

August 14, 2006

EPA Docket Center (EPA/DC)
United States Environmental Protection Agency
U.S. EPA (MD-6102T)
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Re: Comments of the National Association of Clean Water Agencies (NACWA) on U.S. EPA's Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Other Solid Waste Incineration Units: Reconsideration

Attention Docket ID No. EPA-HQ-OAR-2003-0156

Dear Sir or Madam:

These comments are submitted on behalf of the National Association of Clean Water Agencies ("NACWA")¹ in support of the United States Environmental Protection Agency's ("U.S. EPA" or the "Agency") determination that sewage sludge incinerators ("SSIs") are not subject to regulation as other solid waste incineration units ("OSWIs") pursuant to Section 129 of the Clean Air Act ("CAA"). NACWA submits these comments in response to U.S. EPA's June 28, 2006 notice of its reconsideration of, and requests for public comments on, the issue of whether SSIs should be excluded from the CAA § 129 regulations for OSWIs promulgated on December 16, 2005 (the "final OSWI rule").²

While NACWA understands and supports U.S. EPA's efforts to ensure a full opportunity for public comment in its rulemaking process, NACWA respectfully submits that U.S. EPA has already properly determined – after thorough evaluation and analysis – that SSIs are not subject to regulation as OSWIs under CAA § 129. This determination is the result of 10 years of notice and comment rulemaking, judicial challenges and negotiations involving all interested parties. Additional public comment during reconsideration is not expected to generate new information. As such, this process should only serve to reinforce U.S. EPA's decision to exclude SSIs from the final OSWI rule to preserve incineration as a safe, viable, and cost-effective biosolids (or "sewage sludge") management practice consistent with the intent of Congress and U.S. EPA. Accordingly,

¹ NACWA (formerly the Association of Metropolitan Sewerage Agencies or AMSA) represents the interests of nearly 300 publicly owned wastewater treatment agencies or works (POTWs) nationwide. NACWA's members serve the majority of the sewered population in the United States, and collectively treat and reclaim more than 18 billion gallons of wastewater each day.

² See *Standards of Performance for New Stationary Sources and Emissions Guidelines for Existing Sources: Other Solid Waste Incineration Units: Reconsideration*, 71 Fed. Reg. 36726 (June 28, 2006); *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Other Solid Waste Incineration Units; Final Rule*, 70 Fed. Reg. 74870 (Dec. 16, 2005).

NACWA strongly supports U.S. EPA's decision not to include SSIs among the categories of OSWIs regulated under the final OSWI rule.

GENERAL COMMENTS

1. NACWA's Public Agency Members Rely on Incineration as a Safe, Effective, and Federally-Approved Biosolids Management Practice.

NACWA represents the interests of the country's wastewater treatment agencies, true environmental practitioners that serve the majority of the sewered population in the United States, and collectively treat and reclaim more than 18 billion gallons of wastewater each day. For over thirty-six years, NACWA has maintained a leadership role in issues affecting POTWs, and has been at the forefront of the development and implementation of scientifically-based, technically-sound, and cost-effective environmental programs for protecting public and ecosystem health.

The approximately 16,000 POTWs located in the United States utilize U.S. EPA-approved methods to manage the estimated eight million dry metric tons of biosolids that are generated annually as a product of their wastewater treatment activities. These approved methods include incineration. As U.S. EPA has repeatedly stated, the Agency does not have a position regarding the biosolids management options most suitable for a particular community and, instead, recognizes that such choices are local decisions (subject, of course, to applicable federal and state regulations).³ U.S. EPA also stated that it continues to support incineration (as well as land application, and disposal at municipal solid waste landfills and disposal at surface disposal sites) as a viable option for the management of biosolids.⁴

The incineration of biosolids results in an 80-95% reduction in volume, the effective destruction of pathogens, the degradation of toxic organic compounds, and the production of a sanitary, odorless, and non-hazardous by-product (*i.e.*, ash). Incineration is thus an important, safe, and effective component of the biosolids management practices utilized by POTWs. U.S. EPA has estimated that, in 1998, up to 22% of biosolids generated at POTWs located within the United States is disposed of through incineration.⁵ Using this and other available surveys, NACWA has estimated that 17% of the biosolids generated by U.S. POTWs is presently managed through incineration.

³ Letter from Benjamin H. Grumbles, then Acting Assistant Administrator for the Office of Water, U.S. EPA, to Scott Hassett, Secretary of Wisconsin Department of Natural Resources dated October 7, 2004 (attached hereto at Attachment B) ("we do not believe that EPA should be involved in determining the biosolids management practices most suitable for a particular community"); James A. Hanlon, Director of U.S. EPA Office of Wastewater Management, to Greg Kester, State of Wisconsin Department of Environmental Resources dated September 20, 2004 (attached hereto at Attachment C).

⁴ *See id.*

⁵ *See* United States Environmental Protection Agency, *Biosolids Generation, Use, and Disposal in the United States 26-27* (1999) (EPA No. 530R-99-009), available at www.epa.gov/epaoswer/non-hw/compost/biosolid.pdf.

2. U.S. EPA's Decision Not to Regulate SSIs under CAA § 129 was Reached After Thorough and Complete Evaluation of the Issue.

Given the importance of incineration to NACWA members and the non-member POTWs that practice incineration, NACWA has been an active participant in U.S. EPA's evaluation of the emissions from sewage sludge incineration and the Agency's regulatory actions related to SSIs. During this process, NACWA has cooperatively provided U.S. EPA with data and other information about its members' biosolids incineration activities and the level and types of pollutants released during this process in order to assist the Agency in evaluating the applicability of CAA §§ 129, 112(d), and 112(k). NACWA has also been heavily involved in U.S. EPA's development of the existing regulations under the CAA and Clean Water Act ("CWA") pertaining to emissions from POTWs and SSIs, including 40 CFR Part 503 (Standards for the Disposal of Sewage Sludge) and 40 CFR Part 63, Subpart VVV (National Emissions Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works).

NACWA's history of involvement in this specific regulatory issue spans nearly a decade, beginning with U.S. EPA's notice of its initial intent to include SSIs as a category of OSWIs under CAA § 129(a)(1)(E).⁶ In response to U.S. EPA's notice, NACWA (then named the Association of Metropolitan Sewerage Agencies or AMSA) and many of its individual member agencies provided extensive comments to U.S. EPA, which explained in detail the many reasons that SSIs should not be included as OSWIs under CAA § 129. As discussed in NACWA's March 17, 1997 comment letter, these reasons include:

- (i) The regulation of SSIs under Section 129 is beyond the U.S. EPA's statutory authority;
- (ii) U.S. EPA's contemplated method for establishing Maximum Achievable Control Technology ("MACT") Standards for SSIs under Section 129 would lead to results contrary to the intent of Congress – i.e., it would lead to the elimination of biosolids incineration (a safe, viable and cost-effective sewage sludge management practice);
- (iii) The properties of biosolids are very different from those of hazardous, medical or municipal solid wastes. Thus, SSIs should not be subject to the same type of regulations imposed on these other types of incinerators;
- (iv) The emissions from SSIs are already subject to comprehensive and stringent regulations that are protective of human health and the environment. U.S. EPA has determined that, through compliance with the Part 503 limits and management practices under the CWA, emissions from SSIs do not adversely affect human health and the environment; and
- (v) Accordingly, no environmental benefit will be realized from the expensive and/or infeasible control measures that Section 129 will impose, and there may be a net loss of environmental benefit.

⁶ *New Source Performance Standards and Emissions Guidelines: Sewage Sludge Incinerators*, 62 Fed. Reg. 1868 (Jan. 14, 1997).

NACWA's March 17, 1997 comments to U.S. EPA remain fully applicable to the issues raised by U.S. EPA's current reconsideration of the final OSWI rule, and are accordingly attached hereto as Attachment A and incorporated by reference.

Following the close of the public comment period in 1997, U.S. EPA evaluated NACWA's and other interested parties' comments, conducted legal analysis, and further studied SSIs. This process was completed, in part, through the Industrial Combustion Coordinated Rulemaking Advisory Committee convened under the Federal Advisory Committee Act ("FACA") on which NACWA member agencies participated extensively and provided their technical expertise and experience. During this three year process, NACWA and its member agencies provided U.S. EPA with significant information regarding its members' biosolids incineration activities and the emissions released during this process. After U.S. EPA's full evaluation and consideration of the applicability of Section 129 to SSIs, U.S. EPA properly determined that SSIs should not be regulated under CAA § 129 because they do not constitute "solid waste incineration units." U.S. EPA accordingly announced that decision in its semiannual regulatory agenda for 2000.⁷ U.S. EPA reiterated this determination when it announced in November 2000 that the Agency would complete the CAA § 129 regulations for OSWIs by November 15, 2005, and confirmed the sources that would be covered by the OSWI rulemaking – tellingly, SSIs were not among those sources.⁸

Further demonstrating its intent not to regulate SSIs under CAA § 129, U.S. EPA provided an express exemption from the final CAA § 129 rules promulgated in December 2000 for commercial and industrial solid waste incinerators. SSIs complying with 40 CFR Part 60, Subpart O (Standards of Performance for Sewage Treatment Plants) are expressly excluded from this incinerator rule.⁹

⁷ United States Environmental Protection Agency, *Unified Agenda, April 2000 Agenda of Regulatory and Deregulatory Actions*, 65 Fed. Reg. 23430, 23460 (April 24, 2000). In the regulatory agenda, U.S. EPA expressly stated:

The Agency has decided not to regulate sewage sludge incinerators as a category under Section 129 of the Clean Air Act. Section 129(a)(1) requires the Agency to establish standards under Section 129 for each category of "solid waste incineration units." "Solid waste incineration unit" is defined as a "distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, or motels)." The Agency believes that sewage sludge generated by publicly-owned treatment works (POTWs) and combusted in SSIs is "solid waste." However, this sludge is from a municipal source, and not from "commercial or industrial establishments or the general public." Therefore, *SSIs that combust this sludge are not "solid waste incineration units" and section 129 does not apply to them.* Virtually all of the SSIs that would be candidates for regulation combust sludge from POTWs, and thus are not covered under Section 129.

⁸ *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources for Other Solid Waste Incinerator Units*, 65 Fed. Reg. 67357 (Nov. 9, 2000).

⁹ *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units*, 65 Fed. Reg. 75338, 75351 (Dec. 1, 2000); *see also* 40 CFR § 60.2020(m).

NACWA also intervened in support of U.S. EPA in the litigation initiated by Sierra Club (the petitioner for this reconsideration proceeding) in federal court in 2001 to compel the Agency to issue performance standards and other requirements under CAA § 129 for OSWIs.¹⁰ In the legal filings and discussions in this lawsuit, NACWA again explained that U.S. EPA had already made a determination not to regulate SSIs under CAA § 129 and, therefore, the Agency was not required to promulgate performance standards or other requirements for SSIs under that section of the CAA. While this litigation resulted in a settlement in which U.S. EPA agreed to establish a schedule for promulgating the standards for OSWIs under CAA § 129, the settlement did not alter or affect the Agency's earlier determination that SSIs are not an OSWI category subject to regulation under Section 129(a)(1)(E).

U.S. EPA accordingly did not include SSIs among the categories of OSWIs in the proposed OSWI rule in December 2004 or in the final rule in December 2005.¹¹ U.S. EPA's basis for doing so was clear – the Agency had already made clear that it determined that SSIs were not a category of OSWIs subject to regulation under CAA § 129. While Sierra Club contends in its petition for reconsideration that there was no opportunity to comment on U.S. EPA's decision not to include SSIs in the OSWI proposed rulemaking, EarthJustice did in fact comment on this specific issue in its comment letter on the proposed OSWI rule.¹² In response to EarthJustice's comment, U.S. EPA again articulated that, as early as April 2000, the Agency indicated that it no longer intended to regulate SSIs under CAA § 129 and made clear that it intended to instead regulate SSIs under CAA § 112 to the extent that additional regulation beyond 40 CFR Part 503 is required.¹³

Given this extensive regulatory history, NACWA believes the various rulemaking activities taken by U.S. EPA over the past decade related to this issue firmly establish that U.S. EPA has already thoroughly considered whether SSIs are subject to regulation as OSWIs under CAA 129, and has reasonably and appropriately determined that they are not. Nevertheless, in light of U.S. EPA's reconsideration of this issue, NACWA provides the following additional comments in further support of U.S. EPA's proper determination that SSIs are sufficiently regulated under other regulatory programs.

¹⁰ *Sierra Club v. Whitman et al.*, Case No. 1:01CV01578 (D.D.C.).

¹¹ *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Other Solid Waste Incineration Units: Proposed Rule*, 69 Fed. Reg. 71472 (Dec. 9, 2004); *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Other Solid Waste Incineration Units: Final Rule*, 70 Fed. Reg. 74870 (Dec. 16, 2005).

¹² See Comments of EarthJustice, page 4 (Docket No. EPA-HA-OAR-2003-0156-0070) (Feb. 7, 2005).

¹³ *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Other Solid Waste Incineration (OSWI) Units: Summary of Public Comments and Responses*, pages 57-58 (Docket No. EPA-HQ-OAR-2003-0156-0104).

SPECIFIC COMMENTS

1. U.S. EPA Properly Exercised its Discretion Under the CAA in Reasonably Determining that SSIs Should Not Be Included as a Category of OSWIs in the Final OSWI Rule.

U.S. EPA was well within its discretion to exclude SSIs from the final OSWI rule. Congress expressly directed U.S. EPA to regulate certain categories of incineration enumerated in Sections 129(a)(1)(A)-(D) of the Act. The statute does not define the categories of "other" solid waste incineration units that must be regulated under CAA § 129(a)(1)(E). Therefore, inherent in U.S. EPA's implementation of CAA § 129 is the discretion for the Agency to reasonably define what constitutes the statutorily undefined "other categories" of solid waste incineration units and then determine which of those categories warrant regulation under CAA § 129.

This conclusion is firmly supported by the text of CAA § 129. Notably, while the statute provides firm timelines for the promulgation of standards and other requirements for specifically identified categories of solid waste incinerators (*e.g.*, municipal waste incinerators, commercial and industrial waste incinerators, and hospital and medical waste incinerators), the CAA then only states that U.S. EPA must publish a *schedule* for the promulgation of standards for statutorily undefined "other categories of solid waste incineration units." CAA § 129(a)(1)(E). Thus, CAA § 129 plainly does not require U.S. EPA to promulgate OSWI standards for "every" or "all" possible categories of solid waste incineration units, without any consideration of the size of the incinerator or its impact on public health and the environment.

An interpretation of CAA § 129 that would include all solid waste incineration units is not only inconsistent with the statutory language, but is also illogical because it would require U.S. EPA to expend a tremendous amount of federal Agency resources to develop MACT standards for every category of such units, regardless of the level of actual emissions from the units. Congress simply could not have required this result by merely directing U.S. EPA to publish a schedule for the promulgation of standards applicable to "other categories" of solid waste incineration units.

Moreover, if Congress truly intended such far-reaching consequences, the legislature would have provided that directive to U.S. EPA within the text of CAA § 129(a)(1)(E). In other words, Congress would have instructed U.S. EPA to regulate "all" or "every" other category of solid waste incineration units. To the contrary, such an intent by Congress is noticeably absent in the text of CAA § 129 or its legislative history. As discussed below, the legislative history actually indicates that, in drafting CAA § 129, Congress was primarily concerned with regulating incinerators burning municipal waste. Congress did not direct U.S. EPA to regulate SSIs or any other specific type of incinerators under the OSWI category.

For all of these reasons, Section 129 is clearly ambiguous with respect to the "other categories" of solid waste incineration units that must be regulated under CAA § 129(a)(1)(E). Congress' instructions to the Agency to publish a schedule for the promulgation of standards for "other categories" of solid waste incineration units, therefore, inherently includes the authority for U.S. EPA to reasonably delineate which categories of

incinerators should be subject to regulation as OSWIs. U.S. EPA properly exercised that authority by collecting and analyzing information regarding potential OSWIs and ultimately concluding that SSIs should not be regulated as a category of OSWIs. As discussed below, this determination was a reasonable exercise of U.S. EPA's discretion under the Act.

A. U.S. EPA's Regulation of SSIs under CAA § 112 Prevents the Regulation of SSIs under CAA § 129.

As an initial matter, U.S. EPA can not include SSIs among the categories of OSWIs to be regulated by the final OSWI rule because U.S. EPA has already determined that SSIs are more properly regulated under CAA § 112. Section 129(h)(2) clearly states that: "no solid waste incineration units subject to performance standards under [Sections 129 and 111] shall be subject to standards under [Section 112(d)]." Thus, the language of Section 129(h) makes clear that U.S. EPA's regulation of sources under CAA § 129 or CAA § 112 must be mutually exclusive. As U.S. EPA has rationally concluded, any unit that is subject to CAA § 112 standards can not be subject to CAA § 129.

SSIs are subject to regulation under CAA § 112, as U.S. EPA has already identified SSIs as an area source category under CAA § 112. After initially listing SSIs as a hazardous air pollutant ("HAP") "source category" under CAA § 112, U.S. EPA subsequently determined that the SSI category did not have any sources with the potential to emit HAPs at a level approaching major source levels.¹⁴ In 2002, U.S. EPA then included SSIs as an additional area source category under CAA §§ 112(c)(3) and 112(k)(3)(B)(ii).¹⁵ Since area source categories are subject to the promulgation of emission standards under CAA § 112(d), SSIs may not also be subject to regulation under § 129.

B. Emissions from SSIs and POTWs are Already Stringently Regulated.

U.S. EPA's decision not to regulate SSIs as OSWIs under CAA § 129(a)(1)(E) is also reasonable and appropriate given that emissions from SSIs are already heavily regulated by other Congressionally-mandated, comprehensive regulations that are adequately protective of human health and the environment. Accordingly, no public health or environmental benefit will be realized from the expensive control measures that CAA § 129 would impose if SSIs were erroneously included in the final OSWI rule.

Since 1993, POTWs that practice incineration have been subject to a comprehensive, risk-based program for reducing the potential environmental risks of sewage sludge pursuant to Section 405 of the CWA

¹⁴ See *National Emission Standards for Hazardous Air Pollutants: Revisions of Source Category List under Section 112 of the Clean Air Act*, 67 Fed. Reg. 6521 (Feb. 12, 2002).

¹⁵ See *National Emission Standards for Hazardous Air Pollutants: Revisions of Area Source Category List under Sections 112(c)(3) and 112(k)(3)(B)(ii) of the Clean Air Act*, 67 Fed. Reg. 43112 (June 26, 2002).

and the implementing regulations set forth in 40 CFR Part 503 (Standards for the Use or Disposal of Sewage Sludge). Section 405(d) of the CWA requires EPA to establish numeric limits and management practices that protect public health and the environment from the adverse effects of toxic pollutants in biosolids. Section 405(e) of the CWA prohibits any person from disposing of biosolids from a POTW or other treatment works treating domestic sewage through any use or disposal practice for which regulations have been established pursuant to Section 405, except as in compliance with the Part 503 regulations.

In the Part 503 regulations, U.S. EPA has identified the pollutants in biosolids that may adversely affect public health or the environment and has specified the management practices for the utilization and disposal of biosolids that are protective of public health and the environment. For disposal by incineration, the Part 503 regulations require, among other requirements:

- (i) numerous management practices and general requirements;
- (ii) risk-based, site-specific limits for arsenic, cadmium, chromium, lead, and nickel content in the biosolids incinerated;
- (iii) compliance with National Standards for Hazardous Air Pollutants (NESHAPs) for mercury and beryllium (as discussed below);
- (iv) operational emission limits for total hydrocarbon (THC) or an alternative emission limit for carbon monoxide (CO); and
- (v) monitoring, recordkeeping and reporting requirements.

See 40 CFR Part 503, Subpart E.

Furthermore, in the course of developing the Part 503 regulations, U.S. EPA also proposed to establish requirements for dioxins (including specific congeners of dioxin, dibenzofuran, and coplanar PCBs).¹⁶ However, after evaluating the emissions of dioxins from biosolids incineration, as well as surface disposal and land application, U.S. EPA decided such requirements were not warranted.¹⁷ This decision was based on the results of a comprehensive risk assessment that demonstrated that dioxin levels in biosolids and biosolids incinerator exhaust gases do not pose a significant risk to human health or the environment.¹⁸

As explained in detail in NACWA's 1997 comments (pages 15-17), the numeric emission limits and management practices requirements established under the Part 503 regulations were derived from years of study and evaluation of the potential risks to human health and the environment which could be posed by the

¹⁶ See *Standards for the Use or Disposal of Sewage Sludge: Proposed Rule*, 64 Fed. Reg. 72045 (Dec. 23, 1999).

¹⁷ See *Standards for the Use or Disposal of Sewage Sludge: Final Notice*, 66 Fed. Reg. 66028 (Dec. 21, 2001).

¹⁸ See *id.*

incineration of biosolids. The regulation of SSIs under this existing regime are risk-based standards which were developed to protect human health and the environment from any reasonably anticipated adverse effects from pollutants that may be present in biosolids. As a result, SSIs can clearly demonstrate that the emissions from their units are *not* adversely impacting human health and the environment by demonstrating compliance with the Part 503 requirements. Moreover, the statutory framework of this regime provides for ample means for U.S. EPA to identify and regulate additional concerns if supported by scientific evidence. For example, CWA Section 405 provides for a biennial review process that was specifically established for identifying and regulating any additional pollutants of concern. U.S. EPA has repeatedly emphasized its confidence that the Part 503 regulations are adequately protective of public health and the environment.¹⁹

Additionally, since 1975, U.S. EPA has imposed NESHAPs for mercury and beryllium emissions which apply to certain SSIs. *See* 40 CFR Part 61, Subpart E and C. The mercury NESHAP applies, in relevant part, to any source that incinerates wastewater treatment plant sludge and imposes emission limits for mercury, as well as imposes stack testing, sampling, and monitoring requirements. *See* 40 CFR Part 61, Subpart E. The beryllium NESHAP applies, in relevant part, to incinerators which process beryllium-containing waste and imposes emission limits for beryllium, as well as sampling requirements. *See* 40 CFR Part 61, Subpart C. These NESHAPs are expressly incorporated into the 40 CFR Part 503 requirements for POTWs.

Since 1974, U.S. EPA has also imposed New Source Performance Standards (NSPS) for SSIs under CAA § 111. *See* 40 CFR Part 60, Subpart O. These regulations apply to any incinerator constructed or modified after June 11, 1973 that 1) combusts wastes containing more than 10% sludge (dry basis) produced by municipal sewage treatment plants; or 2) charges more than 1,000 kg (2,205 lbs.) per day municipal sewage sludge (dry basis). *See* 40 CFR § 160.150. Under the existing NSPS for SSIs, regulated incinerators must comply with emission limits for particulate matter and opacity, as well as operational, monitoring, testing and reporting requirements.

Thus, of the eleven pollutants identified in CAA § 129, many are already directly regulated under Parts 503, 60, or 61, including total particulate matter, opacity, lead, cadmium, mercury, and CO (optional, as a surrogate for THC). *See* CAA § 129(a)(4). Additionally, U.S. EPA and NACWA have both also determined that SSIs are only very minor sources of several other of the CAA § 129 pollutants, including dioxins, sulfur dioxide, and hydrogen chloride. NACWA's March 17, 1997 comment letter (pages 13-14) documents in detail many specific examples of existing SSI regulations, or information regarding emissions from SSIs, for each of the pollutants listed in Section 129.

In addition to the federal requirements applicable to SSIs outlined above, public agencies operating SSIs are also required to obtain a Title V operating permit if they are "major sources" as defined by the CAA. Pursuant to 40 CFR Part 403, POTWs additionally implement, through local regulatory authority, pretreatment standards to prevent discharge of pollutants to the POTW that may pass through or interfere with treatment processes. Pretreatment is an effective way to reduce harmful constituents in the biosolids combusted by SSIs.

¹⁹ *See* Letter from James A. Hanlon, Director of U.S. EPA Office of Wastewater Management, to Greg Kester, State of Wisconsin Department of Environmental Resources, dated September 20, 2004 ("EPA believes that 40 CFR Part [503] regulations are protective of public health and the environment and we continue to support biosolids management in full compliance with the Part 503 regulation.") (attached hereto as Attachment C).

States also have authority to regulate and, in fact, do regulate air emissions from SSIs under their respective CAA State Implementation Plans. Together, these federal, state, and local regulations form an existing and effective regulatory scheme for regulating emissions from SSIs. Further regulation of SSIs under Section 129 is not appropriate or necessary for the protection of public health and the environment.

C. Regulation of SSIs under CAA § 129 Would Result in Prohibitive Costs and Only Negligible Beneficial Impacts.

U.S. EPA's decision not to include SSIs among the categories of OSWI covered by the final OSWI rule is also supported by an analysis of costs and benefits. The additional regulatory burdens imposed under CAA § 129 would be substantial to SSI operators, while offering no discernable corresponding benefits. The added costs then imposed upon POTW ratepayers would be considerable, and could potentially lead to the elimination of incineration as a biosolids management option for many communities.

Cost would invariably increase under CAA § 129 as SSI operators face competing MACT standards for pollutants that cannot be simultaneously achieved (e.g., NO_x and CO). For further discussion *see* NACWA's 1997 comment letter (pages 17-19).

An overwhelming cost or regulatory burden on SSIs would be inconsistent with U.S. EPA's declarations that incineration is a safe and acceptable biosolids disposal method. It would also be contrary to the congressional intent expressed in Section 405 of the CWA, in which Congress mandates that U.S. EPA must provide for safe management practices for the use and disposal of biosolids, and not to dictate "preferred" practices and eliminate others. For example, Section 405(e) of the CWA states that "[t]he determination of the manner of disposal or use of sludge is a local determination," as long as the practice is in accordance with U.S. EPA's regulations.

For all of these reasons, NACWA believes that U.S. EPA has properly interpreted CAA § 129, and reasonably exercised its discretion not to regulate SSIs as OSWIs pursuant to CAA § 129(a)(1)(E).

2. U.S. EPA Properly Determined that SSIs are Not "Solid Waste Incineration Units" and, Therefore, Are Not Subject to Regulation Under CAA § 129.

Section 129 of the CAA requires U.S. EPA to develop and adopt new source performance standards and emissions guidelines for "solid waste incineration units." Therefore, the potential scope of incineration units covered by Section 129 is expressly limited by the definition of "solid waste incineration units." In CAA § 129(g)(1), Congress expressly defined this term to mean:

a distinct operating unit of any facility which combusts any solid waste material from any commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels). . . .

CAA § 129(g)(1). As fully explained below (as well as in NACWA's March 17, 1997 comment letter), biosolids generated by POTWs is not a "solid waste," nor is it "from commercial or industrial establishments or the general public." Simply stated, incinerators which combust biosolids from POTWs are not "solid waste incineration units" and do not fall within the scope of U.S. EPA's duty to regulate pursuant to Section 129.

A. Sewage Sludge Is Not from Commercial or Industrial Establishments or the General Public.

As U.S. EPA has previously determined, SSIs are not subject to regulation under CAA § 129 because the biosolids combusted by SSIs are generated at POTWs, rather than from "commercial or industrial establishments or the general public." POTWs are not, contrary to the arguments advanced in petitioner's request for reconsideration, properly characterized as "commercial or industrial establishments." The fact that the sewered population served by a POTW is assessed a monetary rate for the collection and treatment services provided by the POTW does not transform it into a "commercial establishment" within the commonly understood meaning of that term, which must presumably be the meaning intended by Congress in CAA § 129(g)(1). Moreover, the fact that Congress and NACWA refer to POTWs as "plants" or "facilities," or that they refer to their works collectively as an "industry," does not transform POTWs into "industrial establishments" within any reasonable interpretation of the term.

Moreover, the careful phrasing employed by Congress in the definition of "solid waste incineration unit"—"solid waste material *from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels)*"—unambiguously indicates that not every category of incineration units is subject to regulation under CAA § 129. Indeed, if Congress had intended that incinerator units that burn solid waste material from *any* source would be regulated by CAA § 129, it would have simply stated that intention. In other words, Congress would not have added this second phrase which limits the scope of Section 129 to the specific waste sources of "commercial or industrial establishments or the general public." The inclusion of such language by Congress was purposeful; CAA § 129(g)(1) cannot be read in such a manner that would render this limiting language meaningless.

Finally, while untreated domestic sewage may originate at "commercial or industrial establishments or the general public," it is not a solid waste when it comes "from" these establishments. As discussed below, untreated domestic sewage is expressly excluded from the definition of "solid waste." Thus, under CAA § 129(g)(1), SSIs cannot be properly characterized as incinerating a solid waste coming *from* commercial or industrial establishments or the general public. Even if the CAA is deemed ambiguous on this point, *Chevron U.S.A., Inc. v. Natural Resource Defense Council, Inc.*, 467 U.S. 837 (1984), directs that we defer to U.S. EPA's reasonable interpretation of ambiguous statutory terms. Certainly, U.S. EPA's reading of the CAA § 129 as excluding SSIs from Section 129 because the biosolids that they combust are generated at POTWs and do not "come from" commercial or industrial establishments or the general public is a reasonable exercise of Agency discretion.

B. Sewage Sludge Is Not a Solid Waste.

While NACWA acknowledges that U.S. EPA has previously stated that it believes otherwise, NACWA respectfully maintains that the biosolids generated by POTWs and combusted in SSIs is not a "solid waste" for purposes of the definition of "solid waste incineration unit" provided in CAA § 129(g)(1). "Solid waste" is defined in Section 129 of the CAA by reference to the definition of "solid waste" under the Solid Waste Disposal Act (which is generally referred to as the Resource Conservation and Recovery Act or "RCRA").²⁰

RCRA defines "solid waste" as:

any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but *does not include solid or dissolved material in domestic sewage . . .*

RCRA § 1004(27) (emphasis added). Sewage sludge from POTWs is exempt from the definition of "solid waste" as "solid or dissolved material in domestic sewage." This exception is commonly referred to as the "Domestic Sewage Exclusion" under RCRA. In fact, both Congress and U.S. EPA have expressly interpreted the definition of "waste" under RCRA to exclude POTW sewage sludge pursuant to the Domestic Sewage Exclusion.

While the legislative history of Section 129 of the CAA is silent as to the definition of "solid waste" (other than, as discussed below, Congress was primarily concerned with *municipal* solid waste), the Domestic Sewage Exclusion had been written into RCRA for 25 years at the time Congress passed the 1990 CAA Amendment. Accordingly, in incorporating RCRA's definition of "solid waste" in Section 129, Congress was well aware of the Domestic Sewage Exclusion encompassed in the definition of "solid waste."

Moreover, shortly after Congress passed the 1990 CAA, Congress amended RCRA to expand the scope of the Domestic Sewage Exclusion to cover Federally Owned Treatment Works. At the time of passage of this amendment (and after a year of debate and revision), Senator Chafee clearly confirmed Congress' understanding that the Domestic Sewage Exclusion exempts POTW sludge from RCRA regulation:

Sewage treatment plants operated by local governments - POTWs - have a special exemption called the domestic sewage exclusion under RCRA. *If most of the waste received by a POTW is domestic sewage, their sludge and wastewater is exempt from hazardous industrial waste regulation even if they are also receiving hazardous industrial waste through sewer connections.*

138 Cong. Rec. 514755, 514758 (September 23, 1992) (emphasis added). Accordingly, in using the limited definition of "solid waste" under RCRA for purposes of defining the scope of Section 129, Congress was aware that POTW sewage sludge would be excluded from the Section 129(g) definitions, which, in turn, would

²⁰ CAA § 129(g)(6) ("The term 'solid waste' shall have the meaning established by the Administrator pursuant to the Solid Waste Disposal Act.")

exclude regulation of SSIs under Section 129. Express exemption of SSIs under the definition of "Solid Waste Incineration Units" under Section 129 would have been redundant.

U.S. EPA has similarly interpreted the scope of the Domestic Sewage Exclusion to include sewage sludge generated by POTWs. The clearest example of this exclusion of POTW sewage sludge from the definition of "solid waste" under RCRA is found in U.S. EPA's promulgation of a rule to identify and list hazardous wastes for petroleum refinery process wastewaters. In the Preamble to the Final Rule (November 2, 1990), U.S. EPA concluded that POTW sewage sludge falls within the Domestic Sewage Exclusion:

These wastes [P038 and K048 wastes] are being added to the list of [hazardous] wastes . . . in order to regulate sludges generated at wastewater treatment facilities on site at petroleum refineries as well as sludges generated at off-site wastewater treatment facilities.¹⁴

...

¹⁴ It should be noted that if wastewaters generated at petroleum refineries are discharged to a POTW and such wastewaters are mixed with domestic sewage from nonindustrial sources, *the sludges generated in the POTW are covered under the domestic sewage exclusion* and are not included in today's listings.

55 Fed. Reg. 46354, 46364 (November 2, 1990) (emphasis added).

Accordingly both Congress and U.S. EPA interpret the definition of "solid waste" under RCRA to exclude POTW sewage sludge pursuant to the Domestic Sewage Exclusion. Therefore, POTW sewage sludge is not "solid waste" as defined by RCRA, and incinerators which combust POTW sewage sludge do not qualify as "solid waste incineration units" under Section 129.

C. The Legislative History of CAA § 129 Further Indicates that SSIs Were Not Intended To Be Regulated as "Solid Waste Incineration Units."

The legislative history of CAA § 129 is fully consistent with the conclusion that SSIs do not constitute solid waste incineration units. The provisions now codified in Section 129 of the CAA originated in a bill entitled "Municipal Waste Combustion Control Act of 1989," introduced in Congress on January 25, 1989. The express purpose of the proposed legislation was to address the "garbage crisis" facing the nation in the late 1980s - "the unseemly aspects of the growing garbage crisis - garbage washing upon ocean beaches, a garbage barge sailing the Caribbean for weeks in search of a disposal facility."²¹

The bill further explained that Congress' underlying objective was to "establish the needed regulatory program to make *municipal waste incineration* an environmentally sound part of our Nation's waste

²¹ 135 Cong. Rec. S289-01 (Jan. 25, 1989).

management.”²² While subsequent legislative history reveals Congress' concern with other specific, large incinerators other than municipal waste combustors (*e.g.*, medical waste incinerators and industrial incinerators burning waste paper, wood, yard wastes, food wastes, batteries and plastics), Congress did not once mention POTW sewage sludge or SSIs, or even hint that its concerns over the incineration of municipal solid waste extended to the incineration of sewage sludge.

In sum, Congress did not intend SSIs to be subject to Section 129 regulation. While Congress provided U.S. EPA with authority to identify categories of OSWIs, it limited the scope of U.S. EPA's authority in this regard to incinerators which combust “solid waste” as defined under RCRA and only solid waste “from commercial or industrial establishments or the general public.” SSIs do not fall within this definition, and therefore, cannot be regulated under Section 129 of the CAA. The plain language of Section 129, as further validated by the legislative history of CAA § 129, supports no other conclusion.

CONCLUSION

NACWA strongly believes that U.S. EPA has reasonably determined that SSIs are not subject to regulation under CAA § 129 and has, accordingly, properly excluded them from the scope of the final OSWI rule. NACWA urges U.S. EPA to maintain its current determination on this issue, and thanks U.S. EPA for the opportunity to submit comments in support of the Agency's position.

²² 135 Cong. Rec. S556 (Jan. 3, 1989).

NACWA's Comments on EPA Reconsideration of Sewage Sludge Incineration

August 14, 2006

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If you have any questions or require additional information concerning NACWA's position on this issue, please do not hesitate to contact Robert P. Dominak, Co-Chair of NACWA Biosolids Management Committee, at 216-881-6600, or Alexandra Dapolito Dunn, NACWA General Counsel, at 202-833-2672.

Sincerely,

A handwritten signature in black ink that reads "K Kirk". The signature is written in a cursive style with a vertical line to the right of the name.

Ken Kirk
Executive Director

- Attachment A: NACWA's March 17, 1997 comments to U.S. EPA.
- Attachment B: Letter from Benjamin H. Grumbles, Acting Assistant Administrator of U.S. EPA, to Scott Hassett, Secretary of Wisconsin Department of Natural Resources dated October 7, 2004.
- Attachment C: Letter from James A. Hanlon, Director of U.S. EPA Office of Wastewater Management, to Greg Kester, State of Wisconsin Department of Environmental Resources dated September 20, 2004.

ATTACHMENT A

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District, CO

Vice President
Cecil Lue-Hing
Metropolitan Water Reclamation
District of Greater Chicago, IL

Treasurer
Michele M. Plá
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Executive Director
Ken Kirk

Association of
Metropolitan
Sewerage Agencies

March 17, 1997

The Air and Radiation Docket
and Information Center (6102)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

Attn: Docket No. A-96-42

Re: Association of Metropolitan Sewerage Agencies' Comments to January 14, 1997
Notice of Additional Information - U.S. EPA's Intent to Delist Sewage Sludge
(Biosolids) Incinerators from Major Source Classification under Section 112 of
CAA and to List Sewage Sludge Incinerators as Sources Subject to Regulation
under Section 129 of CAA

Dear Sir or Madam:

The Incineration Workgroup of the Association of Metropolitan Sewerage Agencies (AMSA) has completed its review of the United States Environmental Protection Agency's (Agency) "Notice of Additional Information" as published in the Federal Register on January 14, 1997 (62 FR 1868). In the Notice of Additional Information, the Agency declares its intent to delist Sewage Sludge Incinerators (SSIs) from the list of major sources of hazardous air pollutants (HAPs) under Section 112© of the Clean Air Act (CAA) and its intent to list SSIs as Other Solid Waste Incinerators (OSWIs) subject to regulation under Section 129 of the CAA.

AMSA fully understands and supports the Agency's intent to delist SSIs from the Section 112 list of major sources of HAPs since there is substantial evidence that SSIs do not qualify as "major sources" as defined under Section 112. However, AMSA strongly opposes regulation of SSIs under Section 129 of the CAA for the following reasons:

1. The regulation of SSIs under Section 129 is beyond the Agency's statutory authority;

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2. The Agency's contemplated method for establishing Maximum Achievable Control Technology (MACT) Standards for SSIs under Section 129 would lead to results contrary to the intent of Congress - i.e., it would lead to the elimination of sewage sludge incineration (a safe, viable and cost-effective sewage sludge management practice);
3. The properties of sewage sludge are very different from those of hazardous, medical or municipal solid waste. Thus, SSIs should not be subject to the same type of regulations imposed on these other types of incinerators;
4. The emissions from SSIs are already subject to comprehensive and stringent regulations that are protective of human health and the environment. The Agency has determined that, through compliance with the Part 503 limits and management practices, emissions from SSIs do not adversely affect human health and the environment; and,
5. Accordingly, no environmental benefit will be realized from the expensive and/or infeasible control measures that Section 129 will impose, and there may be a net loss of environmental benefit.

I. Incineration of Sewage Sludge

AMSA has over 170 members who own or operate approximately 700 Publicly Owned Treatment Works (POTWs), with members in more than 40 states and the District of Columbia. AMSA's 170 members are not limited to only large public agencies in major metropolitan areas but also include numerous smaller municipalities, with populations as low as 100,000. AMSA members utilize a number of Agency-approved methods, including incineration, to dispose of their sewage sludge in a safe and cost-effective manner.

At the present time, in excess of 20% of AMSA member agencies practice incineration, while the Agency has estimated, based on the 1988 National Sewage Sludge Survey, that approximately 16% of the sewage sludge removed from POTWs located within the United States is incinerated. Given the importance of incineration to AMSA members and the non-member POTWs that practice incineration, AMSA has closely monitored the Agency's actions in regulating SSIs, specifically the Agency's actions under Section 112 of the CAA and Section 405 of the Clean Water Act (CWA).

AMSA strongly disagrees with recent statements attributed to Agency personnel that incineration is not a preferred sewage sludge management option, and that incineration is the most costly means of sewage sludge disposal. This simply is *not* true for a number of communities and wastewater treatment agencies, especially for those agencies located in areas where available landfill space and agricultural application sites are scarce.

During an AMSA Incineration Workgroup meeting, held on January 22, 1997, a considerable number of Workgroup members indicated that due to the large quantity of sludge removed from the wastewater at their POTWs, their cost to incinerate is approximately one-half of the cost of landfilling and/or land

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application.

In addition, a study conducted by the Metropolitan Sewer District of Greater Cincinnati and the consulting firm of Black & Veatch suggests that the regulators' negative perception of incineration as a pollution source is unfounded when compared to other sewage sludge disposal options. Their findings were outlined in a paper entitled "Incineration - The Green Alternative? Comparison of Air Emissions with Other Solids Handling Processes" which was presented at the Water Environment Federation's 1996 Biosolids Management Conference.

AMSA believes that EPA's recent proposed change in direction toward regulating SSIs under Section 129 of the CAA, instead of Section 112, will have a significant *negative* impact on its members and other POTWs that practice incineration, while it will have a *negligible* beneficial impact on human health and the environment, or could even have a negative impact.

II. Standards for the Use and Disposal of Sewage Sludge (40 CFR Part 503)

AMSA is concerned that public and Agency personnel misperception with regards to current regulation of the incineration of sewage sludge is leading the Agency to stray from the comprehensive regulatory framework authorized by Congress under Section 405 of the CWA (above and beyond the historic CAA regulations applicable to all sources) that is directly focused on safe and effective management of sewage sludge, including incineration. Unlike some other types of incinerators, Congress has already mandated comprehensive, stringent regulation aimed specifically at use and disposal of sewage sludge, including incineration.

Since 1993, POTWs that practice incineration have been subject to SSI air emission limits pursuant to Section 405 of the CWA and its implementing regulations under the Agency's Sewage Sludge Disposal Regulation (40 CFR Part 503). For more than four years, these POTWs have dedicated significant time and expenditures to comply with the Part 503 Regulations. These Regulations include (1) numeric emission limits for arsenic, beryllium, cadmium, chromium, lead, mercury and nickel; (2) a Total Hydrocarbon (THC) or alternative carbon monoxide (CO) emission limit; (3) and numerous requirements regarding management practices.

The numeric emission limits and management practices requirements established under the Part 503 Regulations were derived from years of study and evaluation of the potential risks to human health and the environment which could be posed by the incineration of sewage sludge. As more fully detailed below, the regulation of SSIs under this existing regime are risk-based standards which were developed to protect human health and the environment from any reasonably anticipated adverse effects from pollutants that may be present in sewage sludge. *See generally* Section 405(d) of the CWA. As a result, owners/operators of SSIs can clearly demonstrate that the emissions from their units are *not* adversely impacting human health and the environment by demonstrating compliance with the Part 503 limits.

Prior to the promulgation of the Part 503 Regulations, the only emission limits placed directly upon

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SSIs were for total particulate matter and mercury. However, with the promulgation of the Part 503 Regulations and the required air emissions performance testing, the performance of SSIs has been enhanced. For example, the vast majority of AMSA members that practice incineration have confirmed the Agency's initial findings that the emissions of the newly regulated metals from their SSIs could be minimized by limiting the maximum combustion zone temperature, while the emissions of organic compounds can be reduced by increasing the incinerator's exhaust gas temperature, although at a substantial additional cost.

The existing regulatory regime established by Section 405 of the CWA and the implementing Part 503 Regulations is extremely conservative and more than adequately protects human health and the environment from potential adverse affects identified with the disposal of sewage sludge by incineration. The conservative nature of the Part 503 Regulations is exemplified by the fact that the Regulations are based on exposure to the Highly Exposed Individual (HEI) over 70-continuous years.

Moreover, the statutory framework of this regime provides for ample means of identifying and regulating additional concerns if supported by scientific evidence. In particular, Section 405 provides for Round II evaluations and biennial review specifically established for identifying and regulating any additional pollutants of concern. See Section 405 of the CWA. These conclusions are fully supported by the Agency's determinations made in promulgating the Part 503 Regulations. (See Section IV.B).

III. AMSA Supports Delisting of SSIs under Section 112 of the Clean Air Act

AMSA fully supports the Agency's intent to delist SSIs from the categories of major sources subject to Section 112 regulation. AMSA has provided EPA with scientific evidence that SSIs do not qualify as "major sources" as defined under Section 112 (sources that emit more than 10 tons per year (tpy) of any single HAP or 25 tpy of any combination of HAPs).

Section 112 of the CAA requires the Agency to identify and list categories of "major sources" of HAPs, which will then be subject to Maximum Achievable Control Technology (MACT) Standards promulgated for each category. On June 21, 1991, the Agency initially published a draft list of major sources of HAPs which included SSIs. 56 FR 28548. This list was published as final on July 16, 1992, and again identified SSIs as a major source of HAPs. 57 FR 31576.

At the time of the initial listing, SSI operators did not have complete data to evaluate the appropriateness of EPA's classification of SSIs as "major sources." However, upon notice of EPA's decision to regulate POTWs and SSIs under Section 112, AMSA's Air Quality Committee conducted an extensive survey that determined that less than 30 of the 189 listed Hazardous Air Pollutants (HAPs) are found in the influent to POTWs. The Ohio Air Quality Development Authority (AQDA) conducted additional study at two POTWs to determine which of the HAPs detected in the POTW influent were also detected in SSI stack emissions. This data was provided to the Office of Air & Radiation and revealed that 20 or less of the 30 HAPs found in POTW influent were detected in the stack emissions from the sample SSIs.

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AMSA also evaluated the HAP emission data for SSIs contained within *AP-42: Compilation of Air Emission Factors*, and *Toxic Air Pollutant Emission Factors - A Compilation for Selected Air Toxic Compounds and Sources*. While AMSA has not independently verified the data contained in these sources and the Agency has acknowledged that its confidence in some of the emission factors is low, this data used in combination with AMSA's data from the aforementioned studies, yields conservative emission information for a total of 69 of the 189 HAPs. Based on this combined data, the average aggregate emission factor for SSIs is 0.32 pounds of HAPs per dry US ton of sewage sludge incinerated.

Given the conservative 0.32 lb/dry US ton emission rate, a sewage sludge incinerator that burns 50,000 dry US tons per year (an extremely high annual through-put rate) would emit, at most, 8 tons of HAPs per year ($0.32 \text{ lb/ton} \times 50,000 \text{ tons} \div 2,000 \text{ lbs/ton}$), far below the 25 ton per year major source threshold.¹ However, the highest HAPs emission rate in the Ohio AQDA test was 0.071 lbs. per dry ton. Based on this rate, a sewage sludge incinerator that burns 50,000 dry tons per year would emit only approximately 1.78 tons of HAPs per year, less than one-tenth of the threshold. The results of the aforementioned analyses conclusively establish that SSIs do not qualify as "major sources" under section 112 of the CAA.

AMSA believes that the extremely low levels of HAPs being emitted from SSIs are a result of the limited number of HAPs entering the POTWs, the low concentrations of HAPs in wastewater, and the fact that SSIs are subject to the Part 503 Regulations.

First, pursuant to regulatory directives (i.e., the Agency's General and Categorical Pretreatment Regulations) and independent initiatives, POTWs have implemented aggressive pretreatment programs which have focussed on limiting the amount of hazardous materials discharged to the sewers and to POTWs from industrial users. For example, one of the AMSA members has reported that over the last 20 years it has seen a 90% decrease in metals entering its plants due to its aggressive pretreatment program. In addition, the 1988 National Sewage Sludge Survey reveals that the General and Categorical Pretreatment Regulations have been successful.

Second, for compliance with the Part 503 metal limits, owner/operators of sewage sludge incinerators have found that by limiting their maximum combustion zone temperatures, they have been able to minimize metal emissions.

Third, with implementation of practices to control THC from SSI stack emissions to satisfy the Part 503 requirements, SSI operators have effectively controlled the emission levels of HAPs from SSIs. THC emissions correlate with organic emissions, and thus, THC is regulated as a surrogate for controlling the combination of all organic emissions. Accordingly, by controlling the level of THC emissions from SSIs, organic emissions are similarly controlled, including emission of those organics identified as HAPs under

¹ In other words, a POTW would have to incinerate over 150,000 tons per year of sewage sludge to even approach the 25 ton per year threshold ($0.32 \text{ lb/ton} \times 150,000 \text{ tons} \div 2,000 \text{ lbs/ton} = 24 \text{ tpy}$). AMSA is not aware of any POTW with an incineration through-put at this level.

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Section 112(b) of the CAA.

As a result of these efforts, the HAPs emissions from SSIs have already been effectively reduced to levels that are well below the levels which trigger "major source" classification under Section 112.

Based on the foregoing demonstration that SSIs do not qualify as "major sources" under Section 112, AMSA strongly believes that the Agency's decision to delist SSIs from its categories of major sources is scientifically-based, and therefore, an appropriate action. Further, delisting SSIs is consistent with the Agency's past practices in addressing sources originally listed but later determined not to be major sources, as well as the Agency's current strategy for implementing Section 112. Specifically, on June 4, 1996, the Agency published notice of its decision to delist five major source categories (including Chromium Chemicals Manufacturing, Lead Acid Battery Manufacturing, Non-Stainless Steel Manufacturing - Electric Arc Furnace Operation, Stainless Steel Manufacturing - Electric Arc Furnace Operation, and Wood Treatment) and one area source classification (Asbestos Processing) from the original Section 112 list. The Agency's delisting decisions were based on the Agency's own initiative pursuant to authority provided in Section 112(c)(9) of the CAA.

The basis for each of EPA's major source delistings was that "available data no longer support the determination that any major sources are present in each category." EPA further explained that these sources were otherwise regulated under existing regulations. SSIs should be delisted for the same reasons.

The Agency's intent to delist SSIs from Section 112 major source categories is also consistent with the Agency's current strategy in implementing Section 112(c). In its Integrated Air Toxics Strategy, the Agency identifies its overall strategy as identifying priorities for emission reductions, including identifying where regulation is not needed.

Specifically, the Agency explained that "it is important to make use of the available information to insure that [the Agency] is not expending efforts on regulations that are not needed." The Agency further explained that "de-listing source categories" is an important tool "that should be used when justified by information currently available to [the Agency] or made available to [the Agency]."

In conclusion, since currently available scientific evidence supports a determination that SSIs do not qualify as a "major source" of HAPs under Section 112, SSIs should be delisted and should not be subject to MACT Standards under Section 112. The Agency's intent to delist SSIs from major source classification under Section 112 is appropriate.

IV. AMSA Opposes Regulation of SSIs under Section 129 of the CAA

Based on careful and extensive review and analysis, AMSA strongly urges the Agency to reevaluate its recently announced proposal to regulate SSIs under Section 129 of the CAA. While AMSA is not opposed to the regulation of SSIs, it is opposed to regulation of SSIs under Section 129, since such action: (1) is beyond the Agency's statutory authority; (2) is not necessary to protect human health and the environment and

could result in a net loss of these protections; and (3) could lead to results contrary to the intent of Congress that the choice of sludge disposal methods is to be made at the local level, by causing the elimination of sewage sludge incineration -- a safe, viable and cost-effective sewage sludge management option, which has been approved by the Agency.

A. The Agency Lacks Authority to Regulate SSIs under Section 129 of the CAA

Section 129 of the CAA requires EPA to establish "performance standards" and other requirements for each category of "Solid Waste Incineration Units." Section 129(a)(1)(A) of CAA. These standards "shall include emission limitations and other requirements applicable to new units and guidelines . . . and other requirements applicable to existing units." *Id.* The standards "shall reflect the maximum degree of reduction in emissions of air pollutants listed under [the statute] that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in such category." Section 129(a)(2) of the CAA.

AMSA strongly opposes the regulation of SSIs under Section 129 of the CAA. As an initial matter, AMSA disagrees with the Agency's underlying premise for its change in direction in regulating SSIs. The Agency's stated premise is that SSIs are more appropriately regulated under Section 129 than under Section 112. While AMSA recognizes that Section 129(h)(2)² precludes regulation of a source category under both Section 112 and 129, it does not follow that SSIs must or should be regulated under *either* Section 112 *or* Section 129, if there is no basis for such regulation.

SSIs cannot be regulated under Section 129 of the CAA because the Agency lacks statutory authority to include categories that are not within the definitions provided by Congress. Support for this is found in the Agency's own position (at least until recently) that it lacks authority to regulate SSIs under Section 129. Contrary to the Agency's insistence in the January 14, 1997 Notice, the Agency's failure to identify SSIs as a Section 129 source was not a mere "oversight." The Agency has directly addressed the issue of regulation of SSIs under Section 129 on more than one occasion and has expressly concluded that SSIs are not governed under Section 129.

Specifically, the Agency expressed its conclusion that SSIs are not governed under Section 129 in the Preamble to the final initial list of Section 112 major sources, wherein it explained that:

"The Agency interprets section 129(h)(2) to preclude the inclusion on today's list (or any revisions of this list) of solid waste incineration units combusting municipal waste, hospital waste, medical waste, infectious waste, commercial or industrial

² Section 129(h)(2) of the CAA states that "no solid waste incineration unit subject to performance standards under this section [§ 129] and section 7411 of this title [§ 111] shall be subject to standards under section 7412(d) of this title [§ 112]."

waste. The rationale for this is that section 129(a) specifically requires the Agency to promulgate standards for units combusting these particular wastes under section 111 and section 129. *The Agency interprets section 129 as not requiring standards to be promulgated for sewage sludge incineration units under section 129, so these units are included on today's [Section 112] list.*"

57 FR 31576, 31584 (July 16, 1992) (emphasis added). The Agency continued, stating that:

"Several commenters argued that sewage sludge incinerators should not be listed because they are already regulated under CWA and by NSPS and NESHAP's. In response, *the Agency does not consider sewage sludge incineration units to be covered under Section 129, so it has the authority to list and set standards for these units under Section 112. . . .*" *Id.*

EPA reiterated this determination in the February 19, 1993 Preamble to the Final Part 503 Regulations, in which it stated that "[a]t this time, the Administrator has decided that listing [SSIs as a major source] under [§ 112 of the CAA] is required by legislation." 58 FR 9248, 9277. If the Agency, at that time, had determined that SSIs were governed by Section 129, it would have been foreclosed from regulating them under Section 112. *See* Section 129(h)(2). The Agency continued to rely on its determination that SSIs are not governed by Section 129 in its draft and initial listings of Other Solids Waste Incinerators (OSWIs) under Section 129 where it did not list SSIs. *See* 58 FR 31358 (June 2, 1993) and 58 FR 5498 (November 2, 1993).

The Agency's failure to list SSIs as OSWIs regulated under Section 129 was not a mere "oversight," but instead was a rational Agency determination based on the correct statutory interpretation that SSIs do not fall within the scope of Section 129.

1. SSIs Do Not Fall Within the Scope of Section 129 of the CAA

AMSA believes that the Agency's original conclusion was the correct conclusion, and strongly disagrees with the Agency's "reevaluation" set forth in the Notice that "[s]ludge generated by POTWs is a solid waste from the general public, commercial and industrial establishments." As fully explained below, sludge generated by POTWs is neither a "solid waste," nor is it "from the general public, commercial and industrial establishments." Simply stated, incinerators which combust sewage sludge do not fall within the scope of Section 129.

Congress limited the scope of Section 129 in its definition of "solid waste incineration unit" which is defined as:

"a distinct operating unit of any facility which combusts [1] any solid waste material [2] from commercial or industrial establishments or the general public (including

single and multiple residences, hotels, and motels).³

Section 129(g)(1) of the CAA.

If POTW sewage sludge does not satisfy *both* of those requirements, SSIs cannot be regulated under Section 129. POTW sewage sludge does not satisfy either requirement under Section 129:

- (1) Sewage sludge is not a "solid waste," and
- (2) Sewage sludge is not from commercial, industrial or public sources.

a. Sewage Sludge Is Not a Solid Waste

"Solid Waste" is defined in Section 129 of the CAA by reference to the definition of "solid waste" under the Resource Conservation and Recovery Act (RCRA): "The term [] 'solid waste' . . . shall have the meaning[] established by the Administrator pursuant to the Solid Waste Disposal Act [commonly referred to as RCRA]." Section 129(g)(6) of the CAA. RCRA defines "solid waste" as:

"any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but *does not include solid or dissolved material in domestic sewage . . .*"

42 U.S.C. § 6903(27) (emphasis added).

Sewage sludge from POTWs is exempt from the definition of "solid waste" as "solid or dissolved material in domestic sewage." This exception is commonly referred to as the "Domestic Sewage Exclusion" under RCRA. In fact, both Congress and the Agency interpret the definition of "solid waste" under RCRA to exclude POTW sewage sludge pursuant to the Domestic Sewage Exclusion.

³ The definition specifically excludes: (1) incinerators or other units which are Treatment, Storage and Disposal Facilities (TSDFs) under RCRA; (2) materials recovery facilities which combust waste for the primary purpose of recovering metals; (3) "qualifying small power production facilities" and "qualifying cogeneration facilities" which burn homogeneous waste (such as tires or used oil) for the production of electric energy or electric energy and steam or forms of useful energy; and (4) air curtain incinerators, provided that such incinerators burn only wood wastes, yard wastes, and clean lumber. *Id.*

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While the Legislative History of Section 129 of the CAA is silent as to SSIs, the Domestic Sewage Exclusion had been written into the solid waste statute for 25 years at the time Congress passed the 1990 Clean Air Act Amendments (CAAA). Accordingly, in adopting the definition of "solid waste" under RCRA for purposes of Section 129, Congress was well aware of the Domestic Sewage Exclusion encompassed in the definition of "solid waste."

Moreover, shortly after Congress passed the 1990 CAAA, Congress turned to amending the Solid Waste Disposal Act to expand the scope of the Domestic Sewage Exclusion to cover Federally Owned Treatment Works. At the time of passage of this amendment (and after a year of debate and revision), Senator Chafee clearly confirmed Congress' understanding that the Domestic Sewage Exclusion exempts POTW sludge from RCRA regulation:

"Sewage treatment plants operated by local governments - POTWs - have a special exemption called the domestic sewage exclusion under RCRA. If most of the waste received by a POTW is domestic sewage, their *sludge* and wastewater is exempt from hazardous industrial waste regulation even if they are also receiving hazardous industrial waste through sewer connections."

138 Cong. Rec. 514755, 514758 (September 23, 1992) (emphasis added). Accordingly, in using the limited definition of "solid waste" under RCRA for purposes of defining the scope of Section 129, Congress was aware that POTW sewage sludge would be excluded from the Section 129 definitions, which, in turn, would exclude regulation of SSIs under Section 129. Express exemption of SSIs under the definition of "Solid Waste Incineration Units" under Section 129 would have been redundant.

The Agency similarly interprets the scope of the Domestic Sewage Exclusion to include sewage sludge generated by POTWs. The clearest example of the Agency's exclusion of POTW sewage sludge from the definition of "solid waste" under RCRA is found in the Agency's promulgation of a rule to identify and list hazardous wastes for petroleum refinery process wastewaters. In the Preamble to the Final Rule (November 2, 1990), the Agency concludes that POTW sewage sludge falls within the Domestic Sewage Exclusion:

"These wastes [F038 and K048 wastes] are being added to the list of [hazardous] wastes . . . in order to regulate sludges generated at wastewater treatment facilities on site at petroleum refineries as well as sludges generated at off-site wastewater treatment facilities."¹⁴

FN14 "It should be noted that if wastewaters generated at petroleum refineries are discharged to a POTW and such wastewaters are mixed with domestic sewage from nonindustrial sources, *the sludges generated in the POTW are covered under the domestic sewage exclusion* and are not included in today's listings."

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55 FR 46354, 46364 (November 2, 1990) (emphasis added).

As fully supported above, both Congress and the Agency interpret the definition of "solid waste" under RCRA to exclude POTW sewage sludge pursuant to the Domestic Sewage Exclusion. Therefore, POTW sewage sludge is not "solid waste" as defined by RCRA, and incinerators which combust POTW sewage sludge do not qualify as "Solid Waste Incineration Units" under Section 129. Therefore, SSIs cannot be included in the scope of Section 129.

b. Sewage Sludge Is Not from Commercial, Industrial or Public Sources

Not only is sewage sludge not a "solid waste," it is not "from commercial or industrial establishments or the general public" and for that reason, also falls outside the second part of the definition of "Solid Waste Incineration Unit." Instead, sewage sludge is from the publicly owned treatment works at which it is generated. While the untreated domestic sewage may be from the specified sources, *untreated* domestic sewage (as well as the resulting sludge) is irrefutably excluded from the definition of "solid waste" under the Domestic Sewage Exclusion, as supported by EPA's own definition. *See* 40 CFR § 261.4.

Congress' careful phrasing of the definition -- "solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels)" -- strongly indicates that Congress intended that *some* category of incinerators be excluded from Section 129 regulation. If that category is not SSIs, AMSA has been unable to identify any other category which could possibly fall outside the definition.

Congress expressly identified certain categories of incinerators which it deemed to qualify as "Solid Waste Incineration Units," including incinerators which burn municipal garbage, medical wastes, and wastes from industrial and commercial processes. Section 129(a)(1) of the CAA. In addition, Congress gave the Agency authority to identify (and regulate) "other solid waste incinerators."⁴ *Id.* However, Congress did not give EPA unlimited authority to do so. If Congress had meant for Section 129 to apply to any incinerator that receives any sort of solid material, it would have simply stated so -- e.g., Congress would not have added this second phrase which limits the scope of Section 129 to that "from commercial or industrial establishments or the general public," nor would it have incorporated the definition of "solid waste" under RCRA.

2. Congress Intended to Regulate Municipal Waste Incinerators, Not SSIs

It is important to reiterate that the Legislative History of Section 129 is fully consistent with and

⁴ In fact, EPA has identified seven categories of OSWIs: (1) Small Municipal Waste Combustors (<35 mg/d capacity), (2) Residential Incinerators, (3) Agricultural Waste Incinerators, (4) Wood Waste Incinerators, (5) Construction and Demolition Waste Incinerators, (6) Crematories, and (7) Contaminated Soil Treatment Facilities. *See* 58 FR 58498 (November 2, 1993).

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supportive of AMSA's analysis. The provisions now codified in Section 129 of the CAA originated in a bill entitled "Municipal Waste Combustion Control Act of 1989," introduced in Congress on January 25, 1989. The express purpose of the proposed legislation was to address the "garbage crisis" facing the nation in the late 1980s -- "the unseemly aspects of the growing garbage crisis -- garbage washing upon ocean beaches, a garbage barge sailing the Caribbean for weeks in search of a disposal facility." 135 Cong. Rec. S289-01 (January 25, 1989).

It is further explained that Congress' underlying objective was to "establish the needed regulatory program to make *municipal waste incineration* an environmentally sound part of our Nation's waste management. *Id.* Moreover, the origin of the pollutants regulated under Section 129 were those which Congress expressly identified with the incineration of *municipal solid waste* (not POTW sewage sludge) -- "Air pollutants of concern emitted by municipal waste incineration units include dioxin, lead and other heavy metals, sulfur dioxide, acid gases, carbon monoxide, and particulate matter." *Id.* (The initial list of pollutants of concern have remained substantially unchanged under Section 129 -- "particulate matter (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, dioxins and dibenzofurans.")

While the subsequent Legislative History reveals some concern with incinerators other than municipal waste combustors, those concerns of Congress were limited to medical waste incinerators and industrial incinerators burning waste paper, wood, yard wastes, food wastes, batteries and plastics. Importantly, however, the Legislative History of Section 129 does not once even mention POTW sewage sludge or SSIs, nor is there even a hint that Congress' concerns over the incineration of municipal solid waste extended to the incineration of sewage sludge.

Based on the foregoing, Congress did not intend SSIs to be subject to Section 129 regulation. While Congress provided the Agency with authority to identify categories of OSWIs, it limited the Agency's authority in this regard to incinerators which combust "solid waste" as defined under RCRA and only solid waste "from commercial or industrial establishments of the general public." SSIs do not fall within this definition, and therefore, cannot be regulated under Section 129 of the CAA. The statute simply does not provide the Agency with the authority to regulate SSIs under Section 129. Congressional intent supports no other conclusion.

B. Regulation of SSIs under Section 129 Is Not Necessary for the Protection of Public Health and the Environment

AMSA is specifically concerned that the Agency's recent change in direction is premised on public misperception of the protections established by current regulation of SSIs. AMSA's concern was heightened by the Agency's contention in the January 14 Notice of Additional Information that regulation of SSIs under Section 129 is appropriate to "assure the public that the SSI are being operated in a manner that will protect the public health." AMSA strongly disagrees with this contention.

1. SSIs Are Currently Stringently Regulated

As mentioned above, SSIs are currently regulated under Part 503 Regulations, which are risk-based standards (as opposed to technology-based standards imposed by Section 129 of the CAA). In addition, SSIs are subject to numerous other air emission regulations, including New Source Performance Standards for particulate matter and a National Emission Standard for mercury. Moreover, states have authority to regulate and in fact do regulate (where deemed appropriate) air emissions of priority pollutants -- particulate matter, SO₂, CO, NO_x, etc. -- from SSIs through their SIP provisions.

If SSIs were to be regulated under Section 129, the Agency would develop national numerical SSI emission limits (MACT Standards) for particulate matter (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, and dioxin and dibenzofurans. These standards are to be developed based on Maximum Achievable Control Technology (MACT), where emission limits are not less stringent than the average emissions limitation achieved by the best performing 12% of the SSIs in the United States.

These stringent limits are required under Section 129 regardless of whether *any* risks to human health or the environment exist. That is, Section 129 in some cases mandates huge expenditures to address non-existent problems.

As explained above, the pollutants set forth in Section 129 are those pollutants which Congress identified as concerns for municipal waste combustors, not SSIs. Moreover, SSIs are already regulated for a large number of pollutants which have been identified as concerns for SSIs specifically (some of them are the same as and some are different than the Section 129 pollutants), where risk to human health and the environment has been shown. Moreover, if additional restrictions, based on risk-based analyses, are deemed necessary, existing regulatory mechanisms are available.

An analysis of the current stringent regulation of SSIs in conjunction with the Congressional mandate for the 503 Regulations -- to adequately protect public health and the environment -- clearly establishes that further regulation of SSIs under Section 129 is not appropriate or necessary for protection of human health and the environment. Thus, AMSA believes that there is no rationale to subject SSIs to MACT Standards for the aforementioned pollutants.

Examples of existing SSI regulatory requirements for the pollutants listed in Section 129, or information on emissions from SSIs, are as follow:

1. For total particulate matter, all SSIs built after June 1973, or modified since that time, are subject to a New Source Performance Standards of 1.3 pounds of particulate (total) per dry ton of sludge incinerated. 40 CFR Part 60, Subpart O.
2. For fine particulate matter (currently PM₁₀), new or modified sources which are major emitters of PM are subject to stringent technology standards, either Lowest Achievable Emission Rate

(LAER) for non-attainment areas or Best Available Control Technology (BACT) for attainment areas. In addition, most states impose some level of control technology for new but smaller sources of PM (such as "Best Available Technology"). In addition, states can and do impose Reasonably Achievable Control Technology (RACT) Standards for existing sources which are determined to be major contributors of PM in impacted areas.

3. For opacity, states consistently impose limits, typically 20% opacity on a six minute average.
4. For Sulfur Dioxide, new or modified sources which are major emitters of Sulfur Dioxide are subject to stringent technology standards, either LAER for non-attainment areas or BACT for attainment areas. In addition, most states impose some level of control technology for new but smaller sources of Sulfur Dioxide. In addition, states can and do impose RACT Standards for existing sources which are determined to be major contributors of Sulfur Dioxide in impacted areas.
5. Hydrogen Chloride emissions from SSIs, while not regulated, are very small compared to emissions from other industries, and therefore constitute a nominal percentage of the total.
6. For Oxide of Nitrogen (NOx), new or modified sources which are major emitters of NOx are subject to stringent technology standards, either LAER for non-attainment areas or BACT for attainment areas. In addition, most states impose some level of control technology for new but smaller sources of NOx. In addition, states can and do impose RACT Standards for existing sources which are determined to be major contributors of NOx in impacted areas.
7. Carbon Monoxide (CO) has already been reduced by the addition of a THC emission limit under the Part 503 Regulations. In addition, the Agency is allowing CO to be used as a surrogate for THC, under the Part 503 Regulations.
8. The Part 503 Regulations already establish risk-based, site-specific SSI emission limits for cadmium and lead. (The Part 503 Regulations also established site-specific, risk-based limits for arsenic, chromium and nickel.)
9. The Part 503 Regulations require SSI emissions to satisfy the National Emission Standard for Hazardous Air Pollutants (NESHAPs) Standard for Mercury. 40 CFR Part 61, Subpart E.
10. AMSA and its consultant, Cambridge Environmental Inc., have determined through emissions performance testing, that SSIs emit less than 0.08% of the total dioxin/dibenzofurans released to the atmosphere each year, and the Agency concurs that SSIs are a very minor source of dioxin and dibenzofurans.

Clearly, SSIs are subject to comprehensive, stringent regulation. Further regulation under Section 129 is simply not necessary.

2. The Part 503 Regulations Ensure Protection of Public Health and the Environment

In combination, the existing regulations applicable to SSI air emissions, especially the Part 503 Regulations, are more than adequate to "assure the public that SSIs are being operated in a manner that will protect public health." The Part 503 Regulations were promulgated after years of study and evaluation of SSI emissions. As mandated by Congress, the Agency identified those pollutants "which, on the basis of available information on their toxicity, persistence, concentration, mobility or potential for exposure, may be present in sewage sludge in concentrations which may adversely affect public health or the environment." Section 405(d)(2)(A) of the CWA. Also, as mandated by Congress, the numerical emission limits and the management practices required by the Part 503 Regulations "are adequate to protect public health and the environment from any reasonably anticipated adverse effects of each pollutant." Section 405(d)(2)(D) of the CWA.

The Agency complied with these mandates, as it repeatedly assured the public in the Preamble to the Final Part 503 Regulations (February 19, 1993). For example, the Agency describes the Part 503 Regulations as requiring "an unprecedented effort to assess the potential for pollutants in sewage sludge to affect public health and the environment through a number of different routes of exposure." 58 FR at 9248. More directly, the Agency concluded that:

"EPA is confident that the regulations it is promulgating today adequately protect public health and the environment from all reasonably anticipated adverse effects, as required by section 405(d), for several reasons. First, EPA has evaluated its regulations for aggregate national health impact. As explained in more detail below, even given very conservative assumptions that probably overstate exposure, there are virtually no effects when sludge is disposed of on the land or used as a soil conditioner or fertilizer in compliance with these rules. Further, even when sludge is incinerated and the population potentially exposed to the incinerator emissions is greater, the effects are small."

58 FR at 9249 (emphasis added). The Agency continued, explaining that:

"The Agency is comfortable that the regulations promulgated here are adequately protective because most of the effects that these regulations are designed to prevent are largely chronic, not acute ones. Even in the unlikely event that new information dictates reconsideration of some of the determinations on which EPA has based its health conclusions for this rule, there would be no adverse short-term human health consequences since standards to protect against chronic effects are well below acute effects levels."

Id. The Agency expressly concluded that:

"Therefore, the Agency has determined that today's rule meets the statutory directive

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that the standards protect against reasonably anticipated adverse effects of the pollutants.”

Id. at 9252.

In addition, the Agency also used high standards for determining the impact of emissions from sewage sludge incinerators on human health:

“In all cases, EPA used cancer potency values corresponding to an incremental carcinogenic risk level of 1×10^{-4} to evaluate the risk from pollutants found in sewage sludge. (The exposure level of a pollutant associated with a 1×10^{-4} cancer risk implies that one additional cancer case will occur in a population of 10,000 exposed at that level for 70 years.) For purposes of establishing the numerical limits for incinerators promulgated today, EPA did, however, evaluate exposure at different incremental cancer risk levels (i.e., 1×10^{-4} through 1×10^{-6}). In the case of human health, the final limits for pollutants in sewage sludge ensure that the use and disposal of sludge does not result in ambient concentrations of the regulated pollutants that exceed an incremental carcinogenic risk level of 1×10^{-4} .”

Id. at 9254. In addition, for incineration, the metal and THC levels were “designed to ensure that ground level concentrations . . . did not exceed a value associated with protection of human health at a cancer risk level of 10^{-5} . *Id.* at 9266-67. To evaluate exposure, the Agency used an individual living in close proximity to a sewage sludge incinerator and assumed this individual “inhale[d] particulates and gases from the incinerator **24 hours per day, 365 days per year for 70 years.**” *Id.* at 9288 (emphasis added). The Agency further assumed that “this highly exposed individual is located at a point where the highest annual ground level concentration of incinerator emissions occurs.” *Id.* Clearly, the Agency developed the Part 503 standards using a very conservative scenario.

Moreover, the Agency used very conservative assumptions in the risk assessment for sewage sludge incineration, resulting in overstatement of the actual risk:

“. . . the risk assessment for incinerator [sic] included **very conservative assumptions**. These assumptions yielded results that the Agency has concluded probably **overstate the risk** associated with current levels of sewage sludge incinerator organic emissions.

The risk assessment numbers are based on estimations of organic emissions from sewage sludge incinerators. In order to develop these estimations, **a number of very conservative assumptions** were made for both the best *estimate and worst case* scenarios, that probably results in **overstating THC emissions** for purposes of this analysis. These include assuming that *all* organic compounds that were sampled and analyzed for at seven sewage sludge incinerators . . . are present in the organic emissions of 172 POTW incinerators. In fact, the data establish that many of these

compounds (including aldrin/dieldrin and hexachlorobenzene) were not detected at all in the samples. Fifty one percent of the calculated aggregate risk is based on risk associated with three compounds, not found in the sewage sludge samples and that will not be created in the process of combustion. Furthermore, organic compounds not detected in the sampling at concentrations below the detection limits were assigned emission levels that corresponded to the detection limit concentrations. This *overstates* THC emissions because the true level is below the detection limit and may be significantly lower or non-existent. Moreover, organic compounds that were not detected in the samples were still assumed to be emitted by an incinerator. The emission level assigned for these compounds is either the detection limit value or average values based on detection limits for other compounds. Again, this represents an assumption that results in *overstatement of the level of risk*.

After calculating risk associated with sewage sludge incinerator emission for THC using the assumptions discussed above, for its "worst-case" scenario, the aggregate assessment increased these estimates by a factor of 5 to account for organic emissions from the stack that have not been identified or quantified. . . . Consequently, increasing the risk calculations by a factor of five *overstates risk* to the extent that the unaccounted for and unquantified portion of the emissions' stream does not include carcinogenic organics."

Id. at 9306 (emphasis added).

As fully supported above, current regulation of SSIs under the Part 503 Regulations is overly conservative and clearly protective of public health and the environment. Moreover, the statutory framework of this regime establishes two separate means to identify and regulate additional concerns with the incineration of sewage sludge if such concerns are supported by scientific evidence -- (1) Round II of the Part 503 Regulations and (2) biennial review of Part 503 Regulations. The Agency's contention that additional regulation of SSIs under Section 129 is appropriate to protect public health is simply not supportable.

V. Practical Impacts of Regulation of SSIs under Section 129 of the CAA -- Unachievable Emission Limits And Negligible Beneficial Impact

The practical significance of regulation of SSIs under Section 129 is of the utmost concern to AMSA. The actual impact of this regulation on human health and the environment will, at best, be negligible, while the added cost to the rate payers to achieve compliance with proposed standards will be substantial.

A. Unachievable Emission Limits

The Agency's proposed regulation of SSIs under Section 129 could result in the elimination of incineration of sewage sludge even though the Agency has declared that incineration is a safe and acceptable sewage sludge disposal method, and Congress has expressed its intent that choice of sewage sludge disposal

methods is to be determined at the local level.

POTW operators may find it is either cost prohibitive or technically infeasible to simultaneously meet the proposed standards for carbon monoxide (CO) and oxides of nitrogen (NOx). Agency personnel have indicated that the NOx MACT Standard could be 5 pounds per dry ton while the CO MACT Standard could be 100 ppm. Based upon these numbers and as the Agency has done for other MACT rules, it appears that the Agency intends to identify the "best performing units" on a pollutant-by-pollutant basis, meaning that it intends to select the best performing 12% of all SSIs with regards to NOx, the best performing 12% of all SSIs with regards to SO₂, and so forth.

While AMSA believes that EPA lacks authority to establish MACT Standards by combining the most stringent limits achieved separately for each listed pollutant, AMSA has a more fundamental technical concern premised on the fact that NOx emissions and CO emissions from SSIs are inversely related. As NOx emissions increase, CO decreases and consequently, as CO increases NOx decreases. It should be noted that in order to reduce THC and CO emissions, the top hearth temperature is increased. Since additional fuel is needed to raise the temperature, additional NOx is released to the atmosphere. On the other hand, if the top hearth temperature is lowered, NOx emissions decrease, while THC and CO emissions increase.

Based on data collected by AMSA, NOx and CO emission levels from SSIs vary significantly among SSIs across the nation, independent of the type of incinerator. As a result of this variation and the inverse relation, if a MACT Standard is established separately for NOx and separately for CO, it is highly likely that few if any SSIs will be able to comply with both standards, thereby resulting in the elimination of incineration -- an Agency-approved biosolids management option.

Such a result would be contrary to Congress' expressed intent under Section 405 of the CWA, in which Congress mandates that the Agency is to provide for safe management practices for the use and disposal of sewage sludge, not to dictate "preferred" practices and eliminate others. Section 405(e) of the CWA states that "[t]he determination of the manner of disposal or use of sludge is a local determination," as long as the practice is in accordance with the Agency's regulations. Congress clearly did not intend to limit the availability of safe sewage sludge management options.

Even in light of Congress' expressed intent, however, an unreasonable implementation of Section 129 standards for SSIs is bound to reach a contrary result.

B. Negligible Beneficial Impact

As previously discussed, SSIs are currently regulated under the Part 503 Regulations, which are risk-based standards (as opposed to technology-based standards imposed by Section 129 of the CAA). In addition, SSIs are subject to New Source Performance Standards under 40 CFR Part 60, Subpart O, and a National Emission Standard for Mercury. In areas where Particulate Matter, NOx, and/or SO₂ are a problem, states can and do impose RACT Standards on SSIs in the impacted area if they constitute a major source of such

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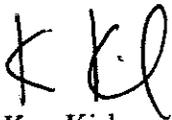
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pollutant. States also have authority to further regulate air emissions from SSIs through their other SIP provisions. In addition, the Agency has already acknowledged that SSIs are very minor sources of dioxin and dibenzofurans. Accordingly, the Agency should focus its efforts and resources on finding ways to control emissions from "major sources" of dioxin and dibenzofurans and *not* SSIs.

Assuming that the Agency's prior extensive SSI risk analysis remains valid, and there is no evidence to the contrary, only one conclusion is possible -- the Agency's stated intention to promulgate SSI regulations under Section 129 is with the Agency's full knowledge that the beneficial impact of these regulation on human health and the environment may be negligible. No benefit, therefore, will be realized from the expensive and/or infeasible control measures that Section 129 will mandate. Moreover, the funds that would be dedicated to satisfy the requirements imposed by Section 129 would generate much greater environmental benefits if they were, instead, directed towards those projects for which there is a demonstrated cost/benefit advantage.

AMSA wishes to thank the United States Environmental Protection Agency for this opportunity to submit comments on the Notice of Additional Information, dated January 14, 1997, concerning SSIs. If you have any questions or require additional information concerning AMSA's position on this issue, please do not hesitate to contact Robert P. Dominak, Vice-Chair AMSA Biosolids Management Committee at 216-881-6600, or Sam Hadeed, AMSA Headquarter's Staff at 202-833-4655.

Sincerely yours,



Ken Kirk
Executive Director

cc: Bob Perciasepe, EPA-HQ
Mike Cook, EPA-HQ
Mary Nichols, EPA-HQ
Tudor Davies, EPA-HQ
Bruce Jordan, EPA-RTP
Gene Crumpler, EPA-RTP
Cecil Lue-Hing, AMSA
Sam Hadeed, AMSA
Bob Dominak, AMSA
Ed Torres, AMSA
Dave Zenz, AMSA
John Distin, SS&D
AMSA Incineration Workgroup

ATTACHMENT B



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT - 7 2004

OFFICE OF
WATER

Mr. Scott Hassett
Secretary, Department of Natural Resources
101 S. Webster Street, Box 7921
Madison, WI 53707-7921

Dear Mr. ^{Scott}Hassett:

Thank you for your letter dated September 13, 2004, to Administrator Michael Leavitt. In your letter, you refer to a letter from Greg Kester to Jim Hanlon, Director, Office of Wastewater Management, concerning several biosolids management issues raised at a National State and Federal biosolids coordinators workshop. Your letter refers to a request for a statement reaffirming that the Environmental Protection Agency's (EPA) biosolids regulations are adequately protective of human health and the environment. You also requested that EPA reissue an official statement that beneficial use of biosolids through land application or public distribution is preferable to land filling or incinerator combustion.

Enclosed, please find a copy of Mr. Hanlon's letter which was sent in response to the issues raised by Greg Kester's letter. The regulatory baseline for the management of biosolids under the Clean Water Act is contained in the biosolids regulations at 40 CFR Part 503. The Part 503 regulations outline the use and disposal practices that publicly owned treatment works may select in their management of biosolids: land application, land filling or surface disposal and incineration. Based on the technical and scientific record, and as explained in the response to Greg Kester's letter, EPA believes that the 40 CFR Part 503 regulations are protective of public health and the environment.

As to the request that EPA should issue a statement favoring the beneficial reuse of biosolids over other uses, we do not believe that EPA should be involved in determining the biosolids management options most suitable for a particular community. Just as EPA does not require or expressly recommend that communities treat their wastewater to reuse standards and reuse it, or require particular technologies of municipal or industrial permittees to meet the

National Pollutant Discharge Elimination System permit limits, we do not require or expressly recommend that communities choose beneficial reuse of biosolids. EPA supports the reuse of wastewater and the beneficial reuse of biosolids as viable options available to communities, but firmly believes that any decisions regarding those choices are local decisions subject to meeting State regulations in addition to Federal regulations.

We appreciate your sharing of your concerns on this matter relative to biosolids management, and hope that this response addresses your concerns.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ben H. Grumbles". The signature is written in dark ink and is positioned above the printed name.

Benjamin H. Grumbles
Acting Assistant Administrator

ATTACHMENT C



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 20 2004

Mr. Greg Kester, PE
State Residuals Coordinator
State of Wisconsin, Department of Natural Resources
101 S. Webster Street, Box 7921
Madison, WI 53707-7921

OFFICE OF
WATER

Dear Mr. Kester:

Thank you for your letter dated July 30, 2004, sent with the concurrence of 43 State residuals coordinators. In the letter, you stated your concern and opinion that the Environmental Protection Agency (EPA) should abandon a position of neutrality on the methods for biosolids use or disposal. The letter also states that EPA should aggressively defend and support the safety of its regulations. In addition, the letter addresses a number of issues including previous EPA positions in promoting beneficial biosolids use, and statements by EPA regarding the safety of treating and managing biosolids. You also urge EPA to respond to requests from State and local governments to support specific biosolids management projects such as a heat drying project in Hawaii.

In order to address your concerns, it is important to first explain the roles that EPA, States and local governments are expected to play in implementing regulations such as the biosolids regulations. While we agree with your assessment that we are partner regulators in the biosolids program, we do not agree that EPA is in the position of determining the biosolids management options most suitable for a particular community. Just as EPA does not require or expressly recommend that communities treat their wastewater to reuse standards and reuse it, or require particular technologies of municipal or industrial permittees to meet the National Pollutant Discharge Elimination System permit limits, we do not require or expressly recommend that communities choose beneficial reuse of biosolids. EPA supports the reuse of wastewater and the beneficial reuse of biosolids as viable options available to communities, but firmly believes that any decisions regarding those choices are local decisions subject to meeting State regulations in addition to Federal regulations. EPA also believes that the States are capable of assessing compliance with Part 503 regulations. EPA is available for technical assistance and training as necessary for assessing compliance with the 503 regulations.

EPA believes that the 40 CFR Part regulations are protective of public health and the environment, and we continue to support biosolids management in full compliance with the Part 503 regulations. Your letter also urges EPA to aggressively defend and support the safety of its regulations. As I stated in a letter to your office dated November 2, 2003, EPA continues to support land application, incineration, and disposal in municipal solid waste landfills and surface disposal units in compliance with 40 CFR Part 503 as viable options for the use and disposal of biosolids. When we receive requests regarding the use of a particular technology or

use or disposal option at a particular site, such as in the Hawaii request, our position will be that it is protective of human health and the environment provided that the technology in question will be designed and implemented to comply with the Part 503 regulations.

EPA has shown a commitment to ensuring that the biosolids regulations are protective of public health and are periodically examined. Indeed, the Clean Water Act requires that the scientific basis of the part 503 Rule be periodically reassessed. Over the past decade, citizens and environmental organizations questioned the adequacy of the rules' chemical and pathogen standards for protecting public health. In order to responsibly address these concerns and confirm that the rule is adequately protective of public health and the environment, EPA commissioned the National Resource Council (NRC) of the National Academy of Sciences to independently review the scientific basis of the regulations governing the land application of biosolids. The NRC report issued in July 2002 concluded that, although there is no documented scientific evidence that the 503 regulations have failed to protect public health, further scientific work is needed to reduce persistent uncertainty about the potential for adverse human health effects from exposure to biosolids.

As part of EPA's continued commitment to the development of sound regulations, and following the recommendations in the NRC report, as well as public comments and input on research priorities from a Biosolids Research Summit held in June 2003 by the Water Environment Research Foundation, EPA developed a final action plan in December 2003. As you know, this plan includes determining potential risks of selected pollutants and conducting a targeted survey, and characterizing potential volatile chemicals and bioaerosols from land application sites. The agency expects to conduct a number of activities within the next two to three years with the goal of further strengthening the biosolids use and disposal program. It is through such activities that EPA will continue to address the uncertainty cited in the NRC report.

Thank you again for sharing your concerns and offering suggestions relative to biosolids management and the 40 CFR Part 503 regulations.

Sincerely,



James A. Hanlon
Director

Office of Wastewater Management