State of California
AIR RESOURCES BOARD

Resolution 09-38

June 25, 2009

Agenda Item No.: 09-6-3

WHEREAS, the California Global Warming Solutions Act of 2006 (AB 32; Stats 2006, ch. 488, Health and Safety Code section 38500 et seq.), declares that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California and creates a comprehensive multi-year program to reduce California's greenhouse gas (GHG) emissions to 1990 levels by 2020;

WHEREAS, section 38505 of the Health and Safety Code defines greenhouse gases as including methane and carbon dioxide (CO_2) among other greenhouse gases;

WHEREAS, section 38510 of the Health and Safety Code designates the Air Resources Board (ARB or the Board) as the State agency charged with monitoring and regulating sources of GHG emissions in order to reduce these emissions;

WHEREAS, section 38560 of the Health and Safety Code directs the Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions from sources or categories of sources, subject to the criteria and schedules specified in Part 4 of Division 25.5 of the Health and Safety Code;

WHEREAS, section 38560.5 of the Health and Safety Code requires the Board to publish and make available a list of discrete early action GHG emission reduction measures (early action measures) by June 30, 2007;

WHEREAS, section 38560.5 of the Health and Safety Code directs the Board to adopt regulations to implement the discrete early action measures identified on the list, and specifies that the regulations shall be enforceable no later than January 1, 2010;

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Board to adopt standards, rules, and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in April 2007, ARB staff released for public review a draft report entitled "Proposed Early Action Items to Mitigate Climate Change in California" (staff report), which described staff's analysis and recommendations for discrete early action measures to reduce global warming emissions;

WHEREAS, the staff report recommended that a measure to reduce methane emissions from municipal solid waste (MSW) landfills be identified as a discrete early action measure pursuant to section 38560.5 of the Health and Safety Code;

WHEREAS, after a public meeting on June 21, 2007, the Board approved the reduction of methane emissions from MSW landfills as a discrete early action measure and directed staff to develop it into a regulation;

WHEREAS, in September 2007, ARB staff released for public review a draft report entitled "Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration" (staff report), which set forth staff's proposed expanded list of early actions; the staff report was released in final form in October 2007 for public review prior to the Board meeting;

WHEREAS, after a public meeting on December 11, 2008, the Board approved the Climate Change Scoping Plan which included the MSW landfill discrete early action measure;

WHEREAS, ARB staff worked closely with California Integrated Waste Management Board staff in developing the proposed regulation;

WHEREAS, in 2007, 2008, and 2009, ARB staff conducted three public workshops, held seven technical workgroup meetings, and had individual meetings in order to include the public, local air districts, and affected stakeholders in the regulatory development process for this early action measure;

WHEREAS, ARB staff prepared a staff report entitled "Initial Statement of Reasons for Proposed Regulation to Reduce Methane Emissions from MSW Landfills" (ISOR) which presents the scope and rationale for the proposed regulation;

WHEREAS, the ISOR and proposed regulatory language were made available to the public for at least 45 days prior to the public hearing to consider the proposed regulation;

WHEREAS, staff has proposed a regulation that, when fully implemented, will achieve a GHG emission reduction of about 1.5 million metric tons of carbon dioxide equivalent ($MMTCO_2E$) from MSW landfills in 2020;

WHEREAS, the proposed regulation would adopt new Subarticle 6, title 17, California Code of Regulations, sections 95460 to 95476, as set forth in Attachment A hereto;

WHEREAS, the Board has considered the impact of the regulation on the economy of the State and the potential adverse economic impacts on California business enterprises and individuals;

WHEREAS, the Board has considered the community impacts of proposed regulations, including environmental justice concerns;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project that may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, during the public comment period for this Board item staff received comments seeking clarification regarding the treatment of inert waste and the administrative process for amended Design Plans;

WHEREAS, state law prohibits Districts from implementing and enforcing state air pollution control law in a manner that results in standards, requirements, or prohibitions less stringent than those adopted by the State Board;

WHEREAS, Staff agrees that clarification of these items is appropriate and will consider them during the 15-day supplemental comment period;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, in consideration of the information in the public record, including the ISOR, written comments, and testimony provided at the hearing, the Board finds that:

Methane is a major contributor to climate change, having a global warming potential of about 21 times that of CO_2;

MSW landfills are the second largest anthropogenic source of methane in California and represent about 1 percent of the statewide greenhouse gas inventory;

MSW landfills are regulated under local air district rules that implement federal requirements for MSW landfills which are focused on achieving reductions of non-methane organic compounds (NMOCs), not methane emissions;

The control of landfill gas, of which methane is a major component, is necessary to prevent methane from either being released into the atmosphere as fugitive emissions or migrating underground to cause groundwater contamination;

The implementation of the proposed regulation will reduce the potential release of methane from MSW landfills, the public's potential exposure to toxic compounds contained in landfill gas emissions, and possible groundwater contamination;

The technology to control methane emissions from MSW landfills, to the extent necessary to comply with the proposed regulation, is reasonably available, cost-effective, and currently in use at many California landfills;

The proposed regulation contains performance standards for the gas collection and control system, and specifies monitoring requirements to ensure that that the system is being maintained and operated in a manner to minimize methane emissions;

The proposed standards include a leak standard for gas collection and control system components, a monitoring requirement for wellheads, methane destruction efficiency requirements for most control devices, surface methane emission standards, and reporting requirements;

The overall cost to affected public agencies and to affected persons and businesses would be approximately $27 million dollars in initial capital costs with about $6 million to $14 million dollars in annual recurring costs (in 2008 dollars);

The cost-effectiveness is estimated to be approximately $9 per metric ton of carbon dioxide equivalent reduced or about 10 cents per month on a per-household basis over the 23-year lifetime of the regulation;

Staff believes that most, if not all, of the public entities, as well as affected private businesses, will be able to secure the funding necessary to meet the proposed regulation's compliance costs; and

WHEREAS, the Board further finds that:

The regulations achieve the maximum technologically feasible greenhouse gas emission reductions from this source category;

The cost-effectiveness of the proposed regulation has been considered, and the regulation will achieve cost-effective methane emission reductions;

The proposed regulation meets the requirements specified in section 38560.5 of the Health and Safety Code;

The proposed emission limits, when fully implemented, will reduce methane emissions by 1.5 MMTCO_2E in 2020;

The economic impacts of the proposed regulation have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in the ISOR;

The benefits to human health, public safety, public welfare, or the environment justify the costs of the proposed regulation;

The proposed regulation is consistent with ARB's environmental justice policies and will equally benefit residents of any races, cultures, or income levels;

The reporting requirements in the proposed regulation are necessary for the health, safety, and welfare of the people of the State; and

No reasonable alternative considered, or that has otherwise been identified and brought to the attention of ARB, would be more effective in carrying out the purpose for which the regulation is proposed, or be as effective and less burdensome to affected private persons and businesses than the proposed regulation.

WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board further finds that the proposed regulation will not result in any significant adverse impacts on the environment;

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the adoption of sections 95460, 95461, 95462, 95463, 95464, 95465, 95466, 95467, 95468, 95469, 95470, 95471, 95472, 95473, 95474, 95475, and 95476 of title 17, California Code of Regulations, as set forth in Attachment A hereto, with the modifications set forth in Attachment B hereto, and with the direction to explore the following potential additional modifications: 1) clarifying the status of inert waste as exempt; 2) clarifying the administrative process for amended design plans; 3) allowing exclusion from or modification of certain monitoring procedures based on site-specific conditions (e.g. monitoring in areas that present a safety risk) to be a part of a source's alternative compliance request; 4) providing additional flexibility for sources with a demonstrated history of compliance with the surface emission standards prior to the effective date of the regulation to qualify for the regulation's compliance incentives; and 5) clarify that the approved regulations are a regulatory floor.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the regulation as set forth in Attachment A hereto, with the modifications set forth in Attachment B hereto and potential modifications as described above, and such other conforming modifications and technical amendments as may be appropriate, and then to adopt the modified regulation after making the modified regulatory language available for supplemental public comment for a period of 15 days, provided that the Executive Officer shall consider such written comments regarding the modifications as may be submitted during this period, shall make additional modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he or she determines this is warranted.

BE IT FURTHER RESOLVED that the Board directs ARB staff to analyze instantaneous surface monitoring data from MSW landfills and return to the Board at a future date if the analysis indicates that a 200 ppm surface methane standard is feasible and does not result in an adverse impact on MSW landfills, including, but not limited to, an increased possibility of landfill fires.

BE IT FURTHER RESOLVED that the Board directs ARB staff to consider alternative methods for estimating the emission reduction benefits of the regulation.

BE IT FURTHER RESOLVED that the Board directs ARB staff to work with California Integrated Waste Management Board or successor organization staff as applicable to investigate the feasibility of additional regulatory actions that can be taken to further reduce methane emissions in support of the proposed regulation.

BE IT FURTHER RESOLVED that the Board directs ARB staff to work with local air districts to: (1) develop a guidance document to assist MSW landfill owners and operators in complying with the requirements of the proposed regulation, (2) develop and consider agreements with local air districts to implement and enforce the proposed regulation, (3) establish an implementation workgroup that meets periodically to discuss implementation issues and promote statewide consistency regarding the implementation and enforcement of the proposed regulation, and (4) modify the regulation to clarify, as discussed in the ISOR/Staff Report, that the regulation is a regulatory floor.

I hereby certify that the above is a true and correct copy of Resolution 09-38, as adopted by the Air Resources Board.

Monica Vejar

Monica Vejar, Clerk of the Board

Resolution 09-38

June 25, 2009

Identification of Attachments to the Resolution

Attachment A:	Proposed Regulation to Reduce Methane Emissions from Municipal Solid Waste Landfills, as set forth in Appendix A to the Initial Statement of Reasons, released May 8, 2009.
Attachment B:	Staff's Suggested Modifications to the Original Proposal (distributed at the Board hearing June 25, 2009).