State of California
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of an Airborne Toxic Control Measure for Dioxins Emissions from Medical Waste Incinerators

Agenda Item No.: 90-10-2

Public Hearing Date: July 13, 1990

Response Date: N/A

Issuing Authority: Air Resources Board

Comment: The Board received comments alleging that adverse environmental impacts could result from the adoption of the proposed regulation. Because many existing medical waste incinerators will cease operation as a result of the regulation, much of the waste presently being burned in these incinerators will be handled by alternative disposal methods (i.e., steam sterilization and landfilling). Commenters stated that the use of these alternative methods would result in: (1) a significant increase in waste diverted to landfills; (2) increased vehicular emissions from the transport of waste to alternative treatment and disposal sites; and (3) increased safety problems associated with the storage, handling, and in-transit accidental releases of medical waste. Commenters also alleged that some alternative methods are less effective than incineration and would cause adverse health impacts. In addition, the Staff Report identified possible adverse environmental effects from the increased generation of hazardous ash and scrubbing residuals from the air pollution control equipment that will be used on incinerators that continue to operate.

Response: The Board has determined, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, that this regulatory action may have a significant adverse impact on the environment. Each of these potential impacts is discussed below.

The regulation may result in adverse environmental impacts from the increased generation of hazardous ash and scrubbing residuals that may occur at specific incineration sites. While hazardous ash and scrubbing residuals are classified as hazardous waste under California law and can pose a health hazard if improperly handled and disposed of, this potential adverse environmental impact will be substantially mitigated if affected sources comply with California and federal laws regarding the generation,

transportation, and disposal of hazardous waste. In addition, the total volume of ash produced in California will be reduced because many incinerators are expected to cease operation as a result of this regulation.

The control measure can also result in other significant adverse environmental impacts, in that there can be a minor increase in solid waste diverted to landfills (up to approximately .05 percent of total municipal waste generated in California) and a minor increase in vehicular emissions from increased transport of waste to landfills and other alternative disposal sites. Because alternative disposal methods do not pose significant safety problems, and are as effective as incineration in treating medical waste, no significant adverse public health or safety impacts are expected to occur from the increased use of steam sterilization and other alternative disposal methods.

For those facilities that retrofit and implement best available control technology, the control measure would result in significant public health benefits due to (1) a 90 to 99 percent overall reduction in both dioxins emissions and associated potential cancer risks, (2) an 85 to 99 percent reduction in hydrochloric acid and particulate matter emissions, and (3) a 37 to 99 percent reduction in cadmium emissions. In Resolution 90-45, the Board found that these public health benefits override the potential adverse environmental impacts described above. The Board also found that there are no feasible mitigation measures or other alternatives that would substantially reduce the adverse environmental impacts, while at the same time providing the substantial overall public health benefits that result from reducing dioxins, hydrochloric acid, particulate matter, and cadmium emissions.

Further analysis of the environmental impacts of the regulation can be found on pages 35-37 of the Staff Report, on pages 145-147 of the Technical Support Document, and the in responses to Comments 1-6 and 42 in the Final Statement of Reasons.

CERTIFIED: Patricia Hutchens
Board Secretary

Date: 5/16/91

Office of the Secretary
AUG 2 1991
RESOURCES AGENCY OF CALIFORNIA

State of California
AIR RESOURCES BOARD
PROPOSED

Resolution 90-45

July 13, 1990

Agenda Item No: 90-10-2

WHEREAS, on July 25, 1986, pursuant to Section 39662 of the Health and Safety Code, the Air Resources Board (Board) identified chlorinated dioxins and dibenzofurans (dioxins) as toxic air contaminants for which there is not sufficient available scientific evidence to support identification of a threshold exposure level below which no carcinogenic health effects are anticipated (see Title 17, California Code of Regulations, Section 93000);

WHEREAS, following identification of dioxins as toxic air contaminants, the Executive Officer, with the participation of local air pollution control districts, is required by Health and Safety Code Section 39655 to prepare a report on the need for, and appropriate degree of, control of dioxins emissions;

WHEREAS, the staff has worked closely with the districts through the statewide Technical Review Group (TRG), the TRG Committee on Dioxins, and with affected sources and other parties to develop as expeditiously as practical an airborne toxic control measure for emissions of dioxins from medical waste incinerators;

WHEREAS, the staff has proposed an airborne toxic control measure (ATCM) for dioxins emissions which would significantly reduce the quantity of dioxins emitted to the atmosphere by requiring emission controls on medical waste incinerators;

WHEREAS, the staff has prepared the "Proposed Dioxins Control Measure for Medical Waste Incinerators" (Staff Report and its Technical Support Document), which constitutes the report required by Health and Safety Code Section 39655 and includes: estimates of dioxins emissions; public exposure to dioxins and potential cancer risk; a discussion of the technical feasibility of control and of existing emission control devices; an estimate of the costs to comply with the ATCM; a discussion of the anticipated effect of the ATCM on public exposure to dioxins from medical waste incinerators and the associated risk; a discussion of alternatives to the ATCM; and identification of any potential adverse environmental effects of the ATCM and possible mitigation measures;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project having significant adverse environmental impacts be

adopted as proposed if feasible alternatives or mitigation measures are available to eliminate or substantially reduce such impacts;

WHEREAS, the proposed ATCM was made available to the public for review and comment, and was discussed at public consultation meetings on July 26, 1989; November 14, 1989; November 16, 1989; March 6, 1990; and April 24, 1990;

WHEREAS, in accordance with Health and Safety Code Section 39665(c), the Staff Report, Technical Support Document, and relevant comments on the proposed ATCM received during public consultation with the districts, affected sources, and the public were made available for public review and comment 45 days prior to the public hearing to consider the proposed ATCM;

WHEREAS, a public hearing and other administrative proceedings were 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 Staff Report, Technical Support Document, and the written comments and public testimony it has received, the Board finds that:

> The operation of medical waste incinerators results in public exposure to dioxins;
>
> Most medical waste incinerators in California are uncontrolled, poorly operated and located in residential areas;
>
> Dioxins emissions from medical waste incinerators are not currently regulated to a degree that adequately protects the public health statewide;
>
> The potential maximum individual lifetime cancer risk from dioxins exposure from medical waste incinerators ranges from less than 10 up to 250 chances in a million;
>
> Emissions testing results show that medical waste incinerators are sources of other pollutants such as cadmium, particulate matter and hydrochloric acid, and these pollutants have the potential to cause adverse health effects;
>
> Emissions testing results show that medical waste incinerators in California have particulate matter emissions that exceed local air district limits;
>
> The proposed ATCM would require facilities that burn greater than 25 tons per year to reduce their dioxins emissions from medical waste incinerators to the lowest level achievable through application of the best available control technology, as required by Health and Safety Code Section 39666(c), and, therefore, complies with the requirements of state law for the control of sources of toxic air contaminants identified by the Board;

As provided in Health and Safety Code Section 39666(c), based on an assessment of risk it was determined that facilities that burn 25 tons or less of waste per year could improve incinerator operation with operator training and that facilities that burn more than 10 but less than 25 tons of waste per year should do an initial source test, and that the alternative level of emission reduction achieved by these requirements is adequate to prevent an endangerment of public health;

For those facilities that apply best available control technology, implementation of the proposed ATCM would reduce dioxins emissions by about 99 percent from currently uncontrolled medical waste incinerators, and about 90 percent from currently controlled facilities;

For those facilities that apply best available control technology, the proposed ATCM would reduce hydrochloric acid and particulate matter emissions by 85 to 99 percent, and reduce cadmium emissions from 37 to as much as 99 percent;

No alternative considered would be either more effective at carrying out the purpose for which the ATCM is proposed, or both as effective and less burdensome to affected private persons, than the proposed ATCM; and

WHEREAS, the Board further finds that:

Adoption of the proposed ATCM may result in significant adverse environmental impacts, in that an increased generation of hazardous ash and scrubbing residuals may occur;

While hazardous ash and scrubbing residuals can be classified as hazardous waste under California law and can pose a health hazard if improperly handled and disposed of, this potential adverse environmental impact will be substantially mitigated if affected sources follow California and federal laws regarding the generation, transportation, and disposal of hazardous waste;

Adoption of the proposed ATCM may result in other significant adverse environmental impacts, in that there may be a slight increase in waste diverted to landfills (up to approximately .05 percent of total municipal waste in California) and a slight increase in vehicular emissions from increased transport of waste to landfills and other alternative disposal sites;

For those facilities that implement best available control technology, the proposed ATCM would result in significant public health benefits due to (1) a 90 to 99 percent overall reduction in both dioxins emissions and associated potential cancer risks, (2) an 85 to 99 percent reduction in hydrochloric acid and particulate matter emissions, (3) a 37 to 99 percent reduction in

cadmium emissions, and these considerations override the potential adverse environmental impacts described above;

There are no feasible mitigation measures or other alternatives that would substantially reduce the adverse environmental impacts described above, while at the same time providing the substantial overall public health benefit realized by the significant emission reductions of dioxins, hydrochloric acid, particulate matter, and cadmium;

NOW, THEREFORE, BE IT RESOLVED that the Board approves the adoption of Section 93108, Subchapter 7.5, Chapter 1, Part III, Titles 17 and 26, California Code of Regulations as set forth in Attachment A.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the airborne toxic control measure as set forth in Attachment A after making it available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to request that local Air Pollution Control and Air Quality Management Districts evaluate the need on a case-by-case basis for further control of cadmium emissions from medical waste incinerators, and direct the Executive Officer to evaluate the need for a further control measure to reduce cadmium emissions through source minimization and segregation.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to forward the adopted ATCM to the districts and provide appropriate assistance to the districts in adopting regulations to implement the ATCM.

I hereby certify that the above is a true and correct copy of Resolution 90-45, as adopted by the Air Resources Board

Pat Hutchens for

Judith M. Lounsbury, Board Secretary