Solid Waste Industry for Climate Solutions

Allied Waste Services
County Sanitation Districts of Los Angeles County
OC Waste & Recycling
Norcal Waste Systems
Republic Services
Waste Connections
Waste Management

November 21, 2008

VIA ELECTRONIC & REGULAR MAIL
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Douglas Ito, Manager
State Implementation Plan &
Local Government Strategies Section
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Re: Comments on Preliminary Draft Staff Proposal – Interim Significance Thresholds for Greenhouse Gases under CEQA (October 24, 2008).

Dear Mr. Ito:

We submit these comments on behalf of the Solid Waste Industry for Climate Solutions (SWICS) in response to the Air Resources Board ("ARB") Preliminary Draft Staff Proposal, Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act ("CEQA") (Pub. Resources Code, § 21000 et seq.). SWICS is an informal organization of major public and private solid waste entities providing much of the solid waste and recycling infrastructure in California.

We were in attendance at the Public Workshop held on October 27, 2008, and appreciate the work that ARB staff has completed, to date, on such a monumental task. We offer the following comments for your consideration in preparing the final recommended approach to the ARB in January 2009.

Local Lead Agencies Must be Reminded that they Retain Discretion when Adopting and Applying Thresholds of Significance

As a preliminary matter, we believe the lead agency responsible for approving a particular project should ultimately determine what threshold(s) of significance to adopt or apply, given a particular project subject to review under CEQA. It is therefore important for ARB staff to emphasize that the recommendations are just that, recommendations, and lead agencies are not required to utilize them for all projects.

Biogenic Emissions from Waste Operations are Carbon Neutral

Any recommended greenhouse gas ("GHG") thresholds for waste projects, including but not limited to landfills, recycling, composting, waste-to-energy and anaerobic digestion projects (collectively "waste projects"), should clarify that biogenic emissions are recognized separately from anthropogenic emissions. The biogenic portion of emissions should be considered "carbon neutral" for composting and waste to energy projects, while the anthropogenic emission may rightfully be evaluated and mitigated.

CO2 emissions from the decomposition or combustion of organic or organic derived materials are considered to be biogenic and part of the near-term carbon cycle. Biogenic emissions should be clearly differentiated from anthropogenic CO2 emission derived from the combustion of fossil fuel. IPCC and WRI protocols treat biogenic emissions of CO2 to be carbon neutral.

The 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 5, for example, recognizes that treatment and disposal of municipal, industrial and other solid waste can produce significant amounts of methane (CH4) and that most modern waste management methods implement controls to minimize the emission of methane to the environment. For example, solid waste disposal sites (SWDS) typically employ sophisticated gas collection and control systems (GCCS) to minimize the release of methane and other non-methane organic compounds to the environment. According to CARB, moreover, approximately 94% of all waste-in-place in California is served by a functioning GCCS. Residual CH4 produced at

California regulated disposal sites contributes approximately 1 percent to the annual California anthropogenic greenhouse gas emissions (CARB GHG Inventory, 2007).

In addition to CH4, solid waste disposal sites (SWDS) also produce *biogenic* carbon dioxide (CO2). Decomposition of organic material derived from biomass sources (e.g., crops, wood) is the primary source of CO2 released from waste. CO2 emissions from organic plant-derived waste sources is considered biogenic and part of the "near-term" carbon cycle as opposed to CO2 emissions from mined fossil fuels that is considered anthropogenic and subject to reporting, regulation and control. CH4 generated at SWDS can be recovered and combusted in a flare or energy device. In these processes, CH4 is burned in the presence of oxygen to produce CO2 and water. Emissions from landfill gas flaring or from energy recovery devices are not a significant contributor to GHG emissions, as the CO2 emissions are of *biogenic origin* and the *anthropogenic CH4 and N2O emissions* are very small.

Similarly, waste to energy facilities may produce both biogenic CO2 emissions from the combustion of biomass materials (e.g., wood, paper, etc.) and anthropogenic CO2 emissions from the combustion of fossil derived materials (e.g., plastics, synthetics, etc.). The biogenic portion of emissions should be considered "carbon neutral" for composting and waste to energy projects, while the anthropogenic emission may rightfully be evaluated and mitigated.

Any thresholds recommended by CARB for waste projects should recognize these distinctions between biogenic and anthropogenic GHG emissions, with only the anthropogenic emissions being considered as constituting GHG impacts from a solid waste project.

Waste Projects, in addition to Transportation and Large Dairies, Deserve Separate Consideration by ARB Staff

As with transportation and large dairy projects, waste projects, including but not limited to landfill, recycling, composting, landfill gas to energy and bioreactor projects, deserve separate consideration by ARB staff. (See Preliminary Draft Staff Proposal, p. 5.) Waste management activities are significantly different from typical industrial projects in that they do not usually have a predictable or known amount of annual emissions. Similarly, a solid waste activity in year "x" may continue to result in GHG impacts over many years.

In the case of landfills, for example, GHG emissions from landfilling may fluctuate based on the disposal that occurs within a given year and past landfilling activities. A landfill project, therefore, will not have the same emissions in any given year. Rather, greenhouse gas sources and sinks will vary from year-to-year based on a wide variety of factors including the variable waste volume as well as physical and chemical characteristics of the disposed waste and the manner in which these disposed materials are managed. Further, landfill greenhouse gas emissions could be offset, depending on the site, by carbon that is sequestered in the landfill, thereby avoiding biogenic CO2 emissions that would have otherwise occurred. Similarly, the amount of emissions from composting operations is contingent on the type and volume of the feedstock being composted. This fact, combined with the varying methods and results of testing emissions from compost piles make it difficult to predict annual emissions from composting operations.

There is an ongoing dialogue and life cycles analysis occurring at the California Integrated Waste Management Board (CIWMB) to assess the emissions resulting from both landfill and composting operations. Accurate estimates of emissions are critical in formulating cost-effective control strategies.

Recommending a strict quantitative threshold for solid waste, recycling, composting and related operations is therefore impractical at this time. Such a threshold could also impede the development of needed recycling and organics processing capacity to meet other CIWMB policy and program requirements. We therefore respectfully suggest that ARB staff be directed to consult and coordinate with the CIWMB on these issues prior to issuing any final recommendations applicable to waste projects.

Applying a Quantitative Threshold Designed for Industrial Projects to Waste Projects Would be Inappropriate

As alluded to above, applying the proposed 7,000 MTCO2e/yr industrial project threshold to waste management related projects, including landfills, recycling, composting, landfill gas to energy and bioreactors would in inappropriate. Landfill gas collection systems are specifically installed for extracting, collecting and oxidizing the maximum amount of landfill gas. Most of a landfill's anthropogenic methane gas emissions emitted into the atmosphere occurs from fugitive emissions through the cover of the landfill. Because the amount of fugitive methane emissions is very difficult to accurately estimate, measurement methods are currently the subject of considerable controversy. There are similar constraints to accurately estimating the emissions from compost piles. Until a universally accepted model and assumptions are adopted, the application of a 7,000

MTCO2e/yr threshold could result in arbitrary and inconsistent results from one lead agency to another.

We therefore think it is inappropriate at this juncture to recommend a quantified threshold for landfill projects or other types of solid waste activities -- or to lump landfills into the industrial project category. If ARB nevertheless proceeds with developing quantifiable thresholds for landfill projects, we strongly suggest a separate life-cycle inventory approach for solid waste management activities. The use of a Life Cycle Inventory model for waste management allows for the comparison of the environmental advantages and disadvantages of various operating and disposal scenarios at a landfill, waste to energy, recycling or composting site, specifically allowing decision makers to consider landfill gas emissions over the life of a landfill, energy use and Greenhouse gas emissions in the decision making process. One such life-cycle approach has been developed by US EPA and is available at:

http://www.epa.gov/climatechange/wycd/waste/SWMGHGreport.html.

The CIWMB is developing additional information through their "Organic Life-Cycle Analysis" (http://www.ciwmb.ca.gov/Climate/Organics/LifeCycle/). We urge CARB to work cooperatively with the CIWMB to further refine the procedures for a comprehensive GHG lifecycle assessment of solid waste management activities.

Additionally, this sort of analysis would be helpful in evaluating the ability of a particular solid waste project to fulfill state or regional targets once they are adopted. At the very least, additional clarification is needed as to the types of land uses envisioned by ARB to be included in the "Industrial Project" category.

Relationship with Existing CEQA Exemptions

Any further regulatory guidance that applies to solid waste landfilling, composting and similar activities should make clear that installation of environmental control systems required by regulatory entities would continue to be exempt under CEQA. (See, e.g., Pub. Resources Code, § 21080.24, CEQA Guidelines, §§ 15263, 15281.) Thus, any guidance issued by CARB should explicitly state that all current CEQA exemptions would continue to apply. This would include the categorical exemptions provided in Title 14 of the California Code of Regulations, sections 15300-15333.

For example, the CEQA exemption under 14 CCR Section 15329, includes a categorical exemption for "co-generation projects at existing facilities." This exemption is typically used for LFG-to-energy and biomass to energy projects as long as they meet the criteria stated. Further, even though these projects emit CO2, the CO2 is biogenic in nature having been derived from a process involving the decomposition of plant matter that is part of the near term carbon cycle. This is also an example of the need for the guidance to only apply to anthropogenic emissions, not biogenic emissions.

Essential Public Services

The CEQA GHG guidance should also recognize the need for the provision of essential public services such as health care, clean water and sanitation services. Essential public services such as solid waste facilities are necessary to protect human health and the environment – and such facilities must grow to keep up with population. Should not the necessary growth of essential public services be exempt from any CEQA threshold for GHG?

* * *

In closing, the lead agency responsible for approving a particular project should ultimately determine what threshold(s) of significance to adopt or apply, given a particular project subject to review under CEQA. Furthermore, because of the unique nature of solid waste facility GHG emissions and control systems, applying the proposed 7,000 MTCO2e/yr industrial project threshold to waste management related projects would be inappropriate. ARB should also clarify that any recommended threshold(s) developed specifically for solid waste and recycling facility projects apply only to new anthropogenic GHG emissions generated by a project (e.g., an expansion), and not from biogenic emissions or from the existing or prior operations at a particular site.

Any thresholds developed specifically for solid waste, composting and recycling facilities should also reflect how a particular project's emissions will be controlled throughout the life of the project, not just when MSW is being disposed, for example. If control of GHG emissions will be beyond levels required by the local Air District, the lead agency should have discretion, after considering all the circumstances surrounding a particular project, including any avoidance or mitigation measures incorporated into the project design, to make a determination whether the proposed project will result in a significant impact to climate change, either on a project specific (direct) or cumulative context.

Thank you in advance for your consideration of our comments. Please contact us if you have any questions or require any additional information.

Very truly yours,

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