State of California
AIR RESOURCES BOARD

Resolution 86-71

August 21, 1986

Agenda Item No.: 86-9-2

WHEREAS, Sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to do such acts and to adopt such regulations as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the Board by law;

WHEREAS, Chapter 3.5 (commencing with Section 39650) of Part 2 of Division 26 of the Health and Safety Code establishes procedures for the identification of toxic air contaminants by the Board;

WHEREAS, Section 39655 of the Health and Safety Code defines a "toxic air contaminant" as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health;

WHEREAS, Section 39662 of the Health and Safety Code directs the Board to list, by regulation, substances determined to be toxic air contaminants, and to specify for each substance listed a threshold exposure level, if any, below which no significant adverse health effects are anticipated;

WHEREAS, chlorinated dioxins and dibenzofurans are emitted from a variety of combustion processes and have been measured in the emissions from sources similar to those now operating or proposed for construction in California;

WHEREAS, pursuant to the request of the Board, the Department of Health Services (DHS) evaluated the health effects of chlorinated dioxins and dibenzofurans in accordance with Section 39660 of the Health and Safety Code;

WHEREAS, DHS staff found that some chlorinated dioxins and dibenzofurans are proven animal carcinogens and concluded that dibenzo-p-dioxins and dibenzofurans chlorinated in the 2, 3, 7 and 8 positions and containing four, five, six or seven chlorine atoms (hereafter referred to as chlorinated dioxins and dibenzofurans) should be considered potential human carcinogens; chlorinated dioxins and dibenzofurans should be treated as substances without a carcinogenic threshold; health effects other than cancer are not expected to occur at predicted ambient levels; and the maximum excess lifetime cancer risk from exposure to these specific chlorinated dioxins and dibenzofurans are estimated to range from 0.6 to 38 cases per million people exposed per picogram per cubic meter;

WHEREAS, for the reasons set forth in its evaluation, DHS has concluded that, in the absence of strong positive evidence that carcinogenic substances act only through mechanisms which ought to have a threshold, these substances should be treated as acting without a threshold, and DHS has determined that insufficient evidence of a carcinogenic threshold exists at this time to allow the identification of a threshold exposure level with respect to chlorinated dioxins and dibenzofurans;

WHEREAS, upon receipt of the DHS evaluation, staff of the Board prepared a report including and in consideration of the DHS evaluation and recommendations and in the form required by Section 39661 of the Health and Safety Code and, in accordance with the provisions of that section, made the report available to the public and submitted it for review to the Scientific Review Panel (SRP) established pursuant to Section 39670 of the Health and Safety Code;

WHEREAS, in accordance with Section 39661 of the Health and Safety Code, the SRP reviewed the staff report, including the scientific procedures and methods used to support the data in the report, the data itself, and the conclusions and assessments on which the report was based, considered the public comments received regarding the report, and, on April 16, 1986 adopted for submittal to the Board, the following findings:

1. Chlorinated dioxins and dibenzofurans are potent toxins and are known carcinogens and/or promoters of carcinogenesis in animals.

2. Chlorinated dioxins and dibenzofurans, especially those chlorinated in the 2,3,7, and 8 positions and containing 4,5,6, or 7 chlorine atoms, are potential carcinogens or promoters of carcinogenesis in humans.

3. The current and planned waste-to-energy facilities in California will provide a high potential for emissions of chlorinated dioxins and dibenzofurans into air in the state.

4. An exposure level below which no significant health effects will occur cannot be identified.

WHEREAS, the SRP found the staff report to be without serious deficiency, and included in its findings the statement that the Panel agreed that chlorinated dioxins and dibenzofurans chlorinated in the 2, 3, 7 and 8 positions and containing four, five, six or seven chlorine atoms should be listed by the Air Resources Board as toxic air contaminants with no determined threshold below which adverse health effects will not occur;

WHEREAS, the staff has clarified that the purpose of this report is to assess the present and potential risk to public health posed by chlorinated dioxins and dibenzofurans for purposes of identifying these substances as toxic air contaminants under Section 39662 of the Health and Safety Code and is not

intended to serve as the basis for risk management decisions; a report containing an evaluation of the need and appropriate degree of regulation for these substances will be prepared by staff and considered in the future;

WHEREAS, new data relating to emissions of dioxins were presented which supplement the staff report and these data will be considered in the risk management phase of the process;

WHEREAS, the California Environmental Quality Act and Board regulations require that no activity having significant adverse environmental impacts be approved as originally proposed if feasible alternatives or mitigation measures are available;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with 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, including DHS' evaluation and recommendations, the available evidence, the findings of the SRP, and the written comments and public testimony it has received, the Board finds that:

Some chlorinated dioxins are proven animal carcinogens and concludes that chlorinated dioxins and dibenzofurans chlorinated in the 2, 3, 7 and 8 positions and containing four, five, six or seven chlorine atoms should be considered potential human carcinogens; and

There is not sufficient available scientific evidence at this time to support the identification of a threshold exposure level for these specific chlorinated dioxins and dibenzofurans; and

These specific chlorinated dioxins and dibenzofurans are air pollutants which, because of their carcinogenicity, may cause or contribute to an increase in mortality and an increase in serious illness, and pose a hazard to human health; and

Although some chlorinated dioxin and dibenzofuran emissions from waste-to-energy facilities were identified by the SRP and have been the subject of a large amount of public concern, the staff report has identified significant other sources of these pollutants now in operation and has recommended that all sources and potential sources be evaluated, and risk management recommendations should take into consideration the relative risk posed by different sources of these substances; and

Future recommendations on the management of risk due to emissions of chlorinated dioxins and dibenzofurans should reflect recent scientific developments in this area, because new information on these substances is continually becoming available; and

WHEREAS, the Board has determined, pursuant to the requirements of the California Environmental Quality Act and Board regulations, that this regulatory action will have no significant adverse impact on the environment.

NOW, THEREFORE BE IT RESOLVED, that the Board adopts the proposed regulatory amendments to Section 93000, Title 17, California Administrative Code, as set forth in Attachment A.

I hereby certify that the above is a true and correct copy of Resolution 86-71, as adopted by the Air Resources Board.

Harold Holmes

Harold Holmes, Board Secretary

Attachment A

Amend Title 17, California Administrative Code, Section 93000 to read as follows:

93000. Substances Identified As Toxic Air Contaminants. Each substance identified in this section has been determined by the state board to be a toxic air contaminant as defined in Health and Safety Code Section 39655. If the state board has found there to be a threshold exposure level below which no significant adverse health effects are anticipated from exposure to the identified substance, that level is specified as the threshold determination. If the board has found there to be no threshold exposure level below which no significant adverse health effects are anticipated from exposure to the identified substance, determination of "no threshold" is specified. If the board has found that there is not sufficient available scientific evidence to support the identification of a threshold exposure level, the "Threshold" column specifies "None identified."

Substance	Threshold
Benzene (C_6H_6)	None identified
Ethylene Dibromide ($BrCH_2CH_2Br$; 1,2-dibromoethane)	None identified
Ethylene Dichloride ($ClCH_2CH_2Cl$; 1,2-dichloroethane)	None identified
Hexavalent Chromium*, Cr(VI)	None identified
Asbestos* [asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, (amosite), tremolite, actinolite, and anthophyllite]	None identified
Dibenzo-p-dioxins and Dibenzofurans chlorinated in the 2,3,7 and 8 positions and containing 4,5,6 or 7 chlorine atoms	None identified

NOTE: Authority cited: Sections 39600, 39601 and 39662, Health and Safety Code. Reference: Sections 39650, 39660, 39661 and 39662, Health and Safety Code.

*Note: Compounds identified by an asterisk have been identified as toxic air contaminants by the Air Resources Board but not yet approved by the Office of Administrative Law.

State of California
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider the Adoption of a Regulatory Amendment Identifying Chlorinated Dioxins and Dibenzofurans as Toxic Air Contaminants

Agenda Item No.: 86-9-2

Public Hearing Date: July 25, 1986

Response Date: July 25, 1986

Issuing Authority: Air Resources Board

Comments: No comments were received identifying any significant environmental issues pertaining to this item. The staff report identified no adverse environmental effects.

Response: N/A

CERTIFIED: Harold Velmas
Board Secretary

Date: January 12, 1989

State of California

MEMORANDUM

To : Gordon Van Vleck
Secretary
Resources Agency

Date : January 13, 1988

Subject : Filing of Notice of Decisions of the Air Resources Board

Cary Allison
Board Secretary
From : **Air Resources Board**

Pursuant to Title 17, Section 60007 (b), and in compliance with Air Resources Board certification under Section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notice of decisions and response to environmental comments raised during the comment period.

ATTACHMENTS
86-68
86-70
86-71
86-94
86-98
86-99
86-115
87-9
87-61
87-62
87-66
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