

State of California
AIR RESOURCES BOARD

Resolution 02-2

February 21, 2002

Agenda Item No.: 02-1-03

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (ARB or 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, the Board, with the assistance of the Office of Environmental Health Hazard Assessment (OEHHA) and the Scientific Review Panel on Toxic Air Contaminants (SRP), is required to identify and control toxic air contaminants in accordance with the procedures and criteria set forth in section 39650 et seq. of the Health and Safety Code;

WHEREAS, the Children's Environmental Health Protection Act, set forth in section 39669.5 of the Health and Safety Code, requires OEHHA by July 1, 2001, to establish an initial list of up to five toxic air contaminants identified or designated by the state board pursuant to section 39657 that may cause infants and children to be especially susceptible to illness, to have the SRP review the list, and to consider public comments on the list;

WHEREAS, the Children's Environmental Health Protection Act also requires the Board to review, revise, or adopt control measures, as appropriate, to reduce exposure to those toxic air contaminants to protect public health, particularly infants and children;

WHEREAS, the Board identified the following substances as toxic air contaminants pursuant to article 3 (commencing with section 39660), chapter 3.5, part 2, division 26 of the Health and Safety Code: benzene (January 25, 1985); dibenzo-*p*-dioxins and dibenzofurans, collectively referred to as dioxins (July 25, 1986); cadmium (January 23, 1987); and 1,3-butadiene (July 9, 1992) as set forth in title 17, California Code of Regulations, section 93000;

WHEREAS, on April 8, 1993, the Board identified polycyclic organic matter (including polycyclic aromatic hydrocarbons (PAHs)), polychlorinated biphenyls (PCBs), mercury compounds, and chromium compounds as toxic air contaminants pursuant to article 2.5 (commencing with section 39656), chapter 3.5, part 2, division 26 of the Health and Safety Code, as set forth in title 17, California Code of Regulations, section 93001;

WHEREAS, in accordance with section 39662(c) of the Health and Safety Code, the Board determined that for benzene, dioxins, cadmium, and 1,3-butadiene there is not sufficient available scientific evidence to support identification of a threshold exposure level below which no significant adverse health effects are anticipated;

WHEREAS, on October 19, 2001, the Office of Environmental Health Hazard Assessment released a final report identifying dioxins and polycyclic organic matter as two of the initial five toxic air contaminants that may cause infants and children to be especially susceptible to illness;

WHEREAS, sections 39658, 39665, and 39666 of the Health and Safety Code authorize the Board to establish airborne toxic control measures (ATCMs) for substances identified as toxic air contaminants in accordance with specified criteria;

WHEREAS, for toxic air contaminants for which the Board has not specified a threshold exposure level, section 39666 of the Health and Safety Code requires ATCMs to be designed to reduce emissions to the lowest level achievable through the application of best available control technology (BACT) or a more effective control method, considering factors specified in section 39665, unless the Board determines, based on assessment of risk, that an alternative level of emissions reduction is adequate or necessary to prevent an endangerment of public health;

WHEREAS, at the March 23, 2000 public hearing on amendments to the Agricultural Burning Guidelines, the Board directed the Executive Officer to work with the California Air Pollution Control Officers Association (CAPCOA) to determine how to address the issue of residential burning and to report back to the Board with a recommendation;

WHEREAS, ARB staff established a multi-agency Residential Burning Working Group, comprised of representatives of the air pollution control and air quality management districts (air districts), the California Department of Forestry and Fire Protection, OEHHA, and the California Integrated Waste Management Board to evaluate residential burning practices in California and to identify issues associated with regulation, compliance levels, smoke management, and health impacts of residential burning;

WHEREAS, the United States Environmental Protection Agency (U.S. EPA) analyzed emissions from the uncontrolled combustion of residential waste, excluding natural vegetation, in 55-gallon metal containers commonly called "burn barrels" and measured significant emissions (or "emission levels") of dioxins, benzene, 1-3-butadiene, PAHs, and PCBs;

WHEREAS, ARB staff conducted a preliminary screening assessment using the emissions factors from the U.S. EPA's burn barrel study and data on residential waste burning practices from Working Group participants to estimate potential health impacts from the combustion of residential waste in burn barrels in California;

WHEREAS, on June 28, 2001, ARB staff reported the Working Group's analysis and the screening assessment results to the Board, identifying potential emissions of dioxins and benzene from residential burning; the uneven regulation of residential burning and the use of burn barrels in California; and the intertwined issues of fire safety, waste management, and air quality with regard to changing household waste disposal practices;

WHEREAS, on June 28, 2001, after hearing additional testimony from CAPCOA and one Air Pollution Control Officer requesting the Board to take regulatory action to control the use of burn barrels and the emissions from residential burning, the Board directed staff to develop an airborne toxic control measure (ATCM) as expeditiously as possible;

WHEREAS, ARB staff continued consultation with state, local, and federal fire agencies, state and local waste agencies, and private waste service providers to collect information regarding alternatives to burning residential waste and the use of burn barrels and expanded the membership of the Working Group to include the California Farm Bureau Federation and the Regional Council of Rural Counties;

WHEREAS, ARB staff used emission factors, regional estimates of waste burned, and site-specific meteorological data to prepare risk assessments of exposure to five toxic air contaminants in residential waste burning emissions;

WHEREAS, in 1990, ARB staff worked closely with the air districts, the affected industry, and the public to prepare the report entitled, *Proposed Dioxin Control Measure for Medical Waste Incinerators*, which sets forth the need for, and the appropriate degree of, control for dioxins;

WHEREAS, ARB staff has prepared a staff report entitled *Initial Statement of Reasons for the Proposed Airborne Toxic Control Measure to Reduce Emissions of Toxic Air Contaminants from Outdoor Residential Waste Burning* and appendices (Initial Statement of Reasons) which provides estimates of potential cancer risk and other health impacts due to airborne emissions from burning residential waste in burn barrels; sets forth possible technologically feasible control alternatives; and discusses the potential environmental impacts and cost impacts to the affected industry, air districts, and local and state government for implementation and compliance with the proposed measure;

WHEREAS, the Initial Statement of Reasons and the 1990 *Proposed Dioxin Control Measure for Medical Waste Incinerators*, which is incorporated by reference in the Initial Statement of Reasons, constitute the report on the need and appropriate degree of regulation for dioxins required by Health and Safety Code section 39665;

WHEREAS, in accordance with Health and Safety Code section 39665(c), the proposed ATCM (see Attachment A) and the staff report and any relevant comments received during public consultation hereto 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 and concepts and drafts of the original proposal were discussed at public workshops held on December 4, 5, 6, 7, 10, and 17, 2001, and January 7, 9, 10, 15, 16, 17, 22, and 23, 2002;

WHEREAS, based on comments received during the 45-day comment period prior to the public hearing, staff has proposed modifications to the original proposal, which are set forth in Attachment B hereto;

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, 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 staff report, written comments, and public testimony it has received, the Board finds that:

1. Existing federal, state, and local regulations do not sufficiently protect the public health from dioxins, benzene, 1,3-butadiene, PCBs, PAHs, and other toxic air contaminant emissions from outdoor residential waste burning.
2. The use of burn barrels for combustion of residential waste may exacerbate the production of toxic air contaminants due to the reduction of oxygen flow, the relatively low heat of combustion, and the presence of contaminants in the ash residue or the waste confined in the barrel that may catalyze or promote toxic air contaminant formation and may promote the combustion of prohibited materials.
3. The components of the mixed waste in the barrels used for the U.S. EPA burn barrel measurements are comparable to the residential waste stream in California, excluding vegetation waste, so that additional source testing is not necessary.
4. Uncontrolled burning of household wastes outdoors at residences may result in potentially harmful concentrations of toxic air contaminants being entrained in the air, which may pose a significant health risk to exposed members of the public, particularly infants and children.
5. The proposed ATCM will substantially reduce toxic air emissions from burning household waste in burn barrels or piles on the ground as a means of disposal.

6. The staff report discusses, to the extent data could reasonably be made available, the factors specified in section 39665(b) of the Health and Safety Code and the proposed ATCM complies with the requirements of state law for control of sources of identified toxic air contaminants.
7. The proposed ATCM has been designed, in consideration of the factors specified in section 39665(b) of the Health and Safety Code, to reduce emissions from this source to the lowest levels presently achievable and constitutes the best available control technology as well as a pollution prevention measure.
8. The economic impacts of the proposed ATCM have been analyzed in the Initial Statement of Reasons as required by California law, and the impacts are reasonable and the ATCM is cost-effective.
9. Suitable alternatives currently exist for waste disposal that do not include burning household waste without any pollutant controls and which significantly reduce emissions from waste combustion or eliminate emissions of the toxic air contaminants from household waste entirely.
10. California rural areas have expressed legitimate short-term concerns regarding the difficulties of finding cost-effective alternatives and, to that end, the proposed ATCM provides exemptions to allow households in the very low population density areas to burn paper and cardboard only, reducing, but not entirely eliminating, public health impacts.
11. The benefits to human health, public safety, public welfare, or the environment justify the costs of the proposed ATCM.
12. No reasonable alternative considered would be more effective at carrying out the purpose for which the measure is proposed, or be as effective and less burdensome to the affected private persons and businesses than the proposed ATCM.

WHEREAS, the Board further finds, in accordance with the Health and Safety Code, section 39650(e), that, while absolute and undisputed scientific evidence may not be available to determine the exact extent of risk from toxic air contaminant emissions from outdoor residential waste burning, it is necessary to take action to protect public health; and

WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board further finds that:

1. No significant adverse environmental impacts are anticipated to occur from the proposed amendments, with the exception that there may be small increases in burning of prohibited wastes in fireplaces and wood stoves; in

illegal dumping of residential waste; or in the amount of waste sent to landfills.

2. Public education and outreach are a necessary and important component of successful implementation of the proposed ATCM to ensure that the public understands the basis and need for the regulation; to minimize the enforcement costs of the air districts; and to avoid the combustion of the materials in residential fireplaces and wood stoves and the illegal dumping of residential waste.
3. There may be a slight increase in waste sent to landfills, amounting to about one percent of the current statewide annual amount, although the increase could be substantially greater in the state's most rural jurisdictions, depending on the adequacy of their current collection and recycling facilities.
4. The Integrated Waste Management Board places great emphasis on jurisdictions demonstrating a good faith effort in moving towards the goal of 50 percent reduction in landfill disposal rates and the Integrated Waste Management Board and others may have some financial support available to boost recycling centers and other waste reduction efforts.
5. A coordinated approach to promoting alternatives to burning requires agency interaction and mutual support, because residential waste burning has impacts on fire safety, waste management, air quality and public health, the promotion of which is the mission of several different agencies.
6. A slight increase in motor vehicle emissions of particulate matter, oxides of nitrogen, volatile organic compounds, and toxic air contaminants, including particulate matter from diesel-powered refuse trucks, may ensue from new waste pickup service or self-hauling waste to the landfill or transfer station; however, the ARB staff analysis indicates that the environmental benefits of the proposed ATCM substantially outweigh these potential impacts.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby approves new section 93113, title 17, CCR, as set forth in Attachments A and B hereto.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to adopt the regulation set forth in Attachment A, as modified by Attachment B, in accordance with the Board's direction, and to make such other conforming modifications as may be appropriate, after making the modified regulatory language and any additional supporting documents and information 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 such modifications as may be appropriate in light of the comments received, and shall present the regulation 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 work with the California Air Pollution Control Officers Association, the Regional Council of Rural Counties, federal, state, and local fire agencies, and public health organizations to initiate a public education and outreach program to assist the air districts in implementing the ATCM.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to work with the Integrated Waste Management Board in its efforts to address local landfill diversion issues and to promote recycling and waste reduction through local educational programs.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to work with the California Air Pollution Control Officers Association to provide local maps clearly identifying exempt areas and to assist the air districts in filing expeditiously requests for exemptions where appropriate.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to submit the adopted regulation to the Office of Administrative Law with a request that this regulation become effective upon filing with the Secretary of State in order to facilitate expeditious air district implementation and public compliance.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to report back to the Board within one year of the implementation date of the ATCM on the progress of air district implementation of the regulation and the ARB's outreach and education efforts to facilitate compliance with the ATCM's requirements.

I hereby certify that the above is a true and correct copy of Resolution 02-2, as adopted by the Air Resources Board.

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Marie Kavan, Clerk of the Board

Resolution 02-2

February 21, 2002

Identification of Attachments to the Board Resolution

- Attachment A:** Proposed Outdoor Residential Waste Burning ATCM (section 93113, title 17, California Code of Regulations), as set forth in Appendix A of the Initial Statement of Reasons, released January 4, 2002.
- Attachment B:** Staff's Suggested Modifications to the Original Proposal (distributed at the Board hearing on February 21, 2002.)

