4 because it has been demonstrated that a well-designed and well operated GCCS should be able to operate the landfill with this threshold. In other words, when conducted properly, SEM is a good indicator of how well a landfill with a GCCS is operating overall. The current and proposed rules provide operational flexibility with established timelines for corrective action, recognizing that even a well-design and well-operated GCCS will experience exceedances occasionally. In doing so, the EPA has acknowledged that as long as such exceedances are corrected successfully, the GCCS is operating well and improvements are not needed. If landfills without a GCCS were subject to the same criteria, the 500 ppm would demonstrate that any methane emissions would be as low as those allowed at a landfill with a well-operated and well-designed GCCS in place.

By eliminating the corrective action opportunity, Tier 4 may become the tier of last resort rather than implemented early. Rather than prohibiting corrective action, we recommend providing an opportunity to correct any exceedance in a timely manner, similar to the existing SEM allowances in the current rule and the existing California LMR rule, which allows a specified corrective action period that, if successful, allows the site to maintain exemptions granted after four quarters without exceedances. The rule should specify that all readings above 500 ppm be recorded with documentation of corrective action mechanism implemented and the results of re-monitoring. Tier 4 SEM should be conducted quarterly until such time as a GCCS is installed, another tier is utilized, or the estimated emissions drop below the threshold.

Similar to the SEM for landfills with active GCCSs, if an exceedance is detected, the landfill should undertake corrective action and the location should be re-monitored within 10 days. If re-monitoring shows an exceedance, additional corrective action should be taken and the location should again be re-monitored within 10 days. If re-monitoring shows a third exceedance, the landfill should prepare a GCCS design plan within one year of the initial exceedance and install a GCCS within 30-months of the initial exceedance.

In light of this fact, we request that EPA consider provisions in the California LMR that allow one 10-day corrective action/remonitoring cycle before certain SEM exemptions or alternatives are lost. This seems like a much more reasonable approach, which would allow minor exceedances that can be remediated easily and quickly to not cause an immediate failure of the Tier 4 criteria. We are concerned that without this allowance, Tier 4 would have limited value to landfills and would not be successfully in preventing the unnecessary operation of GCCS at landfills or in landfill area that simply do not have enough gas generation to warrant collection.

*Wind for SEM –*

We do not recommend utilizing wind criteria for SEM. In response to EPA’s request for comments on prohibiting SEM when wind speeds exceed 5 mph, and instantaneous wind speeds exceed 10 mph, we refer EPA to the comments included under Tier 4 for installation. In addition, we would like to clarify that 5 mph average wind speed would not be considered “windy” – according to the Beaufort wind scale, it is considered a light breeze.

*Recordkeeping*

EPA appears to be requiring that during Tier 4 monitoring, all data must be recorded. It is unclear why EPA would need all of this data recorded and kept as records when it is only relevant if an exceedance occurs. We do not currently, nor is it proposed, to collect and keep all SEM data form regular SEM events, and EPA has provided no justification why it should be required under Tier 4. SEM devices take readings every few seconds, resulting in thousands of readings per event. This is a significant amount of data, and without a reason to record and keep all of this data, we request that this requirement be removed from the rule. We will certainly record and collect the data relative to all exceedances but to record and collect all of the data collected literally each several seconds seems onerous and unnecessary.

*Tier 4 – 2 year/5 year*

The current proposal does not state that the Tier 4 or similar SEM method could be used to delay the requirement to expand the GCCS at an already regulated landfill for areas that meet the two- or five-year waste age criteria. We request that EPA consider applying the Tier 4 criteria to these areas where GCCS expansion is not warranted because the areas are capable of meeting the SEM threshold without a GCCS. This would delay GCCS installation until such time as the actual surface emissions warrant a GCCS.

*200 – 500 ppm*

The EPA requested comments on a value between 200 ppm and 500 ppm should be considered.

*Agency notification*

The EPA requested comments on whether landfill owners or operators should provide notification to regulators prior to conducting the quarterly Tier 4 SEM. This notification affords regulators the opportunity to observe the testing provides greater transparency and trust. As such, this is a reasonable requirement and is acceptable to the landfill industry, although it is noted that while conducting SEM after the GCCS is installed under the rule, landfills are not required to notify regulators prior to conducting monitoring. In addition, with the existing wind requirements, coordination with regulators becomes even more challenging.

**Third party verification and self-auditing -**

EPA provides more information about its goal for a third-party verification program that would supplement or replace the current approach of requiring EPA or state review and approval of site-specific design plans and plan revisions. While the industry agrees that use of independent, third-party experts, i.e., registered professional engineers (PE) to review and sign design plans in lieu of EPA or state agency approval would greatly reduce burdens for regulators, EPA does not describe such a simple and straightforward approach. Instead, EPA describes in the preamble and in an accompanying memorandum in the docket entitled “Using Third-party Audits to Improve Compliance,” a cumbersome process of third-party site audits, and an even more complex and unwieldy description of the necessary elements for approving, qualifying and overseeing third-party auditors. The potential third-party program described by EPA is neither comparable nor relevant to the verification or certification required for landfill design plans, nor would it reduce administrative burdens.

We agree with EPA that review and approval of design plans is a burden for many states. We estimated in our comments on the proposed Subpart XXX that fewer than half of the landfills operate with an approved design plan. This low approval rate is due to a lack of sufficient experienced personnel and resources at the agencies. EPA could reduce these burdens on state agencies and increase the regulated community’s confidence if the Agency would finalize a self-implementing process for landfills to obtain independent third-party professional engineer certifications of plans that can be submitted or maintained onsite for inspection.

Landfills are well equipped to self-implement design plan requirements. As a practical matter, each landfill works with professional engineers who are familiar with the landfill and the site-specific considerations that may affect the design. These engineers are best equipped to establish landfill-specific design plans.

Use of state-licensed professional engineers would greatly simplify the process EPA outlined in the preamble including establishment of criteria for competence, independence, reporting and oversight. Every state regulates the practice of engineering to ensure public safety by granting only Professional Engineers (PEs) the authority to sign and seal engineering plans and offer their services to the public.

To use the PE seal, engineers must complete several steps to ensure their competency. To become licensed, engineers must complete a four-year college degree, work under a Professional Engineer for at least four years, pass two intensive competency exams and earn a license from their state’s licensure board. Then, to retain their licenses, PEs must continually maintain and improve their skills throughout their careers. Use of state-licensed PEs would assure EPA and state agencies that only competent, licensed professionals would certify the design plans and subsequent revisions.

There is ample federal and state regulatory precedent for use of licensed PEs to prepare, review and certify regulatory documents. For example, under the Federal Spill Prevention Control and Countermeasures (SPCC) program, preparation of the SPCC Plan is the responsibility of the facility owner or operator, or an engineer or consultant may prepare the plan, but a registered PE must certify the plan. Facilities that store less than 10,000 gallons of oil, may qualify to self-certify their SPCC Plan. By certifying a facility’s SPCC Plan, the Professional Engineer, having examined the facility, attests that:

1. (s)he is familiar with the requirements of Part 112;
2. the engineer or their agent has visited and examined the facility;
3. the Plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards, and with the requirements of Part 112;
4. procedures for required inspections and testing have been established; and
5. the Plan is adequate for the facility.

Another federal example is EPA’s Renewable Fuel Standard program. Before a facility may earn program credits (renewable identification numbers – RINs) for producing a renewable transportation fuel, a facility must be registered, with its fuel production process, feedstocks and the fuel itself reviewed and certified by a licensed PE in a document submitted to EPA. When fuel producers seek fuel pathway certifications for new renewable fuels, various documents that are included in the process must be prepared and certified by a licensed PE for submission to EPA.

EPA also implements regulatory programs that allow facility owners to self-certify regulatory documents. For example, the federal Underground Storage Tank (UST) program allows facility owners to self-certify and notify the Agency that an underground storage tank has been properly installed by using a qualified installer who follows prescribed industry codes. Several highly successful state voluntary cleanup programs in Illinois, Ohio and Pennsylvania allow site owners to self-certify corrective action projects by submitting Site Investigation, Remedial Objectives, Remedial Action and Remedial Action Completion Reports all certified by a licensed PE.

Of particular relevance to EPA’s request for input on third-party verification programs in the ANPRM, the Agency cited a report by Lesley McAllister entitled “Third-Party Programs to Address Regulatory Compliance.”[[1]](#footnote-2) In her report, Ms. McAllister recommends “Agencies that are considering third-party compliance assessment programs to achieve regulatory goals should compare a third-party approach with direct governmental compliance assessment and with requiring regulated entities to make a self-declaration of compliance.”[[2]](#footnote-3) With respect to this issue, the report highlights the work of an EPA program not cited in the ANPRM: EPA’s GHG Reporting Program. After reviewing several options with respect to the GHGRP, EPA decided not to use third-party verification due to the significant costs associated with “developing the program; approving third parties and training them; ensuring that conflicts of interest were not present; and performing ongoing oversight. The report also observed that, even with third-party certification, the EPA would probably need to develop specialized software to receive and review the data and accompany third parties on site visits. In EPA’s decision not to require third-party verification, EPA also emphasized that the activities necessary to set up a third-party program would ‘slow down implementation of the [greenhouse gas reporting] rule.’”[[3]](#footnote-4)

Based on our review of EPA’s approach and the supporting memorandum, we conclude that the Agency has failed to show that the specific requirements associated with verifying landfill design plans are amenable to a third-party verification approach. We also note that implementation of a third-party verification system would likely take significant time, and we are concerned that affected landfills could be in compliance jeopardy until the system was in place and working well. In addition, we are concerned that the costs of verification will be significant. A significant number of landfills are municipally-owned. These landfills are chronically under-funded and may be unable to pay for required verification services.

While the Agency stated in the ANPRM that that “utilizing a third-party certification program could help to standardize and expedite design plan reviews,”[[4]](#footnote-5) we are not confident that this statement is accurate. EPA has not yet succeeded in standardizing the approaches taken by states with respect to design plan approvals and many other issues. We suspect that it may be even more difficult for EPA to ensure the consistent application of an objective process by a large number of the potential future verifiers, particularly as EPA is seeking to out-source the verification of design plans, which are site-specific and very diverse across the country.

While we agree that a third-party reviewer system could reduce the burden and backlog experienced by reviewing agencies, we are concerned that oversight and implementation of a third-party certification system could itself be administratively burdensome and costly, and will simply add another layer of review to an already burdened process. Our members have experienced difficulties with third party verification programs in the context of carbon offset and greenhouse gas reporting rules. One specific concern is cost. Experience has shown that the cost of the verification service is often more than the initial cost of developing the plan. Thus, requiring separate third-party verification could more than double the cost of design plan development without adding value. For example, in the context of commenting on EPA’s Greenhouse Gas Reporting Rule in 2009, one member estimated a total annual cost of $500,000 for third party verification services. In fact, third party verification costs range from $4,500 - $10,000 per site and per report. Interestingly, in March of 2015, Governor Baker of Massachusetts issued an executive order requiring review of all regulations and elimination of unnecessary requirements that add no value. In response to the order, the Massachusetts Department of Environmental Protection no longer requires third-party verification of GHG emissions reports.

For these reasons, we believe that EPA should abandon the idea of third-party verification for design plans. As noted herein, the current design plan, approval system is not effective, and provides little value or compliance assistance to regulated landfills. A self-implementing process would relieve administrative burdens for implementing agencies and provide compliance assurance to affected facilities. As an example, EPA has acknowledged in the context of the Standards of Performance for Petroleum Refineries (40 C.F.R. Part 60, Subpart Ja) that the burden associated with a formalized review process for flare management plans is not warranted. Instead, while submittal and periodic update of the plan is required, and the plan must be followed, formal approval of the plan is not required. “Rather, the rule specifies elements of the plan that need to be addressed in order for the plan to be considered adequate and provides an opportunity for a delegated authority to find the plan not adequate if they choose to do so.”77 Fed. Reg. 56422, 56446 (September 12, 2012). PE certification of plans and plan revisions would provide additional assurance to agencies. WM requests that EPA consider this type of approach in both Subpart XXX and Subpart Cf. We believe that this approach will adequately ensure compliance with the regulatory goal of well-designed and well-operated collection and control systems, as well as significantly reduce burdens associated with delayed and inconsistent approaches by reviewing agencies.

**Landfill Gas Treatment**

We support EPA’s proposed definition of treatment system. As we stated in previous comments (include footnote here to incorporate respective organization comment document), and EPA recognizes in this rulemaking, gas treatment is dictated by the intended use of the treated gas. There are many types of beneficial use that require varying degrees of landfill gas treatment. The broad definition will underpin the success of current and future beneficial use projects.

We support EPA’s proposed requirement to prepare a treatment system monitoring plan in place of the previously proposed numeric values and continuous monitoring and recordkeeping requirements (80 FR 52157). This flexibility will minimize cost and retain existing and promote future beneficial use projects. The beneficial use projects that produce renewable energy will be critical to the success of state Clean Power Plans. State Clean Power Plans may rely on renewable energy as part of Building Block three and 29 states currently recognize landfill gas as renewable in Renewable Portfolio Standards (RPS).

*Treatment system monitoring plan*

However, we do not agree that agency approval of the monitoring plan is warranted or justified. As we stated in our previous comments (add footnote to reference docket ID No. xxxxx), treatment systems are closed loop systems that process LFG for subsequent beneficial use; a LFG treatment system is not a control device and emission limits do not apply. The treated landfill gas would still be required to be routed to a control device that may fall under another subpart of the CAA.

Proposed Agency approval of the treatment system monitoring plan is inconsistent with recent agency action. For example, EPA finalized revisions to the NESHAP rules for Brick and Structural Clay Manufacturing and Clay Ceramics Manufacturing September 24, 2015. Both rules require sources to “prepare, implement and revise as necessary” an operation, maintenance and monitoring (OM&M) plan. The OM&M plans “*must be available for inspection by the delegated authority upon request*” (emphasis added, see § 63.8420 (c) and § 63.8425 (a); § 63.8570 (c) and § 63.8575 (a)). Both NESHAPs (40 CFR 63 Subparts JJJJJ and KKKKK) do not require agency approval of the OM&M Plan, yet these sources are subject to specific emission limits and continuous emissions monitoring. The LFG treatment systems are not subject to emission limits or continuous emissions monitoring, yet EPA proposes to require agency approval which is more stringent than what EPA has promulgated for sources with HAP emission limits and continuous emissions monitoring requirements.

As another example, the Part 98 GHG Reporting Rules require a facility to prepare, follow and maintain a GHG Monitoring Plan for agency inspection if requested; the rule does not require agency approval. Part 63 Subpart AAAA requires a SSM Plan be prepared and maintained for agency inspection if requested.

The requirement to submit the treatment system monitoring plan for agency approval – as part of the GCCS Design Plan - is unwarranted and creates new burden for the agencies, especially since the treatment systems are not control devices, are enclosed systems with no emissions and do not have prescribed emission limits. The requirement to prepare a plan and maintain a copy for agency inspection is sufficient.

*Bypass*

We request EPA clarify what it means by “bypass” as it relates to LFG flare or LFG treatment system operations. For typical industrial operations **(we can footnote the Brick MACT and refinery MACT rule citations – see text below)**, bypass means diverting contaminants from the air pollution control device to the atmosphere. For Landfill GCCS operations there is no bypass of the air pollution control device (open flare, combustion device, treatment system). There may be bypass of one control device *to route landfill gas to another control device or to a treatment system*, but this is part of an *enclosed loop system with no bypass to atmosphere*. There is no design or operation of bypass to atmosphere of landfill gas, therefore the requirement to monitor bypass flow is irrelevant and unnecessary. See **§63.8420 (d) and Table 2 of the final Brick NESHAP Rule, 40 CFR 63 Subpart JJJJJ):**

*(d) If you own or operate an affected kiln that is subject to the emission limits specified in Table 1 to this subpart and must perform routine maintenance on the control device for that kiln, you may bypass the kiln control device and continue operating the kiln subject to the alternative standard established in this paragraph upon approval by the Administrator and provided you satisfy the conditions listed in paragraphs (d)(1) through (5) of this section..*

**Table 2 to Subpart JJJJJ of Part 63--Operating Limits**

|  |  |
| --- | --- |
| ***For each...*** | ***You must...*** |
| *1. Tunnel kiln equipped with a DLA.* | *a. Maintain the average pressure drop across the DLA for each 3-hour block period at or above the average pressure drop established during the HF/HCl/Cl2 performance test; or, if you are monitoring the bypass stack damper position, initiate corrective action within 1 hour after the bypass damper is opened allowing the kiln exhaust gas to bypass the DLA and complete corrective action in accordance with your OM&M plan* |

Proposed Refinery MACT 1 rule (CC and UUU) June 30, 2014 Federal Register page 36912 - the final rule is at OMB review):

*“For a closed vent system containing bypass lines that can divert the stream away from the APCD to the atmosphere…”*

Only if and when true bypass of the control device could occur should the owner/operator be subject to the monitoring and inspection provisions. We recommend EPA revise Cf and XXX language to be consistent with the current language in Subpart WWW, as follows:

A device that records flow to or bypass of the flare. The owner or operator must **either**:

(1) Install, calibrate, and maintain a gas flow rate measuring device that must record the flow to the control device at least every 15 minutes; ~~and~~ **or**

*Flaring treated landfill gas*

We are confused why EPA says combustion of treated gas in a flare is not allowed but then states if flares are used they must meet the flare requirements. See § 60.33f(c)(3). In some cases, the treatment system may be installed prior to the delivery piping to the flare and intended beneficial end use. We do not believe EPA’s intent is to prohibit treated gas from being burned in a flare or to exempt flares from operational requirements. We therefore recommend EPA revise the rule text to read as follows.

*(3) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air or combustion in a flare ~~is not allowed under this option. (If flares are used, they~~ must meet the requirements in paragraphs (c)(1) or (c)(2) of this section.~~)~~*

**Conclusion**

The NWRA and SWANA appreciate your consideration of these comments and our requested revisions to the EPA’s proposal. Should you have any questions about these comments, please call Anne Germain, Director of Waste & Recycling Technology for NWRA, at 202-364-3724 or e-mail her at [agermain@wasterecycling.org](mailto:agermain@wasterecycling.org). You may also call Jesse Maxwell, Advocacy & eLearning Program Manager for SWANA, at 240-494-2237 or e-mail him at [jmaxwell@swana.org](mailto:jmaxwell@swana.org).

Very truly yours,

Sharon H. Kneiss David Biderman

President & CEO Executive Director & CEO

National Waste & Recycling Association Solid Waste Association of North America

Other EPA requesting comments on:

* Addressing **wet landfills** & whether revisions to the k value for wet landfills would require changes to the Lo parameter
* Using a portable gas composition analyzer as acceptable alternative to Method 3A or 3C. – Landtec letter
* Whether open flares can achieve 98% destruction efficiency - reiterate
* Whether there are opportunities to incentivize the use of landfill gas for energy production rather than flaring – production tax credits…
* Other compliance flexibilities to better promote the use of GCCS BMPs – organics diversion?
  + Structure the guidelines to credit organics diversion
  + What, if any, role organics diversion policies or measures could play in an approvable state plan
* Whether the regulation should require that the GCCS design plan contain a description of early gas collection measures or BMPs
* Whether the monitoring in the rule should e strengthened to require GCCS to be expanded in a site-specific manner as long as SEM limits in all areas of landfill were maintained at all times.
* Whether an NMOC threshold higher that 34 may be appropriate for all, or a subset of existing landfills
* Streamline design plan submission and approval
* Whether a level between 200 and 500 ppm is appropriate
* Whether landfills should provide notification when conducting Tier 4
* Whether it is technically feasible to prevent free venting of LFG by closing all valves within 1 hour – unless malfunction….data might look like a couple of minutes of free venting… as flares cool down…lag time…
* Alternative ways in which emission limit could be complied with when the control device malfunctions - no
* SC - Non-CO2 GHGs? - Niki
* Ozone health impacts
* Corrective action timeline – 60 days appropriate for repairs?
* Whether wet landfills not subject to AAAA should be subject to different schedules for installing and expanding their GCCS? – Roger/Terry
* Defining wet, but not bioreactor landfills
* adding criteria for when an affected source must update its design plan – add wells? But not approval – Matt?
* clarifying when landfill owners or operators must submit corrective action timeline requests
* update several definitions in the Emission Guidelines - Niki
* proposing two specific compliance flexibilities in the Emission Guidelines to encourage wider adoption of organics diversion and GCCS Best Management Practices (BMPs) for emission reductions at landfills. These compliance flexibilities are discussed in sections VI.B (wellhead monitoring) and VII.A (Tier 4 emission threshold determination) of this preamble.

1. USEPA ANPRM, footnote 94, p. 100 [↑](#footnote-ref-2)
2. Report, p. 59-60 [↑](#footnote-ref-3)
3. Report, p. 59-60 [↑](#footnote-ref-4)
4. 79 Fed. Reg. at 41790 [↑](#footnote-ref-5)