

State of California  
AIR RESOURCES BOARD

Resolution 87- 82

September 10, 1987

Agenda Item No.: 87-12-1

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, in California, carbon tetrachloride (CCl<sub>4</sub> and tetrachloromethane, hereinafter "carbon tetrachloride") has been measured in the atmosphere and is emitted from many activities including the manufacture of carbon tetrachloride, the production of fluorocarbons, the agricultural application of carbon tetrachloride as a grain fumigant, the production of chlorinated paraffin wax, and the use of carbon tetrachloride as an industrial solvent;

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

WHEREAS, DHS concluded in its evaluation that carbon tetrachloride is an animal carcinogen and a potential human carcinogen; that health effects other than cancer are not expected to occur at existing or expected ambient levels of carbon tetrachloride; and that the maximum excess lifetime cancer risk from carbon tetrachloride exposure is estimated to range from 10 to 42 cases per million people exposed per 0.16 parts per billion (1 microgram per cubic meter);

WHEREAS, for the reasons set forth in its evaluation, DHS concluded that in the absence of strong positive evidence that carbon tetrachloride acts only through mechanisms which ought to have a threshold, carbon tetrachloride

should be treated as acting without a threshold, and DHS has determined that there is not sufficient available scientific evidence at this time to support the identification of a carbon tetrachloride exposure level below which carcinogenic effects would not have some probability of occurring;

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 June 3, 1987, adopted for submittal to the Board findings which included the following:

- "1. Carbon tetrachloride has been identified as an animal carcinogen and recommends that it be regarded as a potential human carcinogen.
2. Carbon tetrachloride is emitted into the air by a variety of sources in California, and its presence has been documented in the ambient air around the state.
3. Adverse health effects other than cancer are not expected to occur at measured or predicted carbon tetrachloride concentrations in the ambient air.
4. Based on available scientific information, a carbon tetrachloride exposure level below which carcinogenic effects are not expected to occur cannot be identified.
5. Based on an interpretation of available scientific evidence by DHS staff, the range of lifetime excess cancer risk from exposure to 0.16 ppb (1 ug/m<sup>3</sup>) of atmospheric carbon tetrachloride based on the best estimate of risk and the upper 95% confidence limit is estimated to be 10 to 42 cases per million people exposed. These upper-bound excess lifetime risks are health conservative estimates; the actual risk is likely to be below these values.
6. It should be noted that the animal carcinogenesis data used for risk assessment are not completely satisfactory and therefore the estimates of risk need to be viewed with caution until more reliable data are available."

WHEREAS, the SRP found the staff report to be without serious deficiency, and the SRP agreed that carbon tetrachloride should be listed by the Air Resources Board as a toxic air contaminant, and that based on available

scientific information, a carbon tetrachloride exposure level below which carcinogenic effects are not expected to occur cannot be identified;

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

Carbon tetrachloride is an animal carcinogen and a potential human carcinogen;

Health effects other than cancer are not anticipated at existing ambient carbon tetrachloride exposure levels;

There is not sufficient available scientific evidence to support the identification of a threshold exposure level for carbon tetrachloride; and

Carbon tetrachloride is an air pollutant which, because of its carcinogenicity, 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; 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 amendment to Section 93000, Titles 17 and 26, California Administrative Code, as set forth in Attachment A.

I hereby certify that the above is a true and correct copy of the Resolution 87-82, as adopted by the Air Resources Board.

  
Harold Holmes, Board Secretary

Amend Titles 17 and 26, 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, a 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."

| <u>Substance</u>   | <u>Threshold Determination</u> |
|--|--------------------------------|
| Benzene (C <sub>6</sub> H <sub>6</sub> )   | None identified                |
| Ethylene Dibromide<br>(BrCH <sub>2</sub> CH <sub>2</sub> Br;<br>1,2-dibromoethane)   | None identified                |
| Ethylene Dichloride<br>(ClCH <sub>2</sub> CH <sub>2</sub> Cl;<br>1,2-dichloroethane)   | None identified                |
| Hexavalent Chromium (Cr(VI))   | None identified                |
| Asbestos [asbestiform varieties<br>of serpentine (chrysotile)<br>riebeckite (crocidolite)<br>cummingtonite-grunerite<br>(amosite), tremolite,<br>actinolite, and<br>anthophyllite] | None identified                |
| Dibenzo-p-dioxins and<br>Dibenzofurans chlorinated<br>in the 2,3,7 and 8 positions<br>and containing 4,5,6 or 7<br>chlorine atoms  | None identified                |
| Cadmium (metallic cadmium<br>and cadmium compounds)*   | None identified                |
| <u>Carbon tetrachloride</u><br><u>(CCl<sub>4</sub>; tetrachloromethane)</u>  | <u>None identified</u>         |

State of California  
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Notice of Public Hearing to Consider the Adoption of a  
Regulatory Amendment Identifying Carbon Tetrachloride as a  
Toxic Air Contaminant

Agenda Item No.: 87-12-1

Public Hearing Date: September 10, 1987


Response Date:

Issuing Authority: Air Resources Board

Comment: 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: \_\_\_\_\_

  
Board Secretary

Date: \_\_\_\_\_

2/9/88

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State of California

MEMORANDUM

To : Gordon Van Vleck  
Secretary  
Resources Agency

Date : August 24, 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

87-30  
87-62  
87-82  
87-83  
87-90  
87-91  
87-92  
87-95  
88-9  
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