June 9, 2009

Via Electronic Transmission: a-and-r-Docket@epa.gov
Docket ID No. EPA-HQ-OAR-2008-0508

RE: Mandatory Reporting of Greenhouse Gases**;** Docket ID No. EPA-HQ-OAR-2008-0508
(Fed. Reg. Vol. 74 No. 68, April 10, 2009)

Dear Sir or Madam:

The Solid Waste Association of North America (SWANA) is pleased to offer the following comments in response to the above-referenced U.S. Environmental Protection Agency Proposed Rulemaking regarding the mandatory reporting of GHGs. SWANA is a not-for-profit professional association with over 8,000 members from both the public and private sectors of the solid waste management field. Our mission is to advance the practice of environmentally and economically sound management of municipal solid waste (MSW) in North America. Our members work at landfills and waste-to-energy facilities, both of which would be affected by this proposed rulemaking.

SWANA has some concerns with specific language in the proposed rulemaking that may create unnecessarily burdensome requirements or contribute to inaccurate reporting of emissions. We are especially concerned with the start date of the reporting as well as the requirements for continuous monitoring of emissions. SWANA believes that use of more streamlined approaches will yield an accurate inventory. We strongly believe that a January 2010 start date for this requirement is too soon for many landfills and WTE operations to implement these new reporting protocols. Bear in mind that many of the effected facilities are already dealing with a multitude of regulations. This additional burden will take time to implement. The following are our full comments in regards to this proposed ruling. Our comments are divided into preamble comments and general comments.

Preamble Comments

Section III.C - Stationary Sources. (Preamble, page 16461)

Per Subpart 98.340, landfills must report CO2, methane, and N2O emissions resulting from the use of supplemental fuels. Many older landfills use supplemental fuels only as pilot gas for landfill gas flare operations. This pilot gas quantity is a very small amount when compared to the methane flared in the landfill gas. To minimize the reporting and documentation burden landfills only using supplemental fuel as a pilot gas for flare operations should be exempt from reporting or a “de minimus” reporting level of pilot gas should be allowed in the rule.

Section IV.B - Electricity Purchases. (Preamble, page 16473 & 16479)

We support the current proposal that reporting of electricity purchases or associated indirect emissions from electricity purchases is not required (Option 1). We believe that the best source of information for indirect GHG emissions is the data from the utility companies.

In the preamble, EPA indicates that their preferred approach is to require reporting of electricity purchases for those facilities that would be required to report emissions (Option 2). We believe that requiring additional reporting on electricity purchases does not provide significant enhancements to the data and as described above, creates unnecessary regulatory burden for operators, many of whom are local governments that operate on very limited budgets. The GHG emissions for electrical usage by landfills is very low compared to the overall emissions.

Section IV.E – Reporting Year. (Preamble, page (16470)

The proposed requirement to begin collecting data on January 1, 2010 may be appropriate for industries who are already reporting on other air quality emissions. However, it is too early for many facility operators who will need to train staff, and install new monitoring equipment, etc. SWANA recommends that EPA have a start date of January 1, 2011 with this first year constituting a phase-in period to establish and confirm sampling and analysis protocols, and January 1, 2012 the date when inventories will bear the full scrutiny of EPA. This is the approach that has been taken in the California AB-32 program.

Secondly, WTE facilities must start sampling and testing CO2 for biogenic and non-biogenic fractions starting in 2010. This may not provide sufficient time for all facilities to develop procedures and purchase and install the hardware needed for the sampling. It is our recommendation that this part of the reporting begin with the 2012 reporting year.

Section IV.J - Verification. (Preamble, page 16476)

We support the proposal to allow self certification with EPA verification of reporting data (Option 3).

This approach provides reliable data management that is consistent with EPA's long-established approach to existing air quality reporting requirements. This approach offers efficient data collection and reporting that can be easily coordinated with existing reporting requirements at many of the facilities affected by this rule.

Self certification with 3rd Party verification (Option 2) creates unnecessary burden on the regulated community and is inconsistent with other EPA programs. Furthermore, it is unnecessary for the vast majority of facilities that will never be involved in a carbon trading program.

Section V.C.1 - Emergency Generators and Portable Equipment. (Preamble page16480)

We support the exemption for portable equipment and generating units designated as emergency generators in a permit issued by a state or local air pollution control agency.

Section V.HH – Landfills. (Preamble, page 16557)

Proposed Monitoring Methods – Continuous Monitoring Equipment

The use of continuous monitoring equipment is an unnecessary expense and burden for many landfills. EPA should not require landfills with gas collection systems to continuously measure CH4 flow and concentration. The standard operating procedure at many landfills with gas collection systems is to collect monthly CH4 flow and concentration data at the flare. Landfill gas generation does not vary significantly over time. In addition, operating experience with landfills in an arid environment shows that gas flow and concentration vary even less over time than the more typical landfill operations. Therefore, SWANA recommends monthly monitoring using a GEM2000 or an equivalent field monitoring device for parameters such as CH4 flow and concentration.

Further elaborating on this point, for the reporting purposes of this rule the increased level of accuracy garnered by requiring continuous monitoring equipment is not necessary and does not justify the increased monitoring costs, calculation and reporting effort. The Inlet temperature, pressure, and methane composition, for instance, are stable enough that landfill owners should not be required to install continuous monitors and recorders for these parameters but should be able to obtain and report this data on a reduced frequency, such as monthly. These parameters are not required under current landfill regulation nor do they add significant accuracy to the emissions calculations needed for the report. The cost of adding continuous monitoring devices is significant and must also include installation, maintenance, and calibration costs. For landfill owners with more than one landfill or with multiple flares at each landfill the costs increase rapidly.

Section VII.C - Enforcement. (Preamble, page 16595)

Comment: We are concerned about the stringent enforcement requirements, as written in the proposed regulation. The regulation does not distinguish between minor offenses, such as reporting or calculations errors, and major violations, such as knowingly falsifying data. The proposal simply states that facilities that do not comply with the reporting requirements could trigger a CAA violation. In any reporting system, many instances of human error may occur. Therefore, EPA needs to establish an enforcement system that distinguishes between minor and major violations, and allow for at least a one year period for facilities to phase-in their monitoring protocols, without the fear of penalty.

General Comments

Reporting Threshold for WTE: SWANA believes the threshold applied to WTE facilities for Tier 4 reporting must be consistent with the reporting threshold applied to other stationary fuel combustion sources. Tier 2 calculations may be used for stationary combustion units where the maximum rated heat input capacity is 250 mmBtu/hr or less; however, a different threshold of 250 tons / day is applied to units that combust MSW. Based on a nominal heat content of 5,000 Btu / lb, the 250 tons / day threshold is equivalent to 104 mmBtu/hr, less than half the standard applied to other stationary combustion units. Conversely, a 250 mmBtu/hr threshold applied to nominal MSW would translate into a mass rate threshold of approximately 600 tons / day.

According to EPA's most recent national GHG inventory (Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007, April 2009) WTE facilities emit very small amounts of GHG relative to other electricity producing sources. Of total CO2e emissions from the Combustion Source sector in EPA's proposed reporting rule, waste-to-energy facilities account for only 0.55 percent.

Unless a facility is already equipped with both a stack gas volumetric flow rate monitor and a CO2 CEM, Tier 4 reporting should not be required. Instead facilities should be allowed to use the Tier 2 reporting method. Installation of these additional reporting methods will not extensively improve the accuracy of the data reported, in a manner in which to justify the substantial additional costs. SWANA requests consistency amongst all the stationary fuel combustion sources and recommends that WTE be allowed to use the Tier 2 method to calculate their emissions regardless of tons per day received.

Reporting of Biogenic Emissions: We support the separate reporting of biogenic emissions, as long as these emissions are not included in the total CO2 emissions data.

Biogenic emissions from flares are not required to be reported according to the preamble; however SWANA recommends that this also be stated specifically in the rule itself.

Clarification of Tier 3 Method for WTE: The Tier 3 methodology requires monthly direct measurements of fuel carbon content, which would require extremely large samples in order to be representative for MSW and is not technically feasible for WTE operations. As the rule is currently written WTE facilities without monitors are only given the option of Tier 3 for 2010, but Tier 2 is more appropriate for WTE facilities. We recommend that the Tier 2 method be used by all WTE operations.

Proposed Monitoring Methods: SWANA has three comments with regard to the proposed monitoring methods. First, as a general comment, the proposed reporting rule is an additional regulation and reporting protocol for solid waste operations which are already reporting emissions data on an annual basis for a number of regulatory programs, including existing climate programs and registries. More integration and coordination is needed between this program and other similar programs throughout the United States so that the burden of additional reporting and monitoring may be reduced.

Second, we believe that landfill gas generation equations proposed to be used for emissions reporting overstate the emissions from arid landfills. This is based on observations resulting from the methane monitoring currently required of landfills subject to the Federal CAA Title V air program. Landfills regulated under NSPS must perform quarterly surface methane monitoring. Data from these monitoring events for arid landfills indicate that surface emissions are well below the emissions standard required by regulation; however calculations using the equations in the proposed rule show that the landfills in arid regions would have significant emissions. These high calculated emissions rates are not consistent with those observed in the field during surface methane monitoring events. As such the mandatory reporting rule must allow site-specific methods be used in place of these default methods and equations.

As a third comment, many WTE facilities would have to install and maintain new continuous analyzers to monitor their emissions. While some already perform this type of monitoring, many do not and would have to purchase additional analyzers for stack flow and CO2 measurement. For all facilities including those with monitors, there is significant work involved in developing procedures and implementing new data processing methods. Because of these additional

financial impacts on facilities, especially in these tough economic times, and the technical burdens to existing staff, we reiterate our request for EPA to extend the reporting start date from January 2010 to January 2011 and allow WTE facilities to use the Tier 2 method to calculate their emissions.

Data Reporting Requirements: The proposed rule does not have a provision for landfills to be removed from reporting when emissions fall below the 25,000 tons CO2e reporting trigger. Many older small landfills with declining GHG emissions will with time drop below the 25,000 tons CO2e. These landfills do not have a reasonable expectation that emissions will increase once they have declined below the 25,000 tons/year level. Therefore, the regulation should allow owners to cease reporting on landfills that drop below the reporting level. We believe EPA should adopt similar language to the CARB AB-32 reporting program which allows facilities that drop below the threshold for three years to no longer be required to report.

Landfills - Low Emissions from Old Landfills: We recommend that the rule be revised to exclude as a "de minimus" closed landfills for which there is little or no available data concerning emissions, waste types, areal extent or depth, and are unlikely to be a significant source of CO2e due to the landfills age, size, or probable waste characteristics.

In many areas of the country the number of landfills that ceased operations over 30 years ago exceeds the number of landfills that are currently operating or were closed after 1980 under regulatory requirements that include post-closure monitoring and gas collection systems. These older landfills typically had local service areas that were much smaller than the service area of the modern regional municipal solid waste landfills, and consequently are relatively small in terms of waste volume. They often contain a mixture of inert material, construction debris and municipal solid wastes, but the organic wastes capable of decomposing to form CO2e gases have had 30 or more years to do so. Today these older sites are often controlled by owners who have minimal knowledge of the characteristics of the wastes, and represent a variety of land uses, including vacant land, marginal industrial use such as open storage or auto salvage yards, park and recreational use, parking lots, and occasionally even redevelopment to commercial or residential use.

It may be reasonable to assume that the majority of these smaller, older landfills are past their period of peak methane production and do not produce GHG emissions exceeding the proposed threshold of 25,000 metric tons of CO2e. However, in the absence of actual monitoring data or reliable information about waste quantities from which to estimate the CO2e produced from such a landfill, the site owner may be faced with significant expenditures for site investigation just to conclusively demonstrate the veracity of the assumption that their site is not subject to the proposed rule.

By not including "de minimus" exclusion criteria, the proposed rule creates an unreasonable hardship on the current owners of many sites that clearly should be excluded, following the logic used to set the proposed threshold. We recommend that EPA develop such criteria, particularly landfill age and size, to exclude these older sites. For example, the CARB landfill methane rule excludes landfills older than 30 years since closure from compliance with the rule.

Additional Comments

In addition to the above comments SWANA would also like to make the following comments which represent a summary of comments made by NSWMA in their June 4, 2009 letter.

Reporting Vehicle Emissions

EPA's proposal to receive emissions data from vehicle and engine manufacturers and transportation fuel providers is the most effective way to receive accurate information regarding fleet emissions. Tracking CH4 and nitrous oxide requires a facility to know the make and model year of each vehicle and that vehicle's engine in order to make the necessary calculations. Given the large fleets that many landfills maintain and continually turnover, the costs associated with tracking this data will be great and will most likely not aid EPA in writing additional climate change regulations.

Responsible Reporting Party for Landfill Gas Emissions

We request clarification of who is responsible for reporting greenhouse gas emissions when all or portions of the landfill gas collection and control and destruction equipment (e.g., flare, turbine, reciprocating internal combustion engine) are not owned by the same entity.

Landfill Gas Collection Efficiency and Methane Oxidation in Soils

SWANA believes that the EPA should use default values for landfill gas collection efficiency and methane oxidation rates, as established in a landfill industry white paper.[1] The recommended values are shown below:

- 50-70 percent (mid-range default = 60%) for a landfill or portions of a landfill that are under daily soil cover with an active landfill gas collection system installed (note that because of limited test data on daily soil covers, the selected range is based on the opinion of experts involved with the creation and review of this document);
- 54-95 percent (mid-range default = 75%) for a landfill or portions of a landfill that contain an intermediate soil cover with an active landfill gas collection system; and
- 90-99 percent (mid-range default = 95%) for landfills that contain a final soil and geomembrane cover systems with an active landfill gas collection system.

Summary of Methane Oxidation Rates

	Oxidation Rate (standard error) mol m^{-2} d^{-1}	Oxidation Rate (standard error) g m^{-2} d^{-1}	Percent oxidized (standard error)
Organic Covers	3.96 (2.33)	63.6	38 (7)
Clay Cover	3.88 (2.17)	52.1	22 (5)
Sand Cover	6.43 (2.77)	102	55 (9)
Other Mixtures	3.72 (1.27)	59.5	30 (6)
Overall	4.51 (1.0)	72.0 (16)	35 (4)

1. *Current MSW Industry Position and State-of-the-Practice on LFG Collection Efficiency, Methane Oxidation, and Carbon Sequestration in Landfills*, SCS Engineers, Version 2.2, January 2009

Carbon Storage in Landfills

Significant amounts of carbon are stored in landfills thereby being removed from the carbon cycle. SWANA believes that an accurate inventory should account for this carbon sink. We suggested using the following carbon storage values in inventory process:

Summary of Carbon Storage Values	Grass	Leaves	Branches and Wood	Food	Coated Paper, Magazines and 3rd Class Mail	Old Newsprint	Old Corrugated Containers	Office Paper	Municipal Solid Waste (15% moisture)	Municipal Solid Waste (20% moisture)	Municipal Solid Waste (25% moisture)
USEPA Carbon Storage Factor (MTCE/Wet Short Ton Refuse)	0.07	0.25	0.31	0.02	0.23	0.36	0.22	0.04	0.09	0.09	0.08

SWANA appreciates the opportunity to comment on this proposed ruling and looks forward to working with EPA in the future to improve the Mandatory Reporting Rule. If you have any questions please feel free to contact me directly at 301.585.2898 or at jskinner@swana.org.

Respectfully Submitted,

John H. Skinner, Ph.D.
SWANA Executive Director and CEO