

Final

Marine Corps Air Station El Toro
Hazardous Material/Hazardous Waste
Management Plan

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Appendix H
State and Local Requirements



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**FINAL HAZARDOUS MATERIAL AND WASTE
MANAGEMENT PLAN.**

DATED 08/01/1994

(APPENDIX I: PHOTOGRAPHS)

IS ENTERED IN THE DATABASE AND FILED AS
ADMINISTRATIVE RECORD NUMBER:

NO. M60050.001595

**FINAL HAZARDOUS MATERIAL AND WASTE
MANAGEMENT PLAN.**

DATED 08/01/1994

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**FINAL HAZARDOUS MATERIAL AND WASTE
MANAGEMENT PLAN.**

(APPENDIX A THRU G)

DATED 08/01/1994

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Division 19.1. Office of Emergency Services

(Title 19)

§ 19-2703. Immediate Reporting of a Release or a Threatened Release.

(a) A person shall provide an immediate, verbal report of any release or threatened release of a hazardous material to the administering agency and the Office of Emergency Services* as soon as:

- (1) a person has knowledge of the release or threatened release;
- (2) notification can be provided without impeding immediate control of the release or threatened release;
- (3) notification can be provided without impeding immediate emergency medical measures.

(b) The immediate reporting pursuant to subsection (a) of this section shall include, as a minimum:

- (1) the exact location of the release or threatened release;
- (2) the name of the person reporting the release or threatened release;
- (3) the hazardous materials involved in the release or threatened release;
- (4) an estimate of the quantity of hazardous materials involved; and
- (5) if known, the potential hazards presented by the hazardous material involved in the release or threatened release;

(c) The immediate reporting pursuant to subsection (a) of this section shall not be required if there is a reasonable belief that the release or threatened release poses no significant present or potential hazard to human health and safety, property, or the environment.

(d) Immediate reporting pursuant to subsection (a) of this section shall be made to the Office of Emergency Services, at telephone number (800) 852-7550 or (916) 427-4341, and to the local administering agency. The

administering agency may designate a call to the 911 emergency number as meeting the requirement to call the administering agency.

(e) The notifications in subsection (d) shall constitute compliance with the requirements of subdivision (b) of section 11004 of title 42 of the United States Code (1989) regarding verbal notification of the State Emergency Planning Commission and the Local Emergency Planning Committee.

* For additional guidance on notification procedures, consult the State of California Hazardous Material Incident Contingency Plan (HMICP).

NOTE: Authority: Sections 25503, 25503.1 and 25520, Health and Safety Code. Reference: Sections 25503(b)(4), 25503.1, 25507, 25518 and 25520, Health and Safety Code.

HISTORY

1. Certificate of Compliance as to 1-17-86 order including amendment of subsection (c) transmitted to OAL 5-16-86 and filed 6-16-86 (Register 86, No. 25).
2. Amendment of subsection (d) and new subsection (e) filed 9-20-90; operative 10-20-90 (Register 90, No. 45).

§ 19-2705. Written Reporting of Emergency Releases.

(a) If required to submit a written emergency release follow-up notice pursuant to 42 U.S.C. section 11004(c) (1989), or as that section may be subsequently amended, a business shall prepare the written emergency release follow-up notice using the form specified in subsection (c) of this section.

(b) A written emergency release follow-up notice prepared pursuant to subsection (a) shall be sent to the Chemical Emergency Planning and Response Commission (CEPRC) at 2800 Meadowview Road, Sacramento, CA 95832. This written report shall be sent as soon as practicable following a release, but no later than 30 days from the date of the release.

(c) The following reporting form (with instructions), the 'Emergency Release Follow-up Notice Reporting Form,' shall be used for filing the written emergency release follow-up notice required by subsection (a) of this section. This form may be reproduced, as needed.

EMERGENCY RELEASE FOLLOW-UP NOTICE REPORTING FORM

| | | | | |
|---|--|--|---|-----|
| A | BUSINESS NAME | FACILITY EMERGENCY CONTACT & PHONE NUMBER () | | |
| B | INCIDENT MO DAY YR DATE | TIME OES NOTIFIED (use 24 hr time) | OES CONTROL NO | |
| C | INCIDENT | CITY/COMMUNITY | COUNTY | ZIP |
| | CHEMICAL OR TRADE NAME (print or type) | | CAS Number | |
| D | CHECK IF CHEMICAL IS LISTED IN 40 CFR 355, APPENDIX A <input type="checkbox"/> | | CHECK IF RELEASE REQUIRES NOTIFICATION UNDER 42 U.S.C. § 9603(a) <input type="checkbox"/> | |
| | PHYSICAL STATE CONTAINED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS | PHYSICAL STATE RELEASED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS | QUANTITY RELEASED | |
| | ENVIRONMENTAL CONTAMINATION <input type="checkbox"/> AIR <input type="checkbox"/> WATER <input type="checkbox"/> GROUND <input type="checkbox"/> OTHER | TIME OF RELEASE | DURATION OF RELEASE _____ DAYS _____ HOURS _____ MINUTES | |
| E | ACTIONS TAKEN | | | |
| | KNOWN OR ANTICIPATED HEALTH EFFECTS (Use the comments section for additional information) | | | |
| F | <input type="checkbox"/> ACUTE OR IMMEDIATE (explain) _____ <input type="checkbox"/> CHRONIC OR DELAYED (explain) _____ <input type="checkbox"/> NOT KNOWN (explain) _____ | | | |
| G | ADVICE REGARDING MEDICAL ATTENTION NECESSARY FOR EXPOSED INDIVIDUALS | | | |
| H | COMMENTS INDICATE SECTION (A-G) AND ITEM WITH COMMENTS OR ADDITIONAL INFORMATION | | | |
| I | CERTIFICATION: I hereby certify under penalty of law that I have personally examined and I am familiar with the information submitted and believe the submitted information is true, accurate, and complete. REPORTING FACILITY REPRESENTATIVE (print or type) _____ SIGNATURE OF REPORTING FACILITY REPRESENTATIVE _____ DATE _____ | | | |

**EMERGENCY RELEASE FOLLOW-UP NOTICE
REPORTING FORM INSTRUCTIONS****GENERAL INFORMATION:**

Chapter 6.95 of Division 20 of the California Health and Safety Code requires that written emergency release follow-up notices prepared pursuant to 42 U.S.C. § 11004, be submitted using this reporting form. Non-permitted releases of reportable quantities of Extremely Hazardous Substances (listed in 40 CFR 355, appendix A) or of chemicals that require release reporting under section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 U.S.C. § 9603(a)] must be reported on the form, as soon as practicable, but no later than 30 days, following a release. The written follow-up report is required in addition to the verbal notification.

BASIC INSTRUCTIONS:

- The form, when filled out, reports follow-up information required by 42 U.S.C § 11004. Ensure that all information requested by the form is provided as completely as possible.
- If the incident involves reportable releases of more than one chemical, prepare one report form for each chemical released.
- If the incident involves a series of separate releases of chemical(s) at different times, the releases should be reported on separate reporting forms.

SPECIFIC INSTRUCTIONS:

Block A: Enter the name of the business and the name and phone number of a contact person who can provide detailed facility information concerning the release.

Block B: Enter the date of the incident and the time that verbal notification was made to OES. The OES control number is provided to the caller by OES at the time verbal notification is made. Enter this control number in the space provided.

Block C: Provide information pertaining to the location where the release occurred. Include the street address, the city or community, the county and the zip code.

Block D: Provide information concerning the specific chemical that was released. Include the chemical or trade name and the Chemical Abstract Service (CAS) number. Check all categories that apply. Provide best available information on quantity, time and duration of the release.

Block E: Indicate all actions taken to respond to and contain the release as specified in 42 U.S.C. § 11004(c).

Block F: Check the categories that apply to the health effects that occurred or could result from the release. Provide an explanation or description of the effects in the space provided. Use Block H for additional comments/information if necessary to meet requirements specified in 42 U.S.C. § 11004(c).

Block G: Include information on the type of medical attention required for exposure to the chemical released. Indicate when and how this information was made available to individuals exposed and to medical personnel, if appropriate for the incident, as specified in 42 U.S.C. § 11004(c).

Block H: List any additional pertinent information.

Block I: Print or type the name of the facility representative submitting the report. Include the official signature and the date that the form was prepared.

MAIL THE COMPLETED REPORT TO:

**Chemical Emergency Planning and Response Commission (CEPRC)
Local Emergency Planning Committee (LEPC)
Attn: Section 304 Reports
2800 Meadowview Road
Sacramento, CA 95832**

NOTE: Authority cited: Sections 25503, 25503.1 and 25507.1, Health and Safety Code. Reference: Sections 25503(b)(4), 25503.1, 25507.1, 25518 and 25520, Health and Safety Code.

HISTORY:

1. New section filed 9-20-90; operative 10-20-90 (Register 90, No. 45).

§ 19-2720. Proposed Area Plans.

The proposed area plan, as required by Section 25503(d) of the Health and Safety Code, shall include:

- (a) a description of the extent to which the administering agency has met the requirements of this Article, and a schedule for implementing the final area plan, by December 29, 1987, to include the provisions of Sections 2722-2736 of this Article;
- (b) provisions for integrating, in the final area plan, information from business plans submitted by handlers within the jurisdiction of an administering agency; and
- (c) a form providing information on the elements within the area plan, substantially equivalent to the following optional model reporting form for area plans.

NOTE: Authority cited: Sections 25503 and 25517.5, Health and Safety Code. Reference: Section 25503, Health and Safety Code.

HISTORY

1. New section filed 7-30-86; operative 8-29-86 (Register 86, No. 31).
2. Amendment of subsections (a) and (b) and new subsection (c) filed 9-12-86 as an emergency; operative 9-12-86 (Register 86, No. 37). A Certificate of Compliance must be transmitted no later than 1-12-87 or emergency language will be repealed by operation of law (Gov. C. 11346.1).
3. Certificate of Compliance transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).
4. Amendment of subsection (a) filed 9-17-87 as an emergency; operative 9-17-87 (Register 87, No. 38). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 1-15-88.
5. Reinstatement of subsection (a) as it existed prior to emergency amendment filed 9-17-87 pursuant to Government Code Section 11346.1(f) (Register 89, No. 51).

(a) provisions for notification of, and coordination with, emergency response personnel, such as, but not limited to, law enforcement, fire service, medical and public health services, poison control centers, hospitals, and resources for the evacuation, reception and care of evacuated persons;

(b) identification and utilization of alternative forms of emergency communications (such as amateur radio services), in the event of a loss of primary communications;

(c) a responsibility matrix or listing of specific emergency responsibilities of responding organizations. This matrix or listing shall be developed in coordination with the listed responding organizations; and

(d) provisions for notification to the Office of Emergency Services of all reports received pursuant to Article 2 of this subchapter. These notifications shall be submitted, at least monthly, on forms specified by the Office of Emergency Services.

NOTE: Authority cited: Section 25503, Health and Safety Code. Reference: Section 25503, Health and Safety Code. (New section filed 7-30-86, operative 8-29-86; Register 86, No. 31).

HISTORY

1. Editorial renumbering of former Section 2724 to Section 2722 and Section 2728 to Section 2724 (Register 86, No. 37).
2. Amendment of subsections (b) and (c) and addition of subsection (d) filed as an emergency 9-12-86, operative 9-12-86, making the following changes: Subsection (b) deleted "and" at end of subsection; Subsection (c) added "and" at end of subsection; New subsection (d) was added and read as follows: "(d) provisions for notification to the Office of Emergency Services of all reports received pursuant to Article 2 of this subchapter. These notifications shall be submitted, at least monthly, on forms specified by the Office of Emergency Services." Certificate of Compliance must be transmitted no later than 1-12-87, or emergency language will be repealed by operation of law (Gov. C. § 11346.1); (Register 86, No. 37).
3. Certificate of Compliance transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).

§ 19-2726. Public Safety and Information.

Area plans shall include, but not be limited to:

- (a) site perimeter security procedures for use during a release or threatened release of hazardous material;
- (b) provisions for informing business personnel and the affected public of safety procedures to follow during a release or threatened release of a hazardous material;
- (c) designation of responsibility for the coordinated release of safety information to the public and to the local Emergency Broadcast System;
- (d) provisions for informing medical and health facilities of the nature of the incident and the substance(s) involved in an incident; and
- (e) provisions for evacuation plans. Evacuation planning shall provide for the following elements:
 - (1) determination of the necessity for evacuation;
 - (2) centralized coordination of information with local law, fire, public health, medical, and other emergency response agencies;
 - (3) timely notification of the affected public, including release of messages prepared pursuant to subsections (c) and (d) of this section;
 - (4) properties of hazardous materials, such as quantity, concentration, vapor pressure, density, and potential health effects;
 - (5) possible release scenarios;
 - (6) facility characteristics, topography, meteorology, and demography of potentially affected areas;
 - (7) ingress and egress routes and alternatives;
 - (8) location of medical resources trained and equipped for hazardous material response;
 - (9) mass-care facilities, reception areas, and sheltering; and
 - (10) procedures for post-emergency period population recovery.

NOTE: Authority cited: Sections 25503 and 25517.5, Health and Safety Code. Reference: Section 25503, Health and Safety Code. (New section filed 7-30-86, operative 8-29-86; Register 86, No. 31).

HISTORY

1. Editorial renumbering of former Section 2726 to Section 2723 and Section 2732 to Section 2726 (Register 86, No. 37).

§ 19-2724. Notification and Coordination.

Area plans shall include, but not be limited to:

| OPTIONAL MODEL REPORTING FORM - AREA PLAN | | | |
|---|------------------|--|------------------------------|
| CHECKLIST for AREA PLAN ELEMENT and reference section | ELEMENT ATTACHED | ELEMENT NOT PROVIDED, JUSTIFICATION ATTACHED | PROPOSED DATE FOR COMPLETION |
| § 2722-EMERGENCY RESPONSE PROCEDURES | | | |
| Approach, Recognition & Evaluation | | | |
| Personnel Monitoring & Decontamination | | | |
| Equipment Monitoring & Decontamination | | | |
| § 2723 - PRE-EMERGENCY PLANNING | | | |
| Pre-Incident Site Surveys | | | |
| Planning & Coordination | | | |
| Emergency Funding Access | | | |
| Disposal Facility Access | | | |
| Emergency Response Contractor Access | | | |
| Integrated Response Management System | | | |
| § 2724-NOTIFICATION & COORDINATION | | | |
| Notification & Coordination | | | |
| Emergency Communications | | | |
| Responsibility Matrix | | | |
| OES Notification | | | |
| § 2725 - TRAINING | | | |
| Emergency Response Personnel Training | | | |
| Training Documentation | | | |
| Training Exercises | | | |
| § 2726-PUBLIC SAFETY & INFORMATION | | | |
| Site Perimeter Security | | | |
| Safety Procedure Information | | | |
| Information Release Responsibility | | | |
| Medical Notification | | | |
| Evacuation Plans | | | |
| § 2727 - SUPPLIES & EQUIPMENT | | | |
| Listing & Description | | | |
| Testing & Maintenance | | | |
| § 2728-INCIDENT CRITIQUE & FOLLOWUP | | | |

2. Amendment of subsection (e) filed as an emergency 9-12-86, operative 9-12-86, making the following changes:

Subsection (e): substituted "a determination of the businesses that, because of their size and nature, should participate in evacuation planning. Factors to be considered in planning for evacuation, shall include, but not be limited to:" for "provisions for evacuation plans. Evacuation planning shall provide for the following elements:"

A new subsection (e)(1) was added and read as follows: "(1) determination of the necessity for evacuation;"

Existing subsections (e)(1) through (9) were redesignated as consecutive subsections (e)(2) through (10);

Certificate of Compliance must be transmitted no later than 1-12-87, or emergency language will be repealed by operation of law (Gov. C. § 11346.1); (Register 86, No. 37).

3. Certificate of Compliance transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).

§ 19-2729. Inventory of Hazardous Materials.

(a) Each business plan shall include an inventory of all hazardous materials handled. The inventory shall include, but not be limited to:

(1) the chemical name and common names of every hazardous material (including acutely hazardous material) handled in quantities equal to or greater than quantities specified in section 25503.5(a) of the Health and Safety Code or in quantities greater than the threshold planning quantities specified in 40 C.F.R. section 355, appendix A, whichever is less;

(2) the federal hazard categories for hazardous chemicals including hazardous waste, using the hazard categories defined in 40 C.F.R. section 370.2;

(3) the maximum amount of each hazardous material or mixture containing a hazardous material included in subsection (a)(1) that is handled at any one time over the course of a year. These amounts must be expressed in commonly understood units appropriate to the manner in which the hazardous materials are handled (e.g., gallons, cubic feet, kilograms, pounds, curies);

(4) information clearly describing how and where the hazardous materials are handled. Clear and legible diagrams and annotated site maps shall be used for this purpose, when determined necessary by the administering agency. Public availability of this information is subject to section 25506(a) of the Health and Safety Code;

(5) the Standard Industrial Classification (SIC) code and nature of the business;

(6) the name, title, and 24-hour telephone number of a contact person, and alternate, representing the business who can provide technical information and assistance in the event of a release or threatened release of hazardous materials. The contact person shall have full facility access, site familiarity, and authority to make decisions for the business regarding incident mitigation, in conjunction with the administering agency and emergency response services.

(7) the three digit state waste number, if a hazardous waste, using the number listed on the California Department of Health Services Uniform Hazardous Waste Manifest, DHS Form 8022;

(8) the maximum capacity of the largest container on site for each hazardous material, mixture, or waste listed on the inventory form;

(9) the total estimated amounts of each hazardous waste handled by the business throughout the course of the year, and

(10) any additional Tier II inventory information required by 42 U.S.C. section 11022 (1989), or as that section may be subsequently amended.

When the information required by this subsection changes, the handler shall promptly notify the administering agency pursuant to Health and Safety Code, section 25510.

(b) The inventory of information declared to be trade secret shall be placed on a separate chemical inventory sheet from the information not declared to be trade secret. The trade secret information chemical inventory sheets shall be clearly marked "Trade Secret."

(c) Notwithstanding 42 U.S.C. section 11022(b) (1989), information on all inventory elements included in subsection (a) of this section shall be provided for all hazardous material handled in quantities equal to or

greater than the quantities specified in section 25503.5 of the Health and Safety Code or in quantities greater than the threshold planning quantities specified in 40 C.F.R. section 355, appendix A, whichever is less.

(d) For mixtures containing hazardous materials, the inventory information required by this section shall be provided by reporting either;

(1) the required information for each component in the mixture which is a hazardous material; or

(2) the required information on the entire mixture.

(e) A mixture is reportable if the quantity of any hazardous component:

(1) is equal to or greater than 55 gallons, 500 pounds, or 200 cubic feet of gas (gas calculated at standard temperature and pressure); or

(2) is greater than the applicable federal threshold planning quantity for an extremely hazardous substance specified in 40 C.F.R. 355, appendix A.

(f) The quantity of any hazardous component in a mixture shall be determined by:

(1) multiplying the weight percent of hazardous component (greater than 1%, or 0.1% if a carcinogen) by the mass of the mixture in pounds, gallons, or cubic feet of gas at standard temperature and pressure; or

(2) the total quantity of the mixture if reported pursuant to (d)(2) of this section.

(g) The inventory of hazardous materials required by subsection (a) of this section shall be submitted annually, on or before March 1, on such date as may be specified by the administering agency.

NOTE: Authority cited: Sections 25503, 25503.1, 25509(c) and 25517.5, Health and Safety Code. Reference: Sections 25503, 25503.1, 25503.5, 25503.8, 25504, 25505(d), 25509, 25509.3, 25510 and 25511, Health and Safety Code.

HISTORY

1. Editorial renumbering of former section 2752 to section 2729 (Register 86, No. 37).
2. Amendment of subsections (a) and (b) filed as an emergency 9-12-86; operative 9-12-86, making the following changes:
Subsection (a)(1) added "in quantities equal to or higher than quantities specified in section 25503.5(a) of the Health and Safety Code"; after "handled"; Subsection (a)(2) deleted "handled" and added "handled in quantities equal to or greater than quantities specified in section 25503.5(a) of the Health and Safety Code"; after "constituents"; Subsection (a)(3) added "or mixture containing a hazardous material" after "hazardous material"; and deleted "and the total amount handled" after "handled at any one time"; Subsection (b) spelling corrected ("separate"); Certificate of Compliance must be transmitted no later than 1-12-87, or section will be repealed by operation of law (Gov. C. 11346.1); (Register 86, No. 37).
3. Certificate of Compliance transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).
4. Amendment filed 9-20-90; operative 10-20-90 (Register 90, No. 45).

§ 19-2730. Optional Model Inventory Reporting Form.

The following optional form (the California Hazardous Material Optional Model Inventory Form), with instructions, may be used, with the approval of the administering agency, to report the inventory required by section 2729 of this article and Health and Safety Code section 25504. This form may be reproduced, as needed. The administering agency may prescribe the appropriate inventory form and the specifications for all business plan submittals within its jurisdiction.*

*Note: In developing local forms and specifications, the administering agency is authorized to adopt or amend existing recognized hazardous material reporting systems such as the Hazardous Material Management Plan (HMMP) in article 80 of the Uniform Fire Code, or to develop local data management formats, provided that all inventory information specified in section 2729(a) of this article is included.

NOTE: Authority cited: Sections 25503, 25503.1, 25509(c) and 25517.5, Health and Safety Code. Reference: Sections 25503, 25503.1, 25503.5, 25503.8, 25504, 25505(d), 25509, 25509.3, 25510 and 25511, Health and Safety Code.

HISTORY

1. Editorial renumbering of former section 2730 to section 2725 and section 2754 to section 2730 (Register 86, No. 37).
2. Amendment of Optional Model Reporting Form: Hazardous Materials Inventory sections H and I and Instructions-Hazardous Material Inventory Reporting Form, subsections H(2), (3) and (4) filed as an emergency 9-12-86; operative 9-12-86 making the following changes:
Section H: deleted "Quantities" and "Total Amount in Year";

Section I: Spelling corrected ("Separate"); Added "if required by the appropriate administering agency" after "facility";

Subsection H(2): added "and" after "names";

Subsection H(3): deleted "and" after "time";

Subsection H(4): deleted "(4) total amount handled over the year";

Certificate of Compliance must be transmitted no later than 1-12-87, or emer-

gency language will be repealed by operation of law (Gov. C. 11346.1) (Register 86, No. 37).

3. Certificate of Compliance including amendment transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).

4. Amendment filed 9-20-90; operative 10-20-90 (Register 90, No. 45).

5. Editorial correction of printing error deleting duplicate NOTE and HISTORY following forms (Register 91, No. 32).

**GUIDE FOR COMPLETING THE CALIFORNIA
HAZARDOUS MATERIAL OPTIONAL MODEL INVENTORY FORM**

There are minimum hazardous material inventory reporting and data management requirements in chapter 6.95 of division 20 of the California Health and Safety Code and section 11022 of title 42 of the United States Code (1989). This model optional reporting form is provided to assist California businesses and administering agencies. The form is designed to include all inventory information mandated under both state and federal laws. Facilities should contact their local administering agency for guidance on locally required forms and inventory information.

FACILITY OWNER/OPERATOR INFORMATION

Note that page 1 is for information on the facility owner and operator, emergency contacts, and selected emergency planning data only.

| <u>DATA ELEMENT</u> | <u>INFORMATION REQUIRED</u> |
|-------------------------|---|
| Business name | Enter the full legal name of the business or facility. |
| Facility street address | Enter the street address where the facility is located. Do not use post office box numbers. The information must provide a means to geographically locate the facility. |
| City | Enter the city where your facility is located. If not within city limits, enter the city used for your mailing address. |
| State | Enter State abbreviation. |
| Zip Code | Enter Zip Code. |
| Dun & Bradstreet # | Enter Dun & Bradstreet # for your facility. |
| SIC Code | Enter the facility Standard Industrial Classification Code. |
| Nature of Business | Provide a short statement on the type of business being conducted at the facility. |
| Owner/Operator Name | Enter name of the facility owner or operator. |
| Mailing Address | If different from the facility street address, enter the owner/operator's mailing address. Include city, state, and zip code in the spaces provided. |

EMERGENCY CONTACTS

| <u>DATA ELEMENT</u> | <u>INFORMATION REQUIRED</u> |
|---------------------|---|
| Primary contact | Include the name, business phone, 24-hour phone, and title of a facility official that can be contacted in case of an emergency involving hazardous material at the facility. |
| Secondary contact | Include the same information as above for a facility official designated to act as an alternate contact person. |

EMERGENCY PLANNING INFORMATION

Facility Emergency Coordinator: Provide the name of the person at the facility designated to serve as the facility emergency coordinator. This person must be able to provide necessary facility emergency planning information.

Do you handle any of the extremely hazardous substances listed in 40 CFR 355, appendix A, at your facility, regardless of the quantity? Check the appropriate box, yes or no.

Are there "sensitive facilities" (schools, hospitals, or extended care facilities) located within 1000 feet of your facility? Check the appropriate box, yes or no.

CERTIFICATION

Print the full name of the facility owner/operator and the full name of the person who prepared the inventory submittal information. Enter the official signature of the facility owner/operator in the space provided. The signature certifies that all information contained in the inventory report (including subsequent chemical description information) is true, accurate, and complete.

CHEMICAL DESCRIPTION

NOTE: you must complete a separate Chemical Description block for each hazardous material and hazardous waste that you handle at your facility in amounts equal to or greater than 500 pounds, 55 gallons, or 200 cubic feet of gas (calculated at standard temperature and pressure). You must also complete a separate Chemical Description block for each extremely hazardous substance (listed in 40 CFR 355, appendix A) handled in amounts greater than the federal threshold planning quantity or in amounts equal to or greater than 500 pounds, whichever is less. List hazardous material and extremely hazardous substance information on separate sheets. If you claim trade secret status for any materials inventoried, list all trade secret information on separate Chemical Description pages. Do not mix trade secret information and non-trade secret information on the same page. Check the appropriate box at the top of each page to identify the information on that page as either trade secret or non-trade secret.

| <u>DATA ELEMENT</u> | <u>INFORMATION REQUIRED</u> |
|---------------------|---|
| Common name | Enter the common name of the chemical or waste. |
| CAS # | Enter the Chemical Abstracts Service number for the material. |
| Chemical name | Enter the chemical name of the substance using the proper chemical terminology. Avoid use of trade names. |

DATA ELEMENT

INFORMATION REQUIRED

DOT # (optional)

If required by the administering agency, enter the 4-digit material ID# as listed in the DOT emergency response guidebook.

Solid

If the material is solid, check the appropriate box.

Liquid

If the material is liquid, check the appropriate box.

Gas

If the material is a gas, check the appropriate box.

Pure

If the material is a pure chemical, check the appropriate box.

Mixture

If the material is a mixture check the appropriate box.

Waste

If the material is a waste, check the appropriate box and provide an estimate of the annual amount of this specific waste generated.

Radioactive

If the material is radioactive, check the appropriate box and fill in number of curies.

Waste Classification

If the material is a waste, enter the appropriate California state waste 3-digit code (listed on the back of the California uniform hazardous waste manifest).

Physical & Health

Hazard Categories

Check the appropriate categories that describe the physical and health hazards associated with the material listed.

Amount & Time at Facility

Check the unit of measure that is most appropriate for the material being inventoried (gallons, pounds, cubic feet, grams, kilograms, or other). Fill in the maximum daily amount on hand at any one time during the year. Calculate the average daily amount on hand during the previous calendar year. List the total number of days during the previous calendar year that the material was on site. Provide the total capacity of the largest container on site for the specific material.

Storage Codes & Location

This section of the form relies on development of a facility map and use of a coding system to indicate type of storage, storage temperature and storage pressure. Contact the administering agency for the appropriate system to use.

- Grid coordinate #

Enter the storage location as a function of a grid coordinate system from the facility map to identify storage locations for the material.

- C

In this column, enter the code that best describes the type of storage container at the location specified. Use codes below:

| <u>CODE</u> | <u>STORAGE TYPE</u> |
|-------------|------------------------------|
| A | Above ground tank |
| B | Below ground tank |
| C | Tank inside building |
| D | Steel drum |
| E | Plastic or non-metallic drum |
| F | Can |
| G | Carboy |
| H | Silo |
| I | Fiber drum |
| J | Bag |
| K | Box |
| L | Cylinder |
| M | Glass bottle or jug |
| N | Plastic bottle or jug |
| O | Tote bin |
| P | Tank wagon |
| Q | Rail car |
| R | Other |

- P

In this column, enter the code that best describes the storage pressure for the specific material and location. Use codes below:

| <u>CODE</u> | <u>STORAGE PRESSURE</u> |
|-------------|-------------------------------|
| 1 | Ambient Pressure |
| 2 | Greater than ambient pressure |
| 3 | Less than ambient pressure |

- T

In this column, enter the code that best describes the storage temperature for the specific material and location. Use codes below:

| <u>CODE</u> | <u>STORAGE TEMPERATURE</u> |
|-------------|----------------------------------|
| 4 | Ambient temperature |
| 5 | Greater than ambient temperature |
| 6 | Less than ambient temperature |
| 7 | Cryogenic conditions |

California Hazardous Material
Optional Model Inventory Form

Page 1 of ____

| | |
|------------------------------|-------|
| For Administering Agency Use | |
| Date Received | _____ |
| Facility ID # | _____ |

FACILITY & OWNER/
OPERATOR IDENTIFICATION

Reporting Period
1/1 to 12/31 19____

| | | |
|---------------------------------|-----------------------|---------------|
| Business Name: | | |
| Facility Street Address: | | |
| City: | State: | Zip Code: |
| Dun & Bradstreet #: | SIC Code (4 digit #): | |
| Nature of Business: | | |
| Owner/Operator Name: | | Phone Number: |
| Mailing Address (if different): | | |
| City: | State: | Zip Code: |

| EMERGENCY CONTACTS | |
|--------------------|-----------------|
| Primary | Secondary |
| Name: | Name: |
| Business Phone: | Business Phone: |
| 24-hour Phone: | 24-hour Phone: |
| Title: | Title: |

| EMERGENCY PLANNING INFORMATION | |
|--|--|
| Name of Facility Emergency Coordinator if different from above: _____ | |
| For State/Fed planning: We handle extremely hazardous substances listed in 40 CFR 355, Appendix A. | There are school(s)'s/hospital(s)'s/extended care facilities within 1,000 ft (straight line distance) of my facility |
| <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> yes <input type="checkbox"/> no |

| | |
|--|-------------------|
| CERTIFICATION: I certify under penalty of law that I have personally examined and I am familiar with the information submitted and believe the information is true, accurate, and complete. | |
| Print Name of Owner/Operator | _____ |
| Print Name of Document Preparer | _____ |
| Signature of Owner/Operator | _____ Date: _____ |

**California Hazardous Material
Optional Model Inventory Form
Chemical Description**

For Administering Agency Use

Facility ID #: _____

Page _____ of _____
Reporting Period
1/1 to 12/31 19____

Trade Secret page Non-trade secret page

| | | | | | |
|---|---|--------------------------------|------------------------------------|--|--|
| Common Name: | | | | CAS # | |
| Chemical Name: | | | | DOT #: (optional) _____ | |
| PHYSICAL Solid: <input type="checkbox"/> Liquid: <input type="checkbox"/> Gas: <input type="checkbox"/> Pure: <input type="checkbox"/> Mixture: <input type="checkbox"/> Waste: <input type="checkbox"/> | | | | If Waste, enter annual amount generated: _____ | |
| STATE: Radioactive: <input type="checkbox"/> (if radioactive _____ curies) | | | | | |
| WASTE CLASSIFICATION: Enter the State Waste Number (from DHS form 8022, Uniform Hazardous Waste Manifest): _____ | | | | (3 digit code) | |
| PHYSICAL & HEALTH HAZARD CATEGORIES: | | PHYSICAL | | HEALTH | |
| | | Fire: <input type="checkbox"/> | Reactive: <input type="checkbox"/> | Immediate Health (Acute): <input type="checkbox"/> | Delayed Health (Chronic): <input type="checkbox"/> |
| AMOUNT & TIME AT FACILITY: | UNITS OF MEASURE: | | | Maximum Daily Amount: | |
| | gals <input type="checkbox"/> lbs <input type="checkbox"/> cu ft <input type="checkbox"/> | | | Average Daily Amount: | |
| | grams <input type="checkbox"/> kg <input type="checkbox"/> | | | # Days per year chemical is on-site: | |
| | other (specify) _____ <input type="checkbox"/> | | | Largest container on-site (capacity): | |
| STORAGE CODES & LOCATIONS: (use codes provided) | Grid Coord. | C | P | T | Location |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | | | |
|---|---|--------------------------------|------------------------------------|--|--|
| Common Name: | | | | CAS # | |
| Chemical Name: | | | | DOT #: (optional) _____ | |
| PHYSICAL Solid: <input type="checkbox"/> Liquid: <input type="checkbox"/> Gas: <input type="checkbox"/> Pure: <input type="checkbox"/> Mixture: <input type="checkbox"/> Waste: <input type="checkbox"/> | | | | If Waste, enter annual amount generated: _____ | |
| STATE: Radioactive: <input type="checkbox"/> (if radioactive _____ curies) | | | | | |
| WASTE CLASSIFICATION: Enter the State Waste Number (from DHS form 8022, Uniform Hazardous Waste Manifest): _____ | | | | (3 digit code) | |
| PHYSICAL & HEALTH HAZARD CATEGORIES: | | PHYSICAL | | HEALTH | |
| | | Fire: <input type="checkbox"/> | Reactive: <input type="checkbox"/> | Immediate Health (Acute): <input type="checkbox"/> | Delayed Health (Chronic): <input type="checkbox"/> |
| AMOUNT & TIME AT FACILITY: | UNITS OF MEASURE: | | | Maximum Daily Amount: | |
| | gals <input type="checkbox"/> lbs <input type="checkbox"/> cu ft <input type="checkbox"/> | | | Average Daily Amount: | |
| | grams <input type="checkbox"/> kg <input type="checkbox"/> | | | # Days per year chemical is on-site: | |
| | other (specify) _____ <input type="checkbox"/> | | | Largest container on-site (capacity): | |
| STORAGE CODES & LOCATIONS: (use codes provided) | Grid Coord. | C | P | T | Location |
| | | | | | |
| | | | | | |
| | | | | | |

- **Location** Enter a brief narrative that describes the storage location. Example: "Northwest corner of the machine shop."

ANNOTATED SITE MAP

Attach a map of the facility. As a minimum, the map should show the following:

1. **Site Layout**

- Scale of map
- Site orientation (north, south, etc.)
- Loading areas
- Parking lots
- Internal roads
- Storm and sewer drains
- Adjacent property use
- Locations and name of adjacent streets and alleys
- Access and egress points and roads

2. **Facility**

- Location of each storage area
- Location of each hazardous material handling area
- Location of emergency response equipment. For example, equipment for fire suppression, approach and mitigation, protective clothing, medical response, etc.

§ 19-2731. Emergency Response Plans and Procedures.

The business plan shall include the following emergency response procedures for a release or threatened release of hazardous materials, scaled appropriately for the size and nature of the business, the nature of the damage potential of the hazardous materials handled, and the proximity of the business to residential areas and other populations:

(a) immediate notification of:

(1) local emergency response personnel;

(2) the administering agency and the State Office of Emergency Services pursuant to article 2 of this subchapter;

(3) persons within the facility who are necessary to respond to an incident;

(b) identification of local emergency medical assistance appropriate for potential accident scenarios;

(c) mitigation, prevention, or abatement of hazards to persons, property, or the environment;

(d) immediate notification and evacuation of the facility; and

(e) identification of areas of the facility and mechanical or other systems that require immediate inspection or isolation because of their vulnerability to earthquake related ground motion.

NOTE: Authority cited: Sections 25503 and 25517.5, Health and Safety Code. Reference: Sections 25503(b)(2), 25504(b) and 25507, Health and Safety Code.

HISTORY

1. Editorial renumbering of former section 2756 to section 2731 (Register 86, No. 37).

2. Amendment of initial paragraph, subsection (d) and reference citation filed as an emergency 9-12-86, operative 9-12-86 making the following changes: In initial paragraph added "and nature" after "size"; "damage potential of the" after "nature of the"; and "and the proximity of the business to residential areas and other populations:" after "materials handled,;" Subsection (d) added "the" after "evacuation of" and deleted "employees and the affected public, pursuant to the determinations made under section 2726 (c) of article 3 of this subchapter" after "facility"; Certificate of Compliance must be transmitted no later than 1-12-87, or emergency language will be repealed by operation of law (Gov. C. 11346.1); (Register 86, No. 37).

3. Certificate of Compliance transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).

4. Amendment filed 9-20-90; operative 10-20-90 (Register 90, No. 45).

§ 19-2732. Training.

(a) The business plan shall include a training program which is reasonable and appropriate for the size of the business and the nature of the hazardous materials handled. The training program shall take into consideration the responsibilities of the employees to be trained. The training program shall, at a minimum, include:

(1) methods for safe handling of hazardous materials;

(2) procedures for coordination with local emergency response organizations;

(3) use of emergency response equipment and supplies under the control of the handler, and

(4) all procedures required by Section 2756 of this Article.

(b) The business plan shall include provisions for ensuring that appropriate personnel receive initial and refresher training.

NOTE: Authority cited: Section 25503, Health and Safety Code. Reference: Section 25504(c), Health and Safety Code.

HISTORY

1. New section filed 7-30-86; effective thirtieth day thereafter (Register 86, No. 31).

2. Editorial renumbering of former Section 2732 to Section 2726 and Section 2758 to Section 2732 (Register 86, No. 37).

§ 19-2733. Applicability.

Each building which is subject to the requirements of Section 25503.5(b)(5)(B) of Chapter 6.95 of the Health and Safety Code, and in which any pesticides, petroleum fuels or oils, or fertilizers are stored shall be conspicuously posted with warning signs as described in Section 2734 of this Article.

NOTE: Authority cited: Sections 25503, 25503.5, and 25517.5, Health and Safety Code. Reference: Sections 25503, 25503.5, and 25504, Health and Safety Code. (New section filed as an emergency 9-12-86, operative 9-12-86; Certificate of Compliance must be transmitted no later than 1-12-87, or section will be repealed by operation of law (Gov. C. § 11346.1(g)); Register 86, No. 37).

HISTORY

1. Certificate of Compliance including amendment transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).

§ 19-2734. Warning Signs.

(a) Warning signs shall be conspicuous and visible from any direction of probable approach.

(b) Each sign shall be of such a size that it is readable from a distance of 25 feet and shall be substantially as follows:

DANGER
HAZARDOUS MATERIAL STORAGE AREA
 (in this space—list the hazardous material
 stored within, by category—
 pesticides, petroleum fuels, oils, or fertilizers)
ALL UNAUTHORIZED PERSONS—KEEP OUT
IN AN EMERGENCY, CONTACT:
 (in this space—list the name and phone number
 of an emergency contact person)

(c) The sign shall be repeated in an appropriate language other than English when it may reasonably be anticipated that persons who do not understand the English language may enter the posted building.

NOTE: Authority cited: Sections 25503, 25503.5, and 25517.5, Health and Safety Code. Reference: Sections 25503, 25503.5, and 25504, Health and Safety Code. (New section filed as an emergency 9-12-86, operative 9-12-86; Certificate of Compliance must be transmitted no later than 1-12-87, or section will be repealed by operation of law (Gov. C. § 11346.1(g)); Register 86, No. 37).

HISTORY

1. Certificate of Compliance including amendment transmitted to OAL 1-7-87 and filed 2-6-87 (Register 87, No. 6).

[The next page is 701.]

4. National Fire Protection Association, Fire Protection for Laboratories Using Chemicals NFPA-45, 1982.

Safety Standard for Laboratories in Health Related Institutions, FPA, 56c, 1980.

Fire Protection Guide on Hazardous Materials, 7th edition, 1978.

National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

5. Scientific Apparatus Makers Association (SAMA), Standard for Laboratory Fume Hoods, SAMA LF7-1980, 1101 16th Street, NW., Washington, DC 20036.

(d) Information on Availability of Referenced Material:

1. American National Standards Institute (ANSI), 1430 Broadway, New York, NY 10018.

2. American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

§ 8-5192. Hazardous Waste Operations and Emergency Response.

(a) Scope, Application and Definitions.

(1) Scope: This section covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards:

(A) Clean-up operations or hazardous substance removal work required by a governmental body, whether Federal, state, local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the Environmental Protection Agency's (EPA) National Priority Site List (NPL), state priority site lists, sites recommended for the EPA, NPL, and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances has been ascertained);

(B) Corrective actions involving hazardous waste clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901, et seq.) and Chapters 6.5 and 6.8 of Division 20 of the California Health and Safety Code;

(C) Voluntary clean-up operations at sites recognized by Federal, state, local or other governmental bodies as uncontrolled hazardous waste sites;

(D) Operations involving hazardous wastes that are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 pursuant to RCRA; or facilities regulated by Chapter 6.5 of Division 20 of the California Health and Safety Code; or by agencies under agreement with U.S.E.P.A. to implement RCRA regulations; and

(E) Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.

(2) Application.

(A) All requirements of Title 8 of the California Code of Regulations apply pursuant to their terms to hazardous waste operations (whether covered by this section or not). If there is a conflict or overlap, the provision more protective of employee safety and health shall apply without regard to 8 CCR 3202(a).

(B) Hazardous substance clean-up operations within the scope of subsections (a)(1)(A) through (a)(1)(C) of this section must comply with all subsections of this section except subsections (p) and (q).

(C) Operations within the scope of subsection (a)(1)(D) of this section must comply only with the requirements of subsection (p) of this section.

NOTES AND EXCEPTIONS TO (a)(2)(C):

A. All provisions of subsection (p) of this section cover any treatment, storage, or disposal (TSD) operation regulated by 40 CFR parts 264 and 265 or by Chapter 6.5 of Division 20 of the California Health and Safety Code, and required to have a permit or interim status from EPA pursuant to 40 CFR 270.1 or from the Department of Health Services (DHS) pursuant to Chapter 6.5 of Division 20 of the California Health and Safety Code.

B. Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 40 CFR 262.34 for exemptions from regulation under 40 CFR parts 264, 265 and 270 ("excepted employers") are not covered by subsections (p)(1) through (p)(7) of this section. Excepted employers who are required by the EPA or state agency such as the Department of Health Services (DHS) to have their employees engage in emergency response or who direct their employees to engage in emergency response are covered by subsection (p)(8) of this section, and cannot be exempted by (p)(8)(A) of this section. Excepted employers who are not required to have employees engage in emergency response, who direct their employees to evacuate in the case of such emergencies and who meet the requirements of subsection (p)(8)(A) of this section are exempt from the balance of subsection (p)(8) of this section.

C. If an area is used for hazardous waste treatment, storage, or disposal, any emergency response operations in that area shall comply with subsection (p)(8) of this section. In other areas not used for treatment, storage, or disposal of hazardous waste, any emergency response operation shall comply with subsection (q) of this section. Compliance with the requirements of subsection (q) of this section shall be deemed to be in compliance with the requirements of subsection (p)(8) of this section.

(D) Emergency response operations for releases of, or substantial threats of releases of, hazardous substances which are not covered by subsections (a)(1)(A) through (a)(1)(D) of this section must only comply with the requirements of subsection (q) of this section.

(3) Definitions.

Buddy system: A system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. The purpose of the buddy system is to provide quick assistance to employees in the event of an emergency.

Certified employee: An employee that has completed all of the requirements for training certification delineated in subsection (e)(6) of this section.

Certified supervisor: A supervisor that has completed all of the requirements for training certification delineated in subsection (e)(6) of this section.

Clean-up operation: An operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared-up, or in any other manner processed or handled with the ultimate goal of making the site safer for people or the environment.

Decontamination: The removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

Emergency response, or responding to emergencies: A response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release, which may cause high levels of exposure to toxic substances, or which poses danger to employees requiring immediate attention. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses within the scope of this standard. Responses to releases of hazardous substances where there is no immediate safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.

NOTE: The "immediate release area" can be the entire geographic boundary of the employee's assigned work area.

Facility: A. Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, storage container, motor vehicle, rolling stock, or aircraft, or B. any site or area where a hazardous substance has been deposited, stored, disposed of, placed, or

otherwise come to be located; but does not include any consumer product in consumer use or any water-borne vessel.

Hazardous materials response (HAZMAT) team: An organized group of employees, designated by the employer, which is expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. The team members perform responses to releases or potential releases of hazardous substances for the purpose of control or stabilization of the incident. A HAZMAT team is not a fire brigade nor is a typical fire brigade a HAZMAT team. A HAZMAT team, however, may be a separate component of a fire brigade or fire department.

Hazardous substance: Any substance designated or listed under A. through D. below, exposure to which results or may result in adverse effects on the health or safety of employees:

A. Any substance defined under Section 101(14) of CERCLA or under Sections 25316 and 25317 of the California Health and Safety Code;

B. Any biological agent and other disease-causing agent which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring;

C. Any substance listed by the U.S. Department of Transportation and regulated as hazardous materials under 49 CFR 172.101 and appendices; and

D. Hazardous waste as herein defined.

Hazardous substance removal work: Clean-up work at any of the following:

A. A site where removal or remedial action is taken pursuant to any of the following:

1. Chapter 6.8 (commencing with Section 25300) of Division 20 of the Health and Safety Code, regardless of whether the site is listed pursuant to Section 25356 of the Health and Safety Code.

2. The federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. Sec. 9601 et seq.).

3. Any operations covered under subsections(a)(1)(A) through (a)(1)(C) of this section.

B. A site where corrective action is taken pursuant to Section 25187 or 25200.10 of the Health and Safety Code or the federal Resource Conservation and Recovery Act of 1976 (42 U.S.C. Sec. 6901 et seq.).

C. A site where clean-up of a discharge of a hazardous substance is required pursuant to Division 7 (commencing with Section 13000) of the Water Code.

D. A site where removal or remedial action is taken because a hazardous substance has been discharged or released in an amount that is reportable pursuant to Section 13271 of the Water Code or the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. Sec. 6901 et seq.). Hazardous substance removal work does not include work related to a hazardous substance spill on a highway.

Hazardous waste: A waste or combination of wastes as defined in 40 CFR 261.3, or regulated as hazardous waste in California pursuant to Chapter 6.5, Division 20, California Health and Safety Code, or B. those substances defined as hazardous wastes in 49 CFR 171.8.

Hazardous waste operation: Any operation conducted within the scope of this regulation including hazardous substance removal work as defined in Labor Code Section 142.7(b).

Hazardous waste site, or site: Any facility or location at which hazardous waste operations within the scope of this regulation take place.

Health hazard: A chemical, mixture of chemicals or a pathogen for which there is statistically significant evidence, based on at least one study conducted in accordance with established scientific principles, that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens; toxic or highly toxic agents; reproductive toxins; irritants; corrosives; sensitizers;

hepatotoxins; nephrotoxins; neurotoxins; agents which act on the hematopoietic system; and agents which damage the lungs, skin, eyes, or mucous membranes. It also includes stress due to temperature extremes. Further definition of the terms used above can be found in Title 8, California Code of Regulations, Section 5194.

IDLH or Immediately dangerous to life or health: An atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

Incidental release: An incidental release is one that does not cause a health or safety hazard to employees and does not need to be cleaned up immediately to prevent death or serious injury to employees.

Oxygen deficiency: That concentration of oxygen by volume below which air supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

Permissible exposure limit (PEL): The exposure, inhalation or dermal permissible exposure limit specified in 8 CCR, Chapter 4, Subchapter 7, Groups 14 and 15; and Group 16, Articles 107, 109, and 110.

Post-emergency response: That portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and clean-up of the site has begun. If post emergency response is performed by an employer's own employees who were part of the initial emergency response, it is considered to be part of the initial response and not post-emergency response. However, if a group of an employer's own employees, separate from the group providing initial response, performs the clean-up operation, then the separate group of employees would be considered to be performing post-emergency response and subject to subsection (q)(11) of this section.

Pre-job health and safety conference: A health and safety conference or briefing held prior to entering a site for the purpose of initiating hazardous substance removal work.

Published exposure level: The exposure limits published in "NIOSH Recommendations for Occupational Safety and Health Standards 1988" incorporated by reference, or if no limit is specified, the exposure limits published in the standards specified by the American Conference of Governmental Industrial Hygienists in their publication "Threshold Limit Values and Biological Exposure Indices for 1989-90" dated 1989 incorporated by reference.

Qualified person: A person with specific training, knowledge and experience in the area for which the person has the responsibility and the authority to control.

Site safety and health supervisor (or official): The individual located on a hazardous waste site who is responsible to the employer and has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.

Small quantity generator: A generator of hazardous wastes who in any calendar month generates no more than 1,000 kilograms (2,205 pounds) of hazardous waste in that month.

Uncontrolled hazardous waste site: An area where an accumulation of hazardous waste creates a threat to the health and safety of individuals or the environment or both. Some sites are found on public lands, such as those created by former municipal, county, or state landfills where illegal or poorly managed waste disposal has taken place. Other sites are found on private property, often belonging to generators or former generators of hazardous waste. Examples of such sites include, but are not limited to, surface impoundments, landfills, dumps, and tank or drum farms. Normal operations at TSD sites are not covered by this definition.

Uncontrolled release: An uncontrolled release is the accidental release of a hazardous substance from its container. If not contained, stopped, and removed, the release would pose a hazard to the employees in the immediate area or in areas in the path of the release, or from its byproducts

or its effects (such as toxic vapors, fire, over-pressurization, toxic gases, or toxic particulates.

(b) Safety and health program.

NOTE TO (b): Safety and health programs developed and implemented to meet other Federal, state, or local regulations are considered acceptable in meeting this requirement if they cover or are modified to cover the topics required in this subsection. An additional or separate safety and health program is not required by this subsection.

(1) General.

(A) Employers shall develop and implement a written safety and health program for their employees involved in hazardous waste operations. The program shall be designed to identify, evaluate, and control safety and health hazards, and provide for emergency response for hazardous waste operations.

(B) The written safety and health program shall incorporate the following:

1. An organization structure;
2. A comprehensive workplan;
3. A site-specific safety and health plan which need not repeat the employer's standard operating procedures required in subsection (b)(1)(B)6. of this section;
4. The safety and health training program;
5. The medical surveillance program;
6. The employer's standard operating procedures for safety and health; and
7. Any necessary interface between general program and site specific activities.

(C) Site excavation. Site excavations created during initial site preparation or during hazardous waste operations shall be shored or sloped as appropriate to prevent accidental collapse in accordance with 8 CCR, Chapter 4, Subchapter 4, Article 6.

(D) Contractors and sub-contractors. An employer who retains contractor or sub-contractor services for work in hazardous waste operations shall inform those contractors, sub-contractors, or their representatives of the site emergency response procedures and any potential fire, explosion, health, safety or other hazards of the hazardous waste operation that have been identified by the employer, including those identified in the employer's information program. Each contractor/sub-contractor is responsible for compliance with all safety and health protection requirements for its employees. An employer's safety and health plan can be used by contractors/sub-contractors at the site if it appropriately addresses their activity and potential safety and health hazards.

(E) Program availability. The written safety and health program shall be made available to any contractor or subcontractor or their representative who will be involved with the hazardous waste operation; to employees; to employee designated representatives; to Division representatives, and to personnel of other Federal, state, or local agencies with regulatory authority over the site.

(2) Organizational structure part of the site program.

(A) The organizational structure part of the program shall establish the specific chain of command and specify the overall responsibilities of supervisors and employees. It shall include, at a minimum, the following elements:

1. A general supervisor (or Certified supervisor for hazardous substance removal work) who has the responsibility and authority to direct all hazardous waste operations.
2. A Site Safety and Health Supervisor who has the responsibility and authority to develop and implement the site safety and health plan and verify compliance.
3. A Qualified Person for operations defined as hazardous substance removal work, who shall be responsible for scheduling any air sampling, laboratory calibration of sampling equipment, evaluation of soil or other contaminated materials sampling results, and for conducting any equipment testing and evaluating the results of the tests.

4. All other personnel needed for hazardous waste site operations and emergency response and their general functions and responsibilities.

5. The lines of authority, responsibility, and communication.

(B) The organizational structure shall be reviewed and updated as necessary to reflect the current status of waste site operations.

(3) Comprehensive workplan part of the site program: The comprehensive workplan part of the program shall address the tasks and objectives of the site operations and the logistics and resources required to reach those tasks and objectives.

(A) The comprehensive workplan shall address anticipated clean-up activities, as well as normal operating procedures, which need not repeat the employer's procedures available elsewhere.

(B) The comprehensive workplan shall define work tasks and objectives and identify the methods for accomplishing those tasks and objectives.

(C) The comprehensive workplan shall establish personnel requirements for implementing the plan.

(D) The comprehensive workplan shall provide for the implementation of the training required in subsection (e) of this section.

(E) The comprehensive workplan shall provide for the implementation of the required informational programs required in subsection (i) of this section.

(F) The comprehensive workplan shall provide for the implementation of the medical surveillance program described in subsection (f) of this section.

(4) Site-specific safety and health plan part of the program.

(A) General: The site safety and health plan, which must be kept on site, shall address the safety and health hazards of each phase of site operation and include the requirements and procedures for employee protection.

NOTE TO (A): In general, a site plan organized as a single document, with component sections/appendices covering all tasks, operations, and contractors/sub-contractors, may be used to promote use efficiency, and enhance completeness, clarity, and coordination.

(B) Elements: The site safety and health plan, as a minimum, shall address the following:

1. A safety and health risk or hazard analysis for each site task and operation found in the workplan.
2. Employee training assignments to assure compliance with subsection (e) of this section.
3. Personal protective equipment (PPE) to be used by employees for each of the site tasks and operations being conducted as required by the personal protective equipment program in subsection (g)(5) of this section.
4. Medical surveillance requirements in accordance with the program in subsection (f) of this section.
5. Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment to be used.
6. Site control measures in accordance with the site control program required in subsection (d) of this section.
7. Decontamination procedures in accordance with subsection (k) of this section.
8. An emergency response plan meeting the requirements of subsection (l) of this section for safe and effective responses to emergencies, including the necessary PPE and other equipment.
9. Confined space entry procedures.
10. A spill containment program meeting the requirements of subsection (j) of this section.

(C) Pre-entry briefing: The site-specific safety and health plan shall provide for pre-entry briefings to be held prior to initiating any site activ-

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ity, and at such other times as necessary to ensure that employees are apprised of the site safety and health plan and that this plan is being followed. The information and data obtained from site characterization and analysis work required in subsection (c) of this section shall be used to prepare and update the site safety and health plan.

(D) For operations defined as Hazardous substance removal work, a Pre-job health and safety conference shall be held before the start of actual work. The conference shall include representatives of the owner or contracting agency, the contractor, the employer, employees, and employee representatives; and shall include a discussion of the employer's safety and health program and the means, methods, devices, processes, practices, conditions, or operations which the employer intends to use in providing a safe and healthy place of employment.

(E) Effectiveness of site safety and health plan: Inspections shall be conducted by the site safety and health supervisor or, in the absence of that individual, another individual who is knowledgeable in occupational safety and health, acting on behalf of the employer as necessary to determine the effectiveness of the site safety and health plan. Any deficiencies in the effectiveness of the site safety and health plan shall be corrected by the employer.

(c) Site Characterization and Analysis.

(1) General: Hazardous waste sites shall be evaluated in accordance with this subsection to identify specific site hazards and to determine the appropriate safety and health control procedures needed to protect employees from the identified hazards.

(2) Preliminary evaluation: A preliminary evaluation of a site's characteristics shall be performed prior to site entry by a qualified person to aid in the selection of appropriate employee protection methods prior to site entry. Immediately after initial site entry, a more detailed evaluation of the site's specific characteristics shall be performed by a qualified person to further identify existing site hazards and to further aid in the selection of the appropriate engineering controls and personal protective equipment for the tasks to be performed.

(3) Hazard identification: All suspected conditions that may pose inhalation or skin absorption hazards that are immediately dangerous to life or health (IDLH) or other conditions that may cause death or serious harm shall be identified during the preliminary survey and evaluated during the detailed survey. Examples of such hazards include, but are not limited to, confined space entry, potentially explosive or flammable situations, visible vapor clouds, or areas where biological indicators such as dead animals or vegetation are located.

(4) Required information: The following information to the extent available shall be obtained by the employer prior to allowing employees to enter a site:

(A) Location and approximate size of the site.

(B) Description of the response activity and/or the job task to be performed.

(C) Duration of the planned employee activity.

(D) Site topography and accessibility by air and roads.

(E) Safety and health hazards expected at the site.

(F) Pathways for hazardous substance dispersion.

(G) Present status and capabilities of emergency response teams that would provide assistance to hazardous waste clean-up site employees at the time of an emergency.

(H) Hazardous substances and health hazards involved or expected at the site, and their chemical and physical properties.

(5) Personal protective equipment: Personal protective equipment (PPE) shall be provided and used during initial site entry in accordance with the following requirements:

(A) Based upon the results of the preliminary site evaluation, an ensemble of PPE shall be selected and used during initial site entry which will provide protection to a level of exposure below PELs and published exposure levels for known or suspected hazardous substances and health hazards and will provide protection against other known and suspected hazards identified during the preliminary site evaluation. If there is no

PEL or published exposure level, the employer may use other published studies and information as a guide to appropriate personal protective equipment.

(B) If positive-pressure self-contained breathing apparatus is not used as part of the entry ensemble, and if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluation, an escape self-contained breathing apparatus of at least five minute's duration shall be carried by employees during initial site entry.

(C) If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site, an ensemble providing protection equivalent to Level B PPE shall be provided as minimum protection and direct reading instruments shall be used as appropriate for identifying IDLH conditions. (See Appendix B for guidelines on Level B protective equipment, and a description of Level B hazards.)

(D) Once the hazards of the site have been identified, the appropriate PPE shall be selected and used in accordance with subsection (g).

(6) Monitoring: The following monitoring shall be conducted during initial site entry when the site evaluation produces information that shows the potential for ionizing radiation or IDLH conditions, or when the site information is not sufficient to rule out these possible conditions:

(A) Monitoring with direct reading instruments for hazardous levels of ionizing radiation.

(B) Monitoring the air with appropriate direct reading test equipment (i.e., combustible gas meters, detector tubes) for IDLH and other conditions that may cause death or serious harm (combustible or explosive atmospheres, oxygen deficiency, toxic substances.)

(C) Visually observing for signs of actual or potential IDLH or other dangerous conditions.

(D) An on-going air monitoring program in accordance with subsection (h) shall be implemented after site characterization has determined the site is safe for the start-up of operations.

(7) Risk identification: Once the presence and concentrations of specific hazardous substances and health hazards have been established, the risks associated with these substances shall be identified. Employees who will be working on the site shall be informed of any risks that have been identified. In situations covered by the Hazard Communication standard, 8 CCR 5194, training required by that standard need not be duplicated.

NOTE TO (c)(7): Risks to consider include, but are not limited to:

A. Exposures exceeding the PELs, and published exposure levels.

B. IDLH concentrations.

C. Potential skin absorption and irritation sources.

D. Potential eye irritation sources.

E. Explosion sensitivity and flammability ranges.

F. Oxygen deficiency.

(8) Employee notification: Any information concerning the chemical, physical, and toxicologic properties of each substance known or expected to be present on site that is available to the employer and relevant to the duties an employee is expected to perform shall be made available to the affected employees prior to the commencement of their work activities. The employer may utilize information developed for the hazard communication standard, 8 CCR 5194, for this purpose.

(d) Site Control.

(1) General: Appropriate site control procedures shall be implemented to control employee exposure to hazardous substances before clean-up work begins.

(2) Site control program: A site control program for protecting employees which is part of the employer's site safety and health program required in subsection (b) of this section shall be developed during the planning stages of a hazardous waste clean-up operation and modified as necessary as new information becomes available.

(3) Elements of the site control program: The site control program shall, as a minimum, include: A site map; site work zones; the use of a "buddy system;" site communications including alerting means for

emergencies; the standard operating procedures or safe work practices; and, identification of nearest medical assistance. Where these requirements are covered elsewhere they need not be repeated.

(e) Training.

(1) General.

(A) All employees working on site (such as but not limited to equipment operators, general laborers, and others) exposed to hazardous substances, health hazards, or safety hazards, and their supervisors and management responsible for the site shall receive training meeting the requirements of this subsection before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards, and they shall receive review training as specified in this subsection.

(B) Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.

(2) Elements to be covered: The training shall thoroughly cover the following:

(A) Names of personnel and alternates responsible for site safety and health;

(B) Safety, health and other hazards present on the site;

(C) Use of PPE;

(D) Work practices by which the employee can minimize risks from hazards;

(E) Safe use of engineering controls and equipment on the site;

(F) Medical surveillance requirements including recognition of symptoms and signs which might indicate overexposure to hazards; and

(G) Subsections 7. through 10. of the site safety and health plan set forth in subsection (b)(4)(B) of this section.

(3) Initial training.

(A) General site workers (such as equipment operators, general laborers, and supervisory personnel) engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances and health hazards shall receive a minimum of 40 hours of instruction off the site, and a minimum of three days actual field experience under the direct supervision of a trained, experienced supervisor.

(B) Workers on site only occasionally for a specific limited task (such as, but not limited to, ground water monitoring, land surveying, or geophysical surveying) and who are unlikely to be exposed over PELs and published exposure levels shall receive a minimum of 24 hours of instruction off the site, and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

(C) Workers regularly on site who work in areas which have been monitored and fully characterized indicating that exposures are under PELs and published exposure levels where respirators are not necessary, and the characterization indicates that there are no health hazards or the possibility of an emergency developing, shall receive a minimum of 24 hours of instruction off the site and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

(D) Workers with 24 hours of training who are covered by subsections (e)(3)(B) and (e)(3)(C) of this section, and who become general site workers or who are required to wear respirators, shall have the additional 16 hours and two days of training necessary to total the training specified in subsection (e)(3)(A).

(4) Management and supervisor training: On-site management and supervisors directly responsible for, or who supervise employees engaged in, hazardous waste operations shall receive 40 hours initial training, and three days of supervised field experience (the training may be reduced to 24 hours and one day if the only area of their responsibility is employees covered by subsections (e)(3)(B) and (e)(3)(C)) and at least eight additional hours of specialized hazardous waste operations management training at the time of job assignment on such topics as, but not limited to, the employer's safety and health program and the associated employee training program, PPE program, spill containment program, and health hazard monitoring procedure and techniques.

(5) Qualifications for trainers: Trainers shall be qualified to instruct employees about the subject matter that is being presented in training. Such trainers shall have satisfactorily completed a training program for teaching the subjects they are expected to teach, or they shall have the academic credentials and instructional experience necessary for teaching the subjects. Instructors shall demonstrate competent instructional skills and knowledge of the applicable subject matter.

(6) Training certification: Employees and supervisors that have received and successfully completed the training and field experience specified in subsections (e)(1) through (e)(4) of this section shall be certified by their instructor or the head instructor and trained supervisor as having successfully completed the necessary training. A written certificate shall be given to each person so certified. Any person who has not been so certified or who does not meet the requirements of subsection (e)(9) of this section shall be prohibited from engaging in hazardous waste operations.

(7) Emergency response: Employees who are engaged in responding to hazardous emergency situations at hazardous waste clean-up sites that may expose them to hazardous substances shall be trained in how to respond to such expected emergencies.

(8) Refresher training: Employees specified in subsection (e)(1) of this section, and managers and supervisors specified in subsection (e)(4) of this section, shall receive eight hours of refresher training annually on the items specified in subsection (e)(2) and/or (e)(4) of this section, any critique of incidents that have occurred in the past year that can serve as training examples of related work, and other relevant topics.

(9) Equivalent training: Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that training required in subsections (e)(1) through (e)(4) of this section shall not be required to provide the initial training requirements of those subsections to such employees. However, certified employees or employees with equivalent training new to a site shall receive appropriate, site specific training before site entry and have appropriate supervised field experience at the new site. Equivalent training includes any academic training or the training that existing employees might have already received from actual hazardous waste site work experience.

(f) Medical Surveillance.

(1) General: Employers engaged in operations specified in subsections (a)(1)(A) through (a)(1)(D) of this section and not covered by (a)(2)(C) exceptions, and employers of employees specified in subsection (q)(9) shall institute a medical surveillance program in accordance with this subsection.

(2) Employees covered: The medical surveillance program shall be instituted by the employer for the following employees:

(A) Any employee who is or may be exposed to hazardous substances or health hazards at or above the PELs or, if there is no PEL, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year.

(B) Any employee who wears a respirator during any part of a day for a period of 30 days or more in a year, or as required by 8 CCR 5144.

(C) Any employee who is injured, becomes ill or develops signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation: and

(D) Members of HAZMAT teams.

(3) Frequency of medical examinations and consultations: Medical examinations and consultations shall also be made available by the employer to each employee covered under subsection (f)(2) on the following schedules:

(A) For employees covered under subsections (f)(2)(A), (f)(2)(B), and (f)(2)(D):

1. Prior to assignment.

2. At least once every twelve months for each employee covered, unless the attending physician believes a longer interval (not greater than biennially) is appropriate.

3. At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months.

4. As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards or that the employee has been injured or exposed above the PELs or published exposure levels in an emergency situation.

5. At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

(B) For employees covered under subsection(f)(2)(C) and for all employees including those of employers covered by subsection (a)(1)(E) who may have been injured, received a health impairment, developed signs or symptoms which may have resulted from exposure to hazardous substances resulting from an emergency incident, or exposed during an emergency incident to hazardous substances at concentrations above the PELs or the published exposure levels without the necessary personal protective equipment being used:

1. As soon as possible following the emergency incident or development of signs or symptoms;

2. At additional times, if the examining physician determines that follow-up examinations or consultations are medically necessary.

(4) Content of medical examinations and consultations.

(A) Medical examinations required by subsection (f)(2) of this section shall include a medical and work history (or updated history if one is in the employee's file) with special emphasis on symptoms related to the handling of hazardous substances and health hazards, and to fitness for duty including the ability to wear any required PPE under conditions (e.g., temperature extremes) that may be expected at the work site.

(B) The content of medical examinations or consultations made available to employees pursuant to subsection (f) shall be determined by the examining physician. The guidelines in the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (see Appendix D, Reference #10) should be consulted.

(5) Examination by a physician and costs: All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

(6) Information provided to the physician: The employer shall provide one copy of this standard and its appendices to the attending physician, and in addition, the following for each employee:

(A) A description of each employee's duties as they relate to the employee's exposures.

(B) Each employee's exposure levels or anticipated exposure levels.

(C) A description of any PPE used or to be used by each employee.

(D) Information from previous medical examinations of each employee which is not readily available to the examining physician.

(E) Information required by 8 CCR 5144 for each employee.

(7) Physician's written opinion.

(A) The employer shall obtain and furnish the employee with a copy of a written opinion from the examining physician containing the following:

1. The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response, or from respirator use.

2. The physician's recommended limitations upon the employee's assigned work.

3. A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

(B) The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposures.

(C) The physician shall provide the results of the medical examination and tests to the employee if requested.

(8) Recordkeeping.

(A) An accurate record of the medical surveillance required by subsection (f) shall be retained. This record shall be retained for the period specified and meet the criteria of 8 CCR 3204.

(B) The record required in subsection (f)(8)(A) shall include at least the following information:

1. The name and social security number of the employee.

2. Physician's written opinions, recommended limitations, and results of examinations and tests.

3. Any employee medical complaints related to exposure to hazardous substances.

4. A copy of the information provided to the examining physician by the employer, with the exception of the standard and its appendices.

(g) Engineering Controls, Work Practices, and Personal Protective Equipment for Employee Protection: Engineering controls, work practices, PPE, or a combination of these shall be implemented in accordance with this subsection to protect employees from exposure to hazardous substances and safety and health hazards.

(1) Engineering controls, work practices and PPE for substances regulated in 8 CCR, Ch. 4, Subch. 7, Groups 14, 15, and 16.

(A) Engineering controls and work practices shall be instituted to reduce and maintain employee exposure to or below the PELs of substances regulated by 8 CCR 5155, except to the extent that such controls and practices are not feasible.

NOTE TO (g)(1)(A): Engineering controls which may be feasible include the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment. Work practices which may be feasible are removing all non-essential employees from potential exposure during opening of drums, wetting down dusty operations and locating employees upwind of possible hazards.

(B) Whenever engineering controls and work practices are not feasible or not required, any reasonable combination of engineering controls, work practices, and PPE shall be used to protect employees to reduce exposure to or below established PELs or exposure limits for substances regulated by 8 CCR, Ch. 4, Subch. 7, Group 16.

(C) The employer shall not implement a schedule of employee rotation as a means of compliance with PELs or exposure limits except when there is no other feasible way of complying with the applicable ionizing radiation exposure standards.

(D) The provisions of 8 CCR, Ch. 4, Subch. 7, Groups 14 and 15 shall be followed.

(2) Engineering controls, work practices, and PPE for substances not regulated in 8 CCR, Ch. 4, Subch. 7, Groups 14, 15, and 16: An appropriate combination of engineering controls, work practices, and personal protective equipment shall be used to reduce and maintain employee exposure to or below the published exposure levels for hazardous substances and health hazards not regulated by 8 CCR, Ch. 4, Subch. 7, Groups 14, 15, and 16. The employer may use the published literature and Material Safety Data Sheets (MSDS's) as a guide in making the employer's determination as to what level of protection the employer believes is appropriate for hazardous substances and health hazards for which there is no PEL or published exposure level.

(3) Personal protective equipment selection.

(A) Personal protective equipment (PPE) shall be selected and used which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.

(B) Personal protective equipment selection shall be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

(C) Positive pressure self-contained breathing apparatus (SCBA) or positive pressure airline respirators equipped with an escape air supply shall be used when chemical exposure levels present will create a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

(D) Totally-encapsulating chemical protective suits (protection equivalent to Level A protection as recommended in Appendix B) shall be used in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

(E) The level of protection provided by PPE selection shall be increased when additional information on site conditions shows that increased protection is necessary to reduce employee exposures below established PELs and published exposure levels for hazardous substances and health hazards. (See Appendix B for guidance on selecting PPE ensembles.)

(F) Personal protective equipment shall be selected and used to meet the requirements of 8 CCR, Ch. 4, Subch. 7, Group 2, Articles 10 and 10.1, and 8 CCR 5144 of the General Industry Safety Orders, and additional requirements specified in this section.

NOTE TO (g)(3): The level of employee protection provided may be decreased when additional information or site conditions show that decreased protection will not result in hazardous exposures to employees.

(4) Totally-encapsulating chemical protective suits.

(A) Totally-encapsulating suits shall protect employees from the particular hazards which are identified during site characterization and analysis.

(B) Totally-encapsulating suits shall be capable of maintaining positive air pressure. (See Appendix A for a test method which may be used to evaluate this requirement.)

(C) Totally-encapsulating suits shall be capable of preventing inward test gas leakage of more than 0.5 percent. (See Appendix A for a test method which may be used to evaluate this requirement.)

(5) Personal protective equipment (PPE) program: A written personal protective equipment program, which is part of the employer's safety and health program required in subsection (b) of this section or required in subsection (p)(1) of this section and which is also a part of the site-specific safety and health plan shall be established. The PPE program shall address the elements listed below. When elements, such as donning and doffing procedures, are provided by the manufacturer of a piece of equipment and are attached to the plan, they need not be rewritten into the plan as long as they adequately address the procedure or element.

(A) PPE selection based upon site hazards,

(B) PPE use and limitations of the equipment,

(C) Work mission duration,

(D) PPE maintenance and storage,

(E) PPE decontamination and disposal,

(F) PPE training and proper fitting,

(G) PPE donning and doffing procedures,

(H) PPE inspection procedures prior to, during, and after use,

(I) Evaluation of the effectiveness of the PPE program, and

(J) Limitations during temperature extremes, heat stress, and other appropriate medical considerations.

(h) Monitoring.

(1) General.

(A) Monitoring shall be performed in accordance with this subsection where there may be a question of employee exposure to hazardous concentrations of hazardous substances in order to assure proper selection of engineering controls, work practices, and PPE so that employees are not exposed to levels which exceed PELs, or published exposure levels if there are no PELs, for hazardous substances.

(B) Air monitoring shall be used to identify and quantify airborne levels of hazardous substances, and health and safety hazards in order to determine the appropriate level of employee protection needed on site.

(2) Initial entry: Upon initial entry, representative air monitoring shall be conducted to identify any IDLH conditions, exposure over PELs or published exposure levels, exposure over a radioactive material's dose limits, or other dangerous situations such as the presence of flammable atmospheres or oxygen-deficient environments.

(3) Periodic monitoring: Periodic monitoring shall be conducted when the possibility of an IDLH condition or flammable atmosphere has developed or when there is indication that exposures may have risen over PELs or published exposure levels since prior monitoring. Situations where it shall be considered whether the possibility that exposures have risen are as follows:

(A) When work begins on a different portion of the site.

(B) When contaminants other than those previously identified are being handled.

(C) When a different type of operation is initiated (e.g., drum opening as opposed to exploratory well drilling).

(D) When employees are handling leaking drums or containers or working in areas with obvious liquid contamination (e.g., a spill or lagoon).

(4) Monitoring of high-risk employees: After the actual clean-up phase of any hazardous waste operation commences; for example, when soil, surface water or containers are moved or disturbed; the employer shall monitor those employees likely to have the highest exposures to hazardous substances and health hazards likely to be present above PELs or published exposure levels by using personal sampling frequently enough to characterize employee exposures.

If the employees likely to have the highest exposure are over PELs or published exposure levels, then monitoring shall continue in order to identify all employees likely to be above those limits. The employer may utilize a representative sampling approach by documenting that the employees and chemicals chosen for monitoring are based on the criteria stated above.

NOTE TO (h): It is not required to monitor employees engaged in site characterization operations covered by subsection (c) of this section.

(i) Informational Programs: Employers shall develop and implement a program, which is part of the employer's safety and health program required in subsection (b) of this section, to inform employees, contractors, and subcontractors (or their representatives) actually engaged in hazardous waste operations of the nature, level, and degree of exposure likely as a result of participation in such hazardous waste operations. Employees, contractors, and subcontractors working outside of the operations part of a site are not covered by this regulation.

(j) Handling Drums and Containers.

(1) General.

(A) Hazardous substances and contaminated soils, liquids, and other residues shall be handled, transported, labeled, and disposed of in accordance with this subsection.

(B) Drums and containers used during the clean-up shall meet the appropriate U.S. Department of Transportation (DOT), OSHA, and EPA regulations for the wastes that they contain.

(C) When practical, drums and containers shall be inspected and their integrity shall be assured prior to being moved. Drums or containers that cannot be inspected before being moved because of storage conditions (i.e., buried beneath the earth, stacked behind other drums, stacked several tiers high in a pile, etc.) shall be moved to an accessible location and inspected prior to further handling.

(D) Unlabeled drums and containers shall be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled.

(E) Site operations shall be organized to minimize the amount of drum or container movement.

(F) Prior to movement of drums or containers, all employees exposed to the transfer operation shall be warned of the potential hazards associated with the contents of the drums or containers.

(G) U. S. Department of Transportation (DOT) specified salvage drums or containers and suitable quantities of proper absorbent shall be kept available and used in areas where spills, leaks, or ruptures may occur.

(H) Where major spills may occur, a spill containment program which is part of the employer's safety and health program required in subsection

(b) of this section shall be implemented to contain and isolate the entire volume of the hazardous substance being transferred.

(I) Drums and containers that cannot be moved without rupture, leakage, or spillage shall be emptied into a sound container using a device classified for the material being transferred.

(J) A ground-penetrating system or other type of detection system or device shall be used to estimate the location and depth of buried drums or containers.

(K) Soil or covering material shall be removed with caution to prevent drum or container rupture.

(L) Fire extinguishing equipment meeting the requirements of 8 CCR, Ch. 4, Subch. 7, Group 27 of the General Industry Safety Orders shall be on hand and ready for use to control incipient fires.

(2) Opening drums and containers: The following procedures shall be followed in areas where drums or containers are being opened:

(A) Where an airline respirator system is used, connections to the bank of air cylinders shall be protected from contamination and the entire system shall be protected from physical damage.

(B) Employees not actually involved in opening drums or containers shall be kept a safe distance from the drums or containers being opened.

(C) If employees must work near or adjacent to drums or containers being opened, a suitable shield that does not interfere with the work operation shall be placed between the employee and the drums or containers being opened to protect the employee in case of accidental explosion.

(D) Controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment shall be located behind the explosion-resistant barrier.

(E) When there is a reasonable possibility of flammable atmosphere being present, material handling equipment and hand tools shall be of the type to prevent sources of ignition.

(F) Drums and containers shall be opened in such a manner that excess interior pressure will be safely relieved. If pressure cannot be relieved from a remote location, appropriate shielding shall be placed between the employee and the drums or containers to reduce the risk of employee injury.

(G) Employees shall be instructed not to stand upon or work from drums or containers.

(3) Material handling equipment: Material handling equipment used to transfer drums and containers shall be selected, positioned and operated to minimize sources of ignition related to the equipment from igniting vapors released from ruptured drums or containers.

(4) Radioactive wastes: Drums and containers containing radioactive wastes shall not be handled until such time as their hazard to employees is properly assessed.

(5) Shock sensitive wastes: As a minimum, the following special precautions shall be taken when drums and containers containing or suspected of containing shock-sensitive wastes are handled:

(A) All non-essential employees shall be evacuated from the area of transfer.

(B) Material handling equipment shall be provided with explosive containment devices or protective shields to protect equipment operators from exploding containers.

(C) An employee alarm system capable of being perceived above surrounding light and noise conditions shall be used to signal the commencement and completion of explosive waste handling activities.

(D) Continuous communications (i.e., portable radios, hand signals, telephones, as appropriate) shall be maintained between the employee-in-charge of the immediate handling area and both the site safety and health supervisor and the command post until such time as the handling operation is completed. Communication equipment or methods that could cause shock sensitive materials to explode shall not be used.

(E) Drums and containers under pressure, as evidenced by bulging or swelling, shall not be moved until such time as the cause for excess pressure is determined and appropriate containment procedures have been implemented to protect employees from explosive relief of the drum.

(F) Drums and containers containing packaged laboratory wastes shall be considered to contain shock-sensitive or explosive materials until they have been characterized.

CAUTION: Shipping of shock sensitive wastes may be prohibited under U. S. Department of Transportation (DOT) regulations. Employers and shippers should refer to 49 CFR 173.21 and 173.50.

(6) Laboratory waste packs: In addition to the requirements of subsection (j)(5), the following precautions shall be taken, as a minimum, in handling laboratory waste packs (lab packs).

(A) Lab packs shall be opened only when necessary and then only by an individual knowledgeable in the inspection, classification, and segregation of the containers within the pack according to the hazards of the wastes.

(B) If crystalline material is noted on any container, the contents shall be handled as a shock-sensitive waste until the contents are identified.

(7) Sampling of drum and container contents: Sampling of containers and drums shall be done in accordance with a sampling procedure which is part of the site safety and health plan developed for and available to employees and others at the specific worksite.

(8) Shipping and transport.

(A) Drums and containers shall be identified and classified prior to packaging for shipment.

(B) Drum or container staging areas shall be kept to the minimum number necessary to safely identify and classify materials and prepare them for transport.

(C) Staging areas shall be provided with adequate access and egress routes.

(D) Bulking of hazardous wastes shall be permitted only after a thorough characterization of the materials has been completed.

(9) Tank and vault procedures.

(A) Tanks and vaults containing hazardous substances shall be handled in a manner similar to that for drums and containers, taking into consideration the size of the tank or vault.

(B) Appropriate tank or vault entry procedures as described in the employer's safety and health plan and meeting the requirements of 8 CCR, Ch. 4, Subch. 7, Article 108 of the General Industry Safety Orders shall be followed whenever employees must enter a tank or vault.

(k) Decontamination.

(1) General: Procedures for all phases of decontamination shall be developed and implemented in accordance with this subsection.

(2) Decontamination procedures.

(A) A decontamination procedure shall be developed, communicated to employees, and implemented before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.

(B) Standard operating procedures shall be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances.

(C) All employees leaving a contaminated area shall be appropriately decontaminated; all contaminated clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated.

(D) Decontamination procedures shall be monitored by the site safety and health supervisor to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

(3) Location: Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.

(4) Equipment and solvents: All equipment and solvents used for decontamination shall be decontaminated or disposed of properly.

(5) Personal protective clothing and equipment.

(A) Protective clothing and equipment shall be decontaminated, cleaned, laundered, maintained, or replaced as needed to maintain its effectiveness.

(B) Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove that clothing and proceed to shower. The clothing shall be disposed of or decontaminated before it is removed from the work zone.

(6) Unauthorized employees: Unauthorized employees shall be instructed not to remove protective clothing or equipment from change rooms.

(7) Commercial laundries or cleaning establishments: Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment shall be informed of the potentially harmful effects of exposures to hazardous substances.

(8) Showers and change rooms: Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they shall be provided and meet the requirements of 8 CCR, Ch. 4, Subch. 7, Article 9 of the General Industry Safety Orders. If temperature conditions prevent the effective use of water, then other effective means for cleansing shall be provided and used.

(I) Emergency Response by Employees at Uncontrolled Hazardous Waste Sites.

(1) Emergency response plan.

(A) An emergency response plan shall be developed and implemented by all employers within the scope of subsections (a)(1)(A)-(B) of this section to handle anticipated emergencies prior to the commencement of hazardous waste operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, Division personnel, and other governmental agencies with relevant responsibilities.

(B) Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this subsection if they provide an emergency action plan complying with 8 CCR 3220 of the General Industry Safety Orders.

(2) Elements of an emergency response plan: The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following:

- (A) Pre-emergency planning.
- (B) Personnel roles, lines of authority, and communication.
- (C) Emergency recognition and prevention.
- (D) Safe distances and places of refuge.
- (E) Site security and control.
- (F) Evacuation routes and procedures.
- (G) Decontamination procedures which are not covered by the site safety and health plan.
- (H) Emergency medical treatment and first aid.
- (I) Emergency alerting and response procedures.
- (J) Critique of response and follow-up.
- (K) Personal protective equipment (PPE) and emergency equipment.

(3) Procedures for handling emergency incidents.

(A) In addition to the elements for the emergency response plan required in subsection (I)(2), the following elements shall be included for emergency response plans:

- 1. Site topography, layout, and prevailing weather conditions.
- 2. Procedures for reporting incidents to local, state, and federal governmental agencies.

(B) The emergency response plan shall be a separate section of the Site Safety and Health Plan.

(C) The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

(D) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.

(E) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

(F) An employee alarm system shall be installed in accordance with 8 CCR, Ch. 4, Subch. 7, Article 165 of the General Industry Safety Orders to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise in order to speed communication, and to begin emergency procedures.

(G) Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

(m) Illumination: Areas accessible to employees shall be lighted to not less than the minimum illumination intensities listed in Table H-1 while any work is in progress:

Table H-1

| Minimum Illumination Intensities in Foot-Candles | |
|--|--|
| Foot candles | Area or operations |
| 5 | General site areas. |
| 3 | Excavation and waste areas, accessways, active storage areas, loading platforms, refueling, and field maintenance areas. |
| 5 | Indoors: Warehouses, corridors, hallways, and exitways. |
| 5 | Tunnels, shafts, and general underground work areas. (EXCEPTION: Minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Mine Safety and Health Administration approved cap lights shall be acceptable for use in the tunnel heading.) |
| 10 | General shops (e.g., mechanical and electrical equipment rooms, active storerooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms.) |
| 30 | First aid stations, infirmaries, and offices. |

(n) Sanitation at Temporary Workplaces.

(1) Potable water.

(A) An adequate supply of potable water shall be provided on the site.

(B) Portable containers used to dispense drinking water shall be capable of being tightly closed and equipped with a tap, and shall be otherwise designed, constructed, and serviced so that sanitary conditions are maintained. Water shall not be dipped from containers.

(C) Any container used to store, dispense, or distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

(D) Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

(2) Nonpotable water.

(A) Outlets for nonpotable water, such as water for industrial or fire-fighting purposes, shall be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

(B) There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing nonpotable water.

(3) Toilet facilities.

(A) A minimum of one separate toilet facility shall be provided for each 20 employees or fraction thereof of each sex. Such facilities may include both toilets and urinals provided that the number of toilets shall not be less than one half of the minimum required number of facilities.

EXCEPTION: Where there are less than 5 employees, separate toilet facilities for each sex are not required provided the toilet facilities can be locked from the inside and contain at least one toilet.

(B) Under temporary field conditions, provisions shall be made to assure that at least one toilet facility is available.

(C) Hazardous waste sites, not provided with a sanitary sewer, shall be provided with the following toilet facilities unless prohibited by local codes:

1. Chemical toilets;
2. Recirculating toilets;
3. Combustion toilets; or
4. Flush toilets.

(D) The requirements of this subsection for sanitation facilities shall not apply to mobile crews having transportation readily available to nearby toilet facilities.

(E) Doors entering toilet facilities shall be provided with entrance locks controlled from inside the facility.

(F) Toilet facilities shall be kept clean, maintained in good working order, and provided with an adequate supply of toilet paper.

(4) Food handling: All food service facilities and operations for employees shall meet the applicable laws, ordinances, and regulations of the jurisdictions in which they are located.

(5) Temporary sleeping quarters: When temporary sleeping quarters are provided, they shall be heated, ventilated, and lighted.

(6) Washing facilities: The employer shall provide adequate washing facilities for employees engaged in operations where hazardous substances may be harmful to employees. Such facilities shall be in near proximity to the worksite; in areas where exposures are below PELs and published exposure levels and which are under the control of the employer, and shall be so equipped as to enable employees to remove hazardous substances from themselves.

(7) Showers and change rooms: When hazardous waste clean-up or removal operations commence on a site and the duration of the work will require six months or greater time to complete, the employer shall provide showers and change rooms for all employees exposed to hazardous substances and health hazards involved in hazardous waste clean-up or removal operations.

(A) Showers shall be provided and shall meet the requirements of 8 CCR 3366(f).

(B) Change rooms shall be provided and shall meet the requirements of 8 CCR 3367. Change rooms shall consist of two separate change areas separated by the shower area required in subsection (n)(7)(A) of this section. One change area, with an exit leading off the worksite, shall provide employees with a clean area where they can remove, store, and put on street clothing. The second area, with an exit to the worksite, shall provide employees with an area where they can put on, remove, and store work clothing and personal protective equipment.

(C) Showers and change rooms shall be located in areas where exposures are below the PELs and published exposure levels. If this cannot be accomplished, then a ventilation system shall be provided that will supply air that is below the PELs and published exposure levels.

(D) Employers shall assure that employees shower at the end of their work shift and when leaving the hazardous waste site.

(o) New Technology Programs.

(1) The employer shall develop and implement procedures for the introduction of effective new technologies and equipment developed for the improved protection of employees working with hazardous waste clean-up operations, and the same shall be implemented as part of the site safety and health program to assure that employee protection is being maintained.

(2) New technologies, equipment, or control measures available to the industry, such as the use of foams, absorbents, adsorbents, neutralizers, or other means to suppress the level of air contaminants while excavating the site or for spill control, shall be evaluated by employers or their representatives. Such an evaluation shall be done to determine the effectiveness of the new methods, materials, or equipment before implementing their use on a large scale for enhancing employee protection. Information and data from manufacturers or suppliers may be used as part of the employer's evaluation effort. Such evaluations shall be made available to the Division upon request.

(p) Certain Operations Conducted Under the Resource Conservation and Recovery Act of 1976 (RCRA): Employers conducting operations at treatment, storage, and disposal (TSD) facilities specified in subsec-

tion (a)(1)(D) of this section shall provide and implement the programs specified in this subsection. (See the "NOTES AND EXCEPTIONS" to subsection (a)(2)(C) of this section for employers not covered.)

(1) Safety and health program: The employer shall develop and implement a written safety and health program for employees involved in hazardous waste operations that shall be available for inspection by employees, their representatives, and Division personnel. The program shall be designed to identify, evaluate, and control safety and health hazards in their facilities for the purpose of employee protection; to provide for emergency response meeting the requirements of subsection (p)(8) of this section; and to address as appropriate site analysis, engineering controls, maximum exposure limits, hazardous waste handling procedures, and uses of new technologies.

(2) Hazard communication program: The employer shall implement a hazard communication program meeting the requirements of 8 CCR 5194 as part of the employer's safety and health program.

NOTE TO 8 CCR 5192: The exemption for hazardous waste provided in 8 CCR 5194 is applicable to this section.

(3) Medical surveillance program: The employer shall develop and implement a medical surveillance program meeting the requirements of subsection (f) of this section.

(4) Decontamination program: The employer shall develop and implement a decontamination procedure in accordance with subsection (k) of this section.

(5) New technology program: The employer shall develop and implement procedures meeting the requirements of subsection (o) of this section for introducing new and innovative equipment into the workplace.

(6) Material handling program: Where employees will be handling drums or containers, the employer shall develop and implement procedures meeting the requirements of subsections (j)(1)(B) through (H), and (K) of this section, as well as (j)(3) and (j)(8) of this section prior to starting such work.

(7) Training program.

(A) New employees: The employer shall develop and implement a training program, which is part of the employer's safety and health program, for employees exposed to health hazards or hazardous substances at TSD operations to enable employees to perform their assigned duties and functions in a safe and healthful manner so as not to endanger themselves or other employees. The initial training shall be for 24 hours and refresher training shall be for eight hours annually. Employees who have received the initial training required by this subsection shall be given a written certificate attesting that they have successfully completed the necessary training.

(B) Current employees: Employers who can show by an employee's previous work experience and/or training that the employee has had training equivalent to the initial training required by this subsection, shall be considered as meeting the initial training requirements of this subsection with respect to that employee. Equivalent training includes the training that existing employees might have already received from actual site work experience. Current employees shall receive eight hours of refresher training annually.

(C) Trainers: Trainers who teach initial training shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, or they shall have the academic credentials and instruction experience necessary to demonstrate a good command of the subject matter of the courses and competent instructional skills.

(8) Emergency response program.

(A) Emergency response plan: An emergency response plan shall be developed and implemented by all employers. Such plans need not duplicate any of the subjects fully addressed in the employer's contingency planning required by permits, such as those issued by the U. S. Environmental Protection Agency, provided that the contingency plan is made part of the emergency response plan. The emergency response plan shall be a written portion of the employer's safety and health program required in subsection (p)(1) of this section. Employers who will evacuate their

employees from the worksite location when an emergency occurs and who do not permit any of their employees to assist in handling the emergency are exempt from the requirements of subsection (p)(8) if they provide an emergency action plan complying with 8 CCR 3220.

(B) Elements of an emergency response plan: The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following areas to the extent that they are not addressed in any specific program required in this subsection:

1. Pre-emergency planning and coordination with outside parties.
2. Personnel roles, lines of authority, and communication.
3. Emergency recognition and prevention.
4. Safe distances and places of refuge.
5. Site security and control.
6. Evacuation routes and procedures.
7. Decontamination procedures.
8. Emergency medical treatment and first aid.
9. Emergency alerting and response procedures.
10. Critique of response and follow-up.
11. Personal protective equipment (PPE) and emergency equipment.

(C) Training.

1. Training for emergency response employees shall be completed before they are called upon to perform in real emergencies. Such training shall include the elements of the emergency response plan, standard operating procedures the employer has established for the job, the PPE to be worn and procedures for handling emergency incidents.

EXCEPTION #1: An employer need not train all employees to the degree specified if the employer divides the work force in a manner such that a sufficient number of employees who have responsibility to control emergencies have the training specified, and all other employees, who may first respond to an emergency incident, have sufficient awareness training to recognize that an emergency response situation exists and that they are instructed in that case to summon the fully trained employees and not attempt control activities for which they are not trained.

EXCEPTION #2: An employer need not train all employees to the degree specified if arrangements have been made in advance for an outside fully-trained emergency response team to respond in a reasonable period and all employees, who may come to the incident first, have sufficient awareness training to recognize that an emergency response situation exists and they have been instructed to call the designated outside fully-trained emergency response team for assistance.

2. Employee members of TSD facility emergency response organizations shall be trained to a level of competence in the recognition of health and safety hazards to protect themselves and other employees. This would include training in the methods used to minimize the risk from safety and health hazards; in the safe use of control equipment; in the selection and use of appropriate personal protective equipment; in the safe operating procedures to be used at the incident scene; in the techniques of coordination with other employees to minimize risks; in the appropriate response to over-exposure from health hazards or injury to themselves and other employees; and in the recognition of subsequent symptoms which may result from over-exposures.

3. The employer shall certify that each covered employee has attended and successfully completed the training required in subsection (p)(8)(C) of this section, or shall certify the employee's competency at least yearly. The method used to demonstrate competency for certification of training shall be recorded and maintained by the employer.

(D) Procedures for handling emergency incidents.

1. In addition to the elements for the emergency response plan required in subsection (p)(8)(B) of this section, the following elements shall be included for emergency response plans to the extent that they do not repeat any information already contained in the emergency response plan:

- a. Site topography, layout, and prevailing weather conditions.
- b. Procedures for reporting incidents to local, state, and federal governmental agencies.

2. The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

3. The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.

4. The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

5. An employee alarm system shall be installed in accordance with 8 CCR 6184 to notify employees of an emergency situation; to stop work activities if necessary; to lower background noise in order to speed communication; and to begin emergency procedures.

6. Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

(q) Emergency Response to Hazardous Substance Releases: This subsection covers employers whose employees are engaged in emergency response no matter where it occurs except that it does not cover employees engaged in operations specified in subsections (a)(1)(A) through (a)(1)(D) of this section. Those emergency response organizations who have developed and implemented programs equivalent to this subsection for handling releases of hazardous substances pursuant to Section 303 of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. 11003) shall be deemed to have met the requirements of this subsection.

(1) Emergency response plan: An emergency response plan shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, and Division personnel. Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this subsection if they provide an emergency action plan in accordance with 8 CCR 3220.

(2) Elements of an emergency response plan: The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following to the extent that they are not addressed elsewhere:

- (A) Pre-emergency planning and coordination with outside parties.
- (B) Personnel roles, lines of authority, training, and communication.
- (C) Emergency recognition and prevention.
- (D) Safe distances and places of refuge.
- (E) Site security and control.
- (F) Evacuation routes and procedures.
- (G) Decontamination.
- (H) Emergency medical treatment and first aid.
- (I) Emergency alerting and response procedures.
- (J) Critique of response and follow-up.
- (K) Personal protective equipment (PPE) and emergency equipment.
- (L) Emergency response organizations may use the local emergency response plan or the state emergency response plan or both, as part of their emergency response plan, to avoid duplication. Those items of the emergency response plan that are being properly addressed by the SARA Title III plans may be substituted into their emergency plan or otherwise kept together for the employer and employee's use.

(3) Procedures for handling emergency response.

(A) The senior emergency response official who has ultimate site control responsibility shall confirm that the Incident Command System (ICS) is in place and the position of Incident Commander (IC) instituted. All emergency responders and their communications shall be coordinated and controlled through the ICS.

NOTE TO (q)(3)(A): The "senior official" at an emergency response is the most senior official on the site who has the responsibility for con-

trolling the operations at the site until the emergency response official who is determined to have ultimate incident control authority arrives. Initially it is the senior officer on the first—due piece of responding emergency apparatus to arrive on the incident scene, usually a police or fire vehicle. As more senior officials arrive the position is passed up the line of authority which has been previously established. As there may be several separate spheres of responsibility at a given site (police, fire, CalTrans, for example), there may be several "senior officials," each responsible for his/her own employees. The "senior emergency response official" who will have ultimate site control responsibility is established in the Hazardous Material Incident Contingency Plan for the State of California (January 1991), promulgated by the State Office of Emergency Services (OES) as directed by Health and Safety Code, Sec. 25503 (HS 25503), and California Code of Regulations, Title 19, Division 2 (19 CCR, Div. 2: Office of Emergency Services) and in coordination with the various city and county, i.e., area emergency response plans.

(B) The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.

(C) Based on the hazardous substances and/or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations, and assure that the PPE worn is appropriate for the hazards to be encountered. However, PPE shall meet, at a minimum, the criteria contained in 8 CCR 3401–3408 when worn while performing fire fighting operations beyond the incipient stage for any incident.

(D) Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus (SCBA) while engaged in emergency response, until such time that the individual in charge of the ICS determines through the use of air monitoring that a decreased level of respiratory protection will not result in hazardous exposures to employees.

(E) The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of two or more.

(F) Back-up personnel shall stand by with equipment ready to provide assistance or rescue, and shall not engage in activities that will detract from that mission. Back-up personnel shall be protected, at a minimum, as the same level as the entry team. Advance first aid support personnel, at a minimum, shall also stand by with medical equipment and transportation capability.

(G) The individual in charge of the ICS shall designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.

(H) When activities are judged by the safety official to be an IDLH condition and/or to involve an imminent danger condition, the safety official shall have the authority to alter, suspend, or terminate those activities. The safety official shall immediately inform the individual in charge of the ICS of any actions needed to be taken to correct these hazards at the emergency scene.

(I) After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.

(J) When deemed necessary for meeting the tasks at hand, approved SCBA may be used with approved cylinders from other approved SCBA, provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with SCBA shall meet U. S. Department of Transportation (DOT) and National Institute for Occupational Safety and Health (NIOSH) criteria.

(4) Skilled support personnel: Personnel, not necessarily an employer's own employees, who are skilled in the operation of certain equipment, such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work that cannot reasonably be performed in a timely fashion by an employer's own employees, and who will be or may be exposed to the hazards at an emergency response scene, are not required to meet the training required in this subsection for the employer's regular employees.

However, these personnel shall be given an initial briefing at the site prior to their participation in any emergency response. The initial briefing shall include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are to be performed. All other appropriate safety and health precautions provided to the employer's own employees shall be used to assure the safety and health of these support personnel.

(5) Specialist employees: Employees who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous substances, and who will be called upon to provide technical advice or assistance at a hazardous substance release incident to the individual in charge, shall receive training or demonstrate competency in the area of their specialization annually.

(6) Training: Training shall be based on the duties and function to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders (those hired after the effective date of this standard) shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following subsections:

(A) First Responder, Awareness Level (FRA): First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

1. An understanding of what hazardous substances are, and the risks associated with them in an incident.
2. An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
3. The ability to recognize the presence of hazardous substances in an emergency.
4. The ability to identify the hazardous substances, if possible.
5. An understanding of the role of the first responder awareness individual in the employer's emergency response plan (including site security and control), and the U. S. Department of Transportation's Emergency Response Guidebook.
6. The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

(B) First Responder, Operations Level (FRO): First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level; and the employer shall so certify:

1. Knowledge of the basic hazard and risk assessment techniques.
2. Know how to select and use proper PPE provided to the first responder operational level.

3. An understanding of basic hazardous materials terms.

4. Know how to perform basic control, containment, and/or confinement operations and rescue injured or contaminated persons within the capabilities of the resources and PPE available with their unit.

5. Know how to implement basic equipment, victim, and rescue personnel decontamination procedures.

6. An understanding of the relevant standard operating procedures and termination procedures.

(C) Hazardous Materials Technician: Hazardous materials technicians are individuals who respond to releases or potential releases of hazardous substances for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch, or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least 24 hours of training of which 8 hours shall be equivalent to the first responder operations level and in addition have competency in the following areas; and the employer shall so certify:

1. Know how to implement the employer's emergency response plan.

2. Know the classification, identification, and verification of known and unknown materials by using field survey instruments and equipment.

3. Be able to function within an assigned role in the ICS.

4. Know how to select and use proper specialized chemical PPE provided to the hazardous materials technician.

5. Understand hazard and risk assessment techniques.

6. Be able to perform advanced control, containment, and/or confinement operations and rescue injured or contaminated persons within the capabilities of the resources and PPE available with the unit.

7. Understand and implement equipment, victim, and rescue personnel decontamination procedures.

8. Understand termination procedures.

9. Understand basic chemical and toxicological terminology and behavior.

(D) Hazardous Materials Specialist: Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local, and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency in the following areas; and the employer shall so certify:

1. Know how to implement the local emergency response plan.

2. Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.

3. Know of the state emergency response plan.

4. Be able to select and use proper specialized chemical PPE provided to the hazardous materials specialist.

5. Understand in-depth hazard and risk techniques.

6. Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and PPE available.

7. Be able to determine and implement decontamination procedures.

8. Have the ability to develop a site safety and health control plan.

9. Understand chemical, radiological, and toxicological terminology and behavior.

(E) Incident Commander/On-scene Manager: Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas; and the employer shall so certify:

1. Know and be able to implement the employer's incident command system.

2. Know how to implement the employer's emergency response plan.

3. Know and understand the hazards and risks associated with employees working in chemical protective clothing.

4. Know how to implement the local emergency response plan.

5. Know of the state emergency response plan and of the Federal Regional Response Team.

6. Know and understand the importance of decontamination procedures.

NOTE TO (q)(6)(E): Management personnel who, during an emergency situation, stay out of the hazardous area and who are not taking charge of the incident, and are not a "specialist" employee under subsection (q)(5) of this section are not subject to the provisions of this section.

(7) Trainers: Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the California Specialized Training Institute, the California State Fire Marshal's Office, the University of California, or the U. S. National Fire Academy; or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

(8) Refresher training.

(A) Those employees who are trained in accordance with subsection (q)(6) of this section shall receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly.

(B) A statement shall be made of the training or competency; and if a statement of competency is made, the employer shall keep a record of the methodology used to demonstrate competency.

(9) Medical surveillance and consultation.

(A) Members of an organized and designated HAZMAT team, and hazardous materials specialists shall receive a baseline physical examination and be provided with medical surveillance as required in subsection (f) of this section.

(B) Any emergency response employee who exhibits signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident, either immediately or subsequently, shall be provided with medical consultation as required in subsection (f)(3)(B) of this section.

(10) Chemical protective clothing: Chemical protective clothing and equipment to be used by organized and designated HAZMAT team members, or to be used by hazardous materials specialists shall meet the requirements of subsections (g)(3) through (5) of this section.

(11) Post-emergency response operations: Upon completion of the emergency response, if it is determined that it is necessary to remove hazardous substances, health hazards, and materials contaminated with them (such as contaminated soil or other elements of the natural environment) from the site of the incident, the employer conducting the clean-up shall comply with one of the following:

(A) Meet all of the requirements of subsections (b) through (o) of this section; or

(B) Where the clean-up is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of the following: 8 CCR 3220, 8 CCR 5144, 8 CCR 5194, and other appropriate safety and health training made necessary by the tasks that they are expected to perform such as the use of PPE, and decontamination procedures. All equipment to be used in the performance of the clean-up work shall be in serviceable condition and shall have been inspected prior to use.

NOTE: Authority cited: Sections 142.3 and 142.7, Labor Code. Reference: Sections 142.3 and 142.7, Labor Code.

HISTORY

1. New section including Appendices A-D filed 8-26-91; operative 9-25-91 (Register 92, No. 12).

Appendices to 5192

Hazardous Waste Operations and Emergency Response

NOTE: The following appendices serve as non-mandatory guidelines to assist employees and employers in complying with the appropriate requirements of this section. However, subsection 5192(g) makes mandatory in certain circumstances the use of Level A and Level B PPE protection.

Appendix A

Personal Protective Equipment (PPE) Test Methods (Non-Mandatory)

This appendix sets forth the non-mandatory examples of tests which may be used to evaluate compliance with subsections (g)(4)(B) and (C). Other tests and other challenge agents may be used to evaluate compliance.

A. Totally-encapsulating chemical protective suit pressure test.

1.0 — Scope.

1.1 This practice measures the ability of a gas tight totally-encapsulating chemical protective suit material, seams, and closures to maintain a fixed positive pressure. The results of this practice allow the gas tight integrity of a totally-encapsulating chemical protective suit to be evaluated.

1.2 Resistance of the suit materials to permeation, penetration, and degradation by specific hazardous substances is not determined by this test method.

2.0 — Definition of terms.

2.1 "Totally-encapsulating chemical protective suit (TECP suit)" means a full body garment which is constructed of protective clothing materials; covers the wearer's torso, head, arms, legs and respirator; may cover the wearer's hands and feet with tightly attached gloves and boots; completely encloses the wearer and respirator by itself or in combination with the wearer's gloves and boots.

2.2 "Protective clothing material" means any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with potentially hazardous liquid or gaseous chemicals.

2.3 "Gas tight" means, for the purpose of this test method, the limited flow of a gas under pressure from the inside of a TECP suit to atmosphere at a prescribed pressure and time interval.

3.0 — Summary of test method.

3.1 The TECP suit is visually inspected and modified for the test. The test apparatus is attached to the suit to permit inflation to the pre-test suit expansion pressure for removal of suit wrinkles and creases. The pressure is lowered to the test pressure and monitored for three minutes. If the pressure drop is excessive, the TECP suit fails the test and is removed from service. The test is repeated after leak location and repair.

4.0 — Required Supplies.

4.1 Source of compressed air.

4.2 Test apparatus for suit testing including a pressure measurement device with a sensitivity of at least 1/4 inch water gauge.

4.3 Vent valve closure plugs or sealing tape.

4.4 Soapy water solution and soft brush.

4.5 Stop watch or appropriate timing device.

5.0 — Safety Precautions.

5.1 Care shall be taken to provide the correct pressure safety devices required for the source of compressed air used.

6.0 — Test procedure.

6.1 Prior to each test, the tester shall perform a visual inspection of the suit. Check the suit for seam integrity by visually examining the seams and gently pulling on the seams. Ensure that all air supply lines, fittings, visor, zippers, and valves are secure and show no signs of deterioration.

6.1.1 Seal off the vent valves along with any other normal inlet or exhaust points (such as umbilical air line fittings or face piece opening) with tape or other appropriate means (caps, plugs, fixture, etc.). Care should be exercised in the sealing process not to damage any of the suit components.

6.1.2 Close all closure assemblies.

6.1.3 Prepare the suit for inflation by providing an improvised connection point on the suit for connecting an airline. Attach the pressure test apparatus to the suit to permit suit inflation from a compressed air source equipped with a pressure indicating regulator. The leak tightness of the pressure test apparatus should be tested before and after each test by closing off the end of the tubing attached to the suit and assuring a pressure of three inches water gauge for three minutes can be maintained. If a component is removed for the test, that component shall be replaced and a second test conducted with another component removed to permit a complete test of the ensemble.

6.1.4 The pre-test expansion pressure (A) and the suit test pressure (B) shall be supplied by the suit manufacturer but in no case shall they be less than: (A) = 3 inches water gauge; and (B) = 2 inches water gauge. The ending suit pressure (C) shall be no less than 80 percent of the test pressure (B); i.e., the pressure drop shall not exceed 20 percent of the test pressure (B).

6.1.5 Inflate the suit until the pressure inside is equal to pressure (A), the pre-test expansion suit pressure. Allow at least one minute to fill out the wrinkles in the suit. Release sufficient air to reduce the suit pressure to pressure (B), the suit test pressure. Begin timing. At the end of three minutes, record the suit pressure as pressure (C), the ending suit pressure. The difference between the suit test pressure and the ending suit test pressure (B-C) shall be defined as the suit pressure drop.

6.1.6 If the suit pressure drop is more than 20 percent of the suit test pressure (B) during the three-minute test period, the suit fails the test and shall be removed from service.

7.0 — Retest Procedure.

7.1 If the suit fails the test, check for leaks by inflating the suit to pressure (A) and brushing or wiping the entire suit (including seams, closures, lens gaskets, glove-to-sleeve joints, etc.) with a mild soap and water solution. Observe the suit for the formation of soap bubbles, which is an indication of a leak. Repair all identified leaks.

7.2 Retest the TECP suit as outlined in Test Procedure 6.0.

8.0 — Report.

8.1 Each TECP suit tested by this practice shall have the following information recorded:

8.1.1 Unique identification number identifying brand name, date of purchase, material of construction, and unique fit features, e.g., special breathing apparatus.

8.1.2 The actual values for test pressures (A), (B), and (C) shall be recorded along with the specific observation times. If the ending pressure (C) is less than 80 percent of the test pressure (B), the suit shall be identified as failing the test. When possible, the specific leak location shall be identified in the test records. Retest pressure data shall be recorded as an additional test.

8.1.3 The source of the test apparatus used shall be identified and the sensitivity of the pressure gauge shall be recorded.

8.1.4 Records shall be kept for each pressure test even if repairs are being made at the test location.

CAUTION

Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust valve to make sure it is not blocked.

Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

B. Totally-encapsulating chemical protective suit qualitative leak test.

1.0 — Scope.

1.1 This practice semi-qualitatively tests gas tight totally-encapsulating chemical protective suit integrity by detecting inward leakage of ammonia vapor. Since no modifications are made to the suit to carry out this test, the results from this practice provide a realistic test for the integrity of the entire suit.

1.2 Resistance of the suit materials to permeation, penetration, and degradation is not determined by this test method. ASTM test methods are available to test suit materials for these characteristics and the tests are usually conducted by the manufacturers of the suits.

2.0 - Definition of terms.

2.1 "Totally-encapsulated chemical protective suit (TECP suit)" means a full body garment which is constructed of protective clothing materials; covers the wearer's torso, head, arms, legs and respirator; may cover the wearer's hands and feet with tightly attached gloves and boots; completely encloses the wearer and respirator by itself or in combination with the wearer's gloves and boots.

2.2 "Protective clothing material" means any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with potentially hazardous liquid or gaseous chemicals.

2.3 "Gas tight" means, for the purpose of this test method, the limited flow of a gas under pressure from the inside of a TECP suit to atmosphere at a prescribed pressure and time interval.

2.4 "Intrusion Coefficient" means a number expressing the level of protection provided by a gas tight totally-encapsulating chemical protective suit. The intrusion coefficient is calculated by dividing the test room challenge agent concentration by the concentration of challenge agent found inside the suit. The accuracy of the intrusion coefficient is dependent on the challenge agent monitoring methods. The larger the intrusion coefficient the greater the protection provided by the TECP suit.

3.0 — Summary of recommended practice.

3.1 The volume of concentrated aqueous ammonia solution (ammonium hydroxide, NH_4OH) required to generate the test atmosphere is determined using the directions outlined in 6.1. The suit is donned by a person wearing the appropriate respiratory equipment (either positive-pressure self-contained breathing apparatus or a positive-pressure supplied air respirator) and worn inside the enclosed test room. The concentrated aqueous ammonia solution is taken by the suited individual into the test room and poured into an open plastic pan. A two-minute evaporation period is observed before the test room concentration is measured using a high range ammonia length of stain detector tube. When the ammonia vapor reaches a concentration of between 1000 and 1200 ppm, the suited individual starts a standardized exercise protocol to stress and flex the suit. After this protocol is completed, the test room concentration is measured again. The suited individual exits the test room and his stand-by person measures the ammonia concentration inside the suit using a low range ammonia length of stain detector tube or other more sensitive ammonia detector.

A stand-by person is required to observe the test individual during the test procedure; aid the person in donning and doffing the TECP suit; and monitor the suit interior. The intrusion coefficient of the suit can be calculated by dividing the average test area concentration by the interior suit concentration. A colorimetric ammonia indicator strip of bromophenol blue or equivalent is placed on the inside of the suit face piece lens so that the suited individual is able to detect a color change and know if the suit has a significant leak. If a color change is observed the individual shall leave the test room immediately.

4.0 — Required supplies.

4.1 A supply of concentrated aqueous ammonium hydroxide (58% ammonia by weight).

4.2 A supply of bromophenol blue indicating paper or equivalent, sensitive to 5-10 ppm ammonia or greater over a two-minute period of exposure. (pH 3.0 (yellow) to pH 4.6 (blue))

4.3 A supply of high range (0.5-10 volume percent) and low range (5-700 ppm) detector tubes for ammonia and the corresponding sampling pump. More sensitive ammonia detectors can be substituted for the low range detector tubes to improve the sensitivity of this practice.

4.4 A shallow plastic pan (PVC) at least 12":14":1" and a half pint plastic container (PVC) with tightly closing lid.

4.5 A graduated cylinder or other volumetric measuring device of at least 50 milliliters in volume with an accuracy of at least ± 1 milliliters.

5.0 — Safety precautions.

5.1 Concentrated aqueous ammonium hydroxide, NH_4OH , is a corrosive volatile liquid requiring eye, skin, and respiratory protection. The person conducting the test shall review the MSDS for aqueous ammonia.

5.2 Since the established short term exposure limit (STEL) for ammonia is 35 ppm as a 15 minute STEL, only persons wearing positive pressure self-contained breathing apparatus or a positive pressure supplied air respirator shall be in the chamber. Normally only the person wearing the totally-encapsulating suit will be inside the chamber. A stand-by person shall have a positive pressure self-contained breathing apparatus, or a positive pressure supplied air respirator available to enter the test area should the suited individual need assistance.

5.3 A method to monitor the suited individual must be used during this test. Visual contact is the simplest but other methods using communication devices are acceptable.

5.4 The test room shall be large enough to allow the exercise protocol to be carried out and then to be ventilated to allow each exhaust of the ammonia test atmosphere after the test(s) are completed.

5.5 Individuals shall be medically screened for the use of respiratory protection and checked for allergies to ammonia before participating in this test procedure.

6.0 — Test procedure.

6.1.1 Measure the test area to the nearest foot and calculate its volume in cubic feet. Multiply the test area volume by 0.2 milliliters of concentrated aqueous ammonia solution per cubic foot of test area volume to determine the approximate volume of concentrated aqueous ammonia required to generate 1000 ppm in the test area.

6.1.2 Measure this volume from the supply of concentrated aqueous ammonia and place it into a closed plastic container.

6.1.3 Place the container, several high range ammonia detector tubes, and the pump in the clean test pan and locate it near the test area entry door so that the suited individual has easy access to these supplies.

6.2.1 In a non-contaminated atmosphere, open a pre-sealed ammonia indicator strip and fasten one end of the strip to the inside of suit face shield lens where it can be seen by the wearer. Moisten the indicator strip with distilled water. Care shall be taken not to contaminate the detector part of the indicator paper by touching it. A small piece of masking tape or equivalent should be used to attach the indicator strip to the interior of the suit face shield.

6.2.2 If problems are encountered with this method of attachment, the indicator strip can be attached to the outside of the respirator face piece lens being used during the test.

6.3 Don the respiratory protective device normally used with the suit, and then don the TECP suit to be tested. Check to be sure all openings which are intended to be sealed (zippers, gloves, etc.) are completely sealed. DO NOT, however, plug off any venting valves.

6.4 Step into the enclosed test room such as a closet, bathroom, or test booth, equipped with an exhaust fan. No air should be exhausted from the chamber during the test because this will dilute the ammonia challenge concentrations.

6.5 Open the container with the pre-measured volume of concentrated aqueous ammonia within the enclosed test room, and pour the liquid into the empty plastic test pan. Wait two minutes to allow for adequate volatilization of the concentrated aqueous ammonia. A small mixing fan can be used near the evaporation pan to increase the evaporation rate of the ammonia solution.

6.6 After two minutes a determination of the ammonia concentration within the chamber should be made using the high range colorimetric detector tube. A concentration of 1000 ppm ammonia or greater shall be generated before the exercises are started.

6.7 To test the integrity of the suit the following four-minute exercise protocol should be followed:

6.7.1 Raising the arms above the head with at least 15 raising motions completed in one minute.

6.7.2 Walking in place for one minute with at least 15 raising motions of each leg in a one-minute period.

6.7.3 Touching the toes with at least 10 complete motions of the arms from above the head to touching of the toes in a one-minute period.

6.7.4 Deep knee bends with at least 10 complete standing and squatting motions in a one-minute period.

6.8 If at any time during the test the colorimetric indicating paper should change colors, the test should be stopped and section 6.10 and 6.12 initiated. (See paragraph 4.2).

6.9 After completion of the test exercise, the test area concentration should be measured again using the high range colorimetric detector tube.

6.10 Exit the test area.

6.11 The opening created by the suit zipper or other appropriate suit penetration should be used to determine the ammonia concentration in the suit with the low range length of stain detector tube or other ammonia monitor. The internal TECP suit air should be sampled far enough from the enclosed test area to prevent a false ammonia reading.

6.12 After completion of the measurement of the suit interior ammonia concentration the test is concluded and the suit is doffed and the respirator removed.

6.13 The ventilating fan for the test room should be turned on and allowed to run for enough time to remove the ammonia gas. The fan shall be vented to the outside of the building.

6.14 Any detectable ammonia in the suit interior (five ppm ammonia (NH_3) or more for the length of stain detector tube) indicates that the suit has failed the test. When other ammonia detectors are used a lower level of detection is possible, and it should be specified as the pass/fail criteria.

6.15 By following this test method, an intrusion coefficient of approximately 200 or more can be measured with the suit in a completely operational condition. If the intrusion coefficient is 200 or more, then the suit is suitable for emergency response and field use.

7.0 — Retest procedures.

7.1 If the suit fails this test, check for leaks by following the pressure test in test A above.

7.2 Retest the TECP suit as outlined in the test procedure 6.0.

8.0 — Report.

8.1 Each gas tight totally-encapsulating chemical protective suit tested by this practice shall have the following information recorded.

8.1.1 Unique identification number identifying brand name, date of purchase, material of construction, and unique suit features, e.g., special breathing apparatus.

8.1.2 General description of test room used for test.

8.1.3 Brand name and purchase date of ammonia detector strips and color change data.

8.1.4 Brand name, sampling range, and expiration date of the length of stain ammonia detector tubes. The brand name and model of the sampling pump should also be recorded. If another type of ammonia detector is used, it should be identified along with its minimum detection limit for ammonia.

8.1.5 Actual test results shall list the two test area concentrations, their average, the interior suit concentration, and the calculated intrusion coefficient. Retest data shall be recorded as an additional test.

8.2 The evaluation of the data shall be specified as "suit passed" or "suit failed" and the date of the test. Any detectable ammonia (five ppm or greater for the length of stain detector tube) in the suit interior indicates the suit has failed this test. When other ammonia detectors are used, a lower level of detection is possible and it should be specified as the pass/fail criteria.

CAUTION

Visually inspect all parts of the suit to be sure they are positioned correctly and secured tightly before putting the suit back into service. Special care should be taken to examine each exhaust valve to make sure it is not blocked.

Care should also be exercised to assure that the inside and outside of the suit is completely dry before it is put into storage.

Appendix B

General Description and Discussion of the Levels of Protection and Protective Gear (Non-Mandatory)

This appendix sets forth information about personal protective equipment (PPE) protection levels which may be used to assist employers in complying with the PPE requirements of this section.

As required by the standard, PPE must be selected which will protect employees from the specific hazards which they are likely to encounter during their work on-site.

Selection of the appropriate PPE is a complex process which must take into consideration a variety of factors. Key factors involved in this process are identification of the hazards, or suspected hazards; their routes of potential hazard to employees (inhalation, skin absorption, ingestion, and eye or skin contact); and the performance of the PPE materials (and seams) in providing a barrier to these hazards. The amount of protection provided by PPE is material-hazard specific. That is, protective equipment materials will protect well against some hazardous substances and poorly, or not at all, against others. In many instances, protective equipment materials cannot be found which will provide continuous protection from the particular hazardous substance. In these cases the breakthrough time of the protective material should exceed the work durations.

Other factors in this selection process to be considered are matching the PPE to the employee's work requirements and task-specific conditions. The durability of PPE materials, such as tear strength and seam strength, should be considered in relation to the employee's tasks. The effects of PPE in relation to heat stress and task duration are a factor in selecting and using PPE. In some cases layers of PPE may be necessary to provide sufficient protection, or to protect expensive PPE inner garments, suits or equipment.

The more that is known about the hazards at the site, the easier the job of PPE selection becomes. As more information about the hazards and conditions at the site becomes available, the site supervisor can make decisions to upgrade or downgrade the level of PPE protection to match the tasks at hand.

The following are guidelines which an employer can use to begin the selection of the appropriate PPE. As noted above, the site information may suggest the use of combinations of PPE selected from the different protection levels (i.e., A, B, C, or D) as being more suitable to the hazards of the work. It should be cautioned that the listing below does not fully address the performance of the specific PPE material in relation to the specific hazards at the job site, and that PPE selection, evaluation, and re-selection is an ongoing process until sufficient information about the hazards and PPE performance is obtained.

Part A. Personal protection equipment is divided into four categories based on the degree of protection afforded. (See Part B of this appendix for further explanation of Levels A, B, C, and D hazards):

I. Level A — To be selected when the greatest level of skin, respiratory, and eye protection is required.

The following constitute Level A equipment; it may be used as appropriate.

1. Positive-pressure, full face-piece, self-contained breathing apparatus (SCBA), or positive pressure supplied-air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).

2. Totally-encapsulating chemical-protective suit.

3. Coveralls.*

4. Long underwear.*

5. Gloves, outer, chemical-resistant.

6. Gloves, inner, chemical-resistant.

7. Boots, chemical-resistant, steel toe and shank.

8. Hard hat (under suit).*

9. Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally-encapsulating suit.)

II. Level B—The highest level of respiratory protection is necessary but a lesser level of skin protection is needed.

The following constitute Level B equipment; it may be used as appropriate.

1. Positive-pressure, fullface-piece, self-contained breathing apparatus (SCBA), or positive-pressure supplied-air respirator with escape SCBA (NIOSH approved).

2. Hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one or two-piece chemical-splash suit; disposable chemical-resistant overalls).

3. Coveralls.*

4. Gloves, outer, chemical-resistant.

5. Gloves, inner, chemical-resistant.

6. Boots, outer, chemical-resistant steel toe and shank.

7. Boot-covers, outer, chemical-resistant (disposable).*

8. Hard hat.*

9. Face shield.*

III. Level C—The concentration(s) and type(s) of airborne substance(s) is known and the criteria for using air purifying respirators are met.

The following constitute Level C equipment; it may be used as appropriate.

1. Full-face or half-mask, air-purifying respirators (NIOSH approved).

2. Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls).

3. Coveralls.*

4. Gloves, outer, chemical-resistant.

5. Gloves, inner, chemical-resistant.

6. Boots (outer), chemical-resistant steel toe and shank.*

7. Boot-covers, outer, chemical-resistant (disposable).*

8. Hard hat.*

9. Escape mask.*

10. Face shield.*

IV. Level D—A work uniform affording minimal protection; used for nuisance contamination only.

The following constitute Level D equipment; it may be used as appropriate.

1. Coveralls.

2. Gloves.*

3. Boots/shoes, chemical-resistant steel toe and shank.

4. Boots, outer, chemical-resistant (disposable).*

5. Safety glasses or chemical splash goggles.*

6. Hard hat.*

7. Escape mask.*

8. Face shield.*

* Optional, as applicable.

Part B. The types of hazards for which levels A, B, C, and D protection are appropriate are described below:

I. Level A—Level A protection should be used when:

1. The hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either the measured (or potential for) high concentration of atmospheric vapors, gases, or particulates; or the site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the skin.

2. Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible; or

3. Operations are being conducted in confined, poorly ventilated areas, and the absence of conditions requiring Level A have not yet been determined.

II. Level B—Level B protection should be used when:

1. The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection; and/or

2. The atmosphere contains less than 19.5 percent oxygen; or

3. The presence of incompletely identified vapors or gases is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin.

NOTE: This involves atmospheres with IDLH concentrations of specific substances that present severe inhalation hazards and that do not represent a severe skin hazard; or that do not meet the criteria for use of air-purifying respirators.

III. Level C—Level C protection should be used when:

1. The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin;

2. The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove the contaminants; and

3. All criteria for the use of air-purifying respirators are met.

IV. Level D—Level D protection should be used when:

1. The atmosphere contains no known hazard; and

2. Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.

NOTE: As stated before, combinations of personal protective equipment other than those described for Levels A, B, C, and D protection may be more appropriate and may be used to provide the proper level of protection.

As an aid in selecting suitable chemical protective clothing, it should be noted that the National Fire Protection Association has developed standards on chemical protective clothing, including:

NFPA 1991—Standard on Vapor-Protective Suits for Hazardous Chemical Emergencies (EPA Level A Protective Clothing)

NFPA 1992—Standard on Liquid Splash-Protective Suits for Hazardous Chemical Emergencies (EPA Level B Protective Clothing)

NFPA 1993—Standard on Support Function Protective Garments for Hazardous Chemical Operations (EPA Level B Protective Clothing)

These standards apply documentation and performance requirements to the manufacture of chemical protective suits. Chemical protective suits meeting these requirements are labelled as compliant with the appropriate standard. As these standards, have been adopted by the National Fire Protection Association, it is recommended that chemical protective suits which meet these standards be used.

Appendix C

Compliance Guidelines (Non-Mandatory)

1. Occupational Safety and Health Program: Each hazardous waste site clean-up effort will require an occupational safety and health program headed by the site coordinator or the employer's representative. The purpose of the program will be the protection of employees at the site and will be an extension of the employer's overall safety and health program. The program will need to be developed before work begins on the site and implemented as work proceeds as stated in subsection (b). The program is to facilitate coordination and communication of safety and health issues among personnel responsible for the various activities which will take place at the site. The program will provide the means for identifying and controlling worksite hazards and the means for monitoring program effectiveness. It will provide the overall means for planning and implementing the needed safety and health training and job orientation of employees, who will be working at the site. The program will need to cover the responsibilities and authority of the site coordinator or the employer's manager on the site for the safety and health of employees at the site, and the relationships with contractors or support services as to what each employer's safety and health responsibilities are for their employees on the site. Each contractor on the site needs to have its own safety and health program so structured that it will smoothly interface with the program of the site coordinator or principal contractor.

Also those employers involved with treating, storing or disposal of hazardous waste as covered in subsection (p) must have implemented a safety and health program for their employees. This program is to include the hazard communication program required in subsection (p)(1) and the

training required in subsections (p)(7) and (p)(8) as parts of the employer's comprehensive overall safety and health program. This program is to be in writing.

Each site or workplace safety and health program will need to include the following: (1) Policy statements of the line of authority and accountability for implementing the program, the objectives of the program, and the role of the site safety and health supervisor or manager and staff; (2) means or methods for the development of procedures for identifying and controlling workplace hazards at the site; (3) means or methods for the development and communication to employees of the various plans, work rules, standard operating procedures and practices that pertain to individual employees and supervisors; (4) means for the training of supervisors and employees to develop the needed skills and knowledge to perform their work in a safe and healthful manner; (5) means to anticipate and prepare for emergency situations; and (6) means for obtaining information feedback to aid in evaluating the program and for improving the effectiveness of the program. The management and employees should be trying continually to improve the effectiveness of the program thereby enhancing the protection being afforded those working on the site.

Accidents on the site should be investigated to provide information on how such occurrences can be avoided in the future. When injuries or illnesses occur on the site or workplace, they will need to be investigated to determine what needs to be done to prevent this incident from occurring again. Such information will need to be used as feedback on the effectiveness of the program and the information turned into positive steps to prevent any reoccurrence. Receipt of employee suggestions or complaints relating to safety and health issues involved with site or workplace activities is also a feedback mechanism that can be used effectively to improve the program and may serve in part as an evaluative tool(s).

For the development and implementation of the program to be the most effective, professional safety and health personnel should be used. Personnel such as, but not necessarily limited to Certified Safety Professionals, Board Certified Industrial Hygienists, or Registered Professional Safety Engineers are good examples of professional stature for safety and health managers who will administer the employer's program.

2. Training: The training programs for employees subject to the requirements of subsection (e) of this standard should address: The safety and health hazards employees should expect to find on hazardous waste clean-up sites; what control measures or techniques are effective for those hazards; what monitoring procedures are effective in characterizing exposure levels; what makes an effective employer's safety and health program; what a site safety and health plan should include; hands on training with personal protective equipment and clothing they may be expected to use; the contents of the OSHA standard relevant to the employee's duties and function; and employee's responsibilities under OSHA and other regulations. Supervisors will need training in their responsibilities under the safety and health program and its subject areas such as the spill containment program, the personal protective equipment program, the medical surveillance program, the emergency response plan, and other areas.

The training programs for employees subject to the requirements of subsection (p) of this standard should address: The employer's safety and health program elements impacting employees; the hazard communication program; the medical surveillance program; the hazards and the controls for such hazards that employees need to know for their job duties and functions. All require annual refresher training.

The training programs for employees covered by the requirements of subsection (q) of this standard should address those competencies required for the various levels of response such as: The hazards associated with hazardous substances; hazard identification and awareness; notification of appropriate persons; the need for and use of personal protective equipment including respirators; the decontamination procedures to be used; preplanning activities for hazardous substance incidents including the emergency response plan; company standard operating procedures for hazardous substance emergency responses; the use of incident com-

mand system; and other subjects. Hands-on training should be stressed whenever possible. Critiques done after an incident which include an evaluation of what worked and what did not, and how could the incident be better handled the next time may be counted as training time.

For hazardous materials specialists (usually members of hazardous materials teams), the training should address the care, use, and/or testing of chemical protective clothing including totally encapsulating suits; the medical surveillance program; the standard operating procedures for the hazardous materials team including the use of plugging and patching equipment; and other subject areas.

Officers and leaders who may be expected to be in charge at an incident should be fully knowledgeable of their company's incident command system. They should know where and how to obtain additional assistance and be familiar with the local district's emergency response plan and the state emergency response plan.

Specialist employees such as technical experts, medical experts, or environmental experts that work with hazardous materials in their regular jobs, who may be sent to the incident scene by the shipper, manufacturer, or governmental agency to advise and assist the person in charge of the incident should have training on an annual basis. Their training should include the care and use of personal protective equipment (PPE) including respirators; knowledge of the incident command system and how they are to relate to it; and those areas needed to keep them current in their respective field as it relates to safety and health involving specific hazardous substances.

Those skilled support personnel, such as employees who work for public works departments or equipment operators who operate bulldozers, sand trucks, backhoes, etc., who may be called to the incident scene to provide emergency support assistance, should have at least a safety and health briefing before entering the area of potential or actual exposure. These skilled support personnel, who have not been a part of the emergency response plan and do not meet the training requirements, should be made aware of the hazards they face and should be provided all necessary protective clothing and equipment required for their tasks.

There are two National Fire Protection Association standards, NFPA 472—Standard for Professional Competence of Responders to Hazardous Material Incidents and NFPA 471—Recommended Practice for Responding to Hazardous Material Incidents, which are excellent resource documents to aid fire departments and other emergency response organizations in developing their training program materials. NFPA 472 provides guidance on the skills and knowledge needed for first responder awareness level, first responder operations level, HAZMAT technicians, and HAZMAT specialists. It also offers guidance for the officer corps who will be in charge of hazardous substance incidents.

3. Decontamination: Decontamination procedures should be tailored to the specific hazards of the site and may vary in complexity and number of steps, depending on the level of hazard and the employee's exposure to the hazard. Decontamination procedures and PPE decontamination methods will vary depending upon the specific substance, since one procedure or method may not work for all substances. Evaluation of decontamination methods and procedures should be performed, as necessary, to assure that employees are not exposed to hazards by reusing PPE. References in Appendix D may be used for guidance in establishing an effective decontamination program. In addition, the U.S. Coast Guard's Manual, Policy Guidance for Response to Hazardous Chemical Releases, U.S. Department of Transportation, Washington, DC (COMDTINST M16465.30) is a good reference for establishing an effective decontamination program.

4. Emergency response plans: The state, along with designated districts within the state, will be developing or have developed local emergency response plans. These state and district plans should be utilized in the emergency response plans called for in this standard. Each employer should assure that its emergency response plan is compatible with the local plan. The major reference being used to aid in developing the state and local district plans is the Hazardous Materials Emergency Planning Guide, NRT-1.

The current Emergency Response Guidebook from the U.S. Department of Transportation, CMA's CHEMTREC, and the Fire Service Emergency Management Handbook may also be used as resources.

Employers involved with treatment, storage, and disposal facilities for hazardous waste, which have the required contingency plan called for by their permit, would not need to duplicate the same planning elements. Those items of the emergency response plan that are properly addressed in the contingency plan may be substituted into the emergency response plan required in 8 CCR 5192 or otherwise kept together for employer and employee use.

5. Personal protective equipment programs: The purpose of personal protective clothing and equipment (PPE) is to shield or isolate individuals from the chemical, physical, and biologic hazards that may be encountered at a hazardous substance site.

As discussed in Appendix B, no single combination of protective equipment and clothing is capable of protecting against all hazards. Thus PPE should be used in conjunction with other protective methods and its effectiveness evaluated periodically. The use of PPE can itself create significant worker hazards, such as heat stress, physical and psychological stress, and impaired vision, mobility, and communication. For any given situation, equipment and clothing should be selected that provide an adequate level of protection. However, over-protection, as well as under-protection, can be hazardous and should be avoided where possible.

Two basic objectives of any PPE program should be to protect the wearer from safety and health hazards, and to prevent injury to the wearer from incorrect use and/or malfunction of the PPE. To accomplish these goals, a comprehensive PPE program should include hazard identification; medical monitoring; environmental surveillance; selection, use, maintenance, and decontamination of PPE; and its associated training.

The written PPE program should include policy statements, procedures, and guidelines. Copies should be made available to all employees, and a reference copy should be made available at the worksite. Technical data on equipment, maintenance manuals, relevant regulations, and other essential information should also be collected and maintained.

6. Incident command system (ICS): Subsection 5192(q)(3)(B) requires the implementation of an ICS. The ICS is an organized approach to effectively control and manage operations at an emergency incident. The individual in charge of the ICS is the senior official responding to the incident. The ICS was originated by the California fire service. During large complex fires involving several companies and many pieces of apparatus, a command post would be established. This enabled one individual to be in charge of managing the incident, rather than having several officers from different companies making separate, and sometimes conflicting, decisions. The individual in charge of the command post would delegate responsibility for performing various tasks to subordinate officers. Additionally, all communications were routed through the command post to reduce the number of radio transmissions and eliminate confusion. However, strategy, tactics, and all decisions were made by one individual.

The ICS is also implemented for emergency response to all incidents, both large and small, that involve hazardous substances.

For a small incident, the individual in charge of the ICS may perform many tasks of the ICS. There may not be any, or little, delegation of tasks to subordinates. For example, in response to a small incident, the individual in charge of the ICS, in addition to normal command activities, may become the safety officer.

To illustrate the operation of the ICS, the following scenario might develop during a small incident, such as an overturned tank truck with a small leak of flammable liquid.

The first responding senior officer would implement and take command of the ICS. That person would size-up the incident and determine if additional personnel and apparatus were necessary; would determine what actions to take to control the leak; and determine the proper level of personal protective equipment. If additional assistance is not needed, the individual in charge of the ICS would implement actions to stop and control the leak using the fewest number of personnel that can effectively

accomplish the tasks. The individual in charge of the ICS then would designate himself as the safety officer and two other employees as a back-up in case rescue may become necessary. In this scenario, decontamination procedures may not be necessary.

A large complex incident may require many employees and difficult, time-consuming efforts to control. In these situations, the individual in charge of the ICS will want to delegate different tasks to subordinates in order to maintain a span of control that will keep the number of subordinates that are reporting, to a manageable level.

Delegation of tasks at large incidents may be by location, where the incident scene is divided into sectors, and subordinate officers coordinate activities within the sector that they have been assigned.

Delegation of tasks can also be by function. Five major functional areas (Incident Command, Operations, Planning, Logistic, and Finance) are activated at major incidents addressing such issues as: medical services; evacuation; water supply; resources (equipment, apparatus); media relations; safety; and site control (integrate activities with police for crowd and traffic control). Also for a large incident, the individual in charge of the ICS will designate several employees as back-up personnel; and a number of safety officers to monitor conditions and recommend safety precautions.

Therefore, no matter what size or complexity an incident may be, by implementing an ICS there will be one individual in charge who makes the decisions and gives directions; and, all actions, and communications are coordinated through one central point of command. Such a system should reduce confusion, improve safety, organize and coordinate actions, and should facilitate effective management of the incident.

The details of the ICS as well as several different scenarios are incorporated into the California Hazardous Material Incident Contingency Plan (HMICP) developed by the State's Office of Emergency Services (OES). The HMICP is written primarily for agencies of the State of California to guide them in understanding the state's role in hazardous material emergencies. Secondly, the HMICP is anticipated to be utilized by local and federal governments, and private organizations to clarify their roles and relationships concerning hazardous material emergencies. This plan should be used for pre-incident planning, or during a hazardous material emergency for guidance and clarification where a state agency has responsibility (i.e., State Agency Coordination) or jurisdiction (i.e., on the right of way of a state highway), or the incident exceeds local resources beyond those of the SARA Title III Regional Plan.

7. Site Safety and Control Plans: The safety and security of response personnel and others in the area of an emergency response incident site should be of primary concern to the incident commander. The use of a site safety and control plan could greatly assist those in charge of assuring the safety and health of employees on the site.

A comprehensive site safety and control plan should include the following: Summary analysis of hazards on the site and a risk analysis of those hazards; site map or sketch; site work zones (clean zone, transition or decontamination zone, work or hot zone); use of the buddy system; site communications; command post or command center; standard operating procedures and safe work practices; medical assistance and triage area; hazard monitoring plan (air contaminant monitoring, etc.); decontamination procedures and area; and other relevant areas. This plan should be a part of the employer's emergency response plan or an extension of it to the specific site.

8. Medical surveillance program: Workers handling hazardous substances may be exposed to toxic chemicals, safety hazards, biologic hazards, and radiation. Therefore, a medical surveillance program is essential to assess and monitor worker's health and fitness for employment in hazardous waste operations and during the course of work; to provide emergency and other treatment as needed; and to keep accurate records for future reference.

The Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities developed by the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Ad-

[The next page is 219.]

ministration (Federal OSHA), the U.S. Coast Guard (USCG), and the Environmental Protection Agency (EPA), October 1985, provides an excellent example of the types of medical testing that should be done as part of a medical surveillance program.

9. **New Technology and Spill Containment Programs:** Where hazardous substances may be released by spilling from a container that will expose employees to the hazards of the material, the employer will need to implement a program to contain and control the spilled material. Diking and ditching, as well as use of absorbents like diatomaceous earth, are traditional techniques which have proven to be effective over the years. However, in recent years new products have come into the marketplace, the use of which complement and increase the effectiveness of these traditional methods. These new products also provide emergency responders and other with additional tools or agents to use to reduce the hazards of spilled materials.

These agents can be rapidly applied over a large area and can be uniformly applied or otherwise can be used to build a small dam, thus improving the workers' ability to control spilled material. These application techniques enhance the intimate contact between the agent and the spilled material allowing for the quickest effect by the agent or quickest control of the spilled material. Agents are available to solidify liquid spilled materials, to suppress vapor generation from spilled materials, and to do both. Some special agents, which when applied as recommended by the manufacturer, will react in a controlled manner with the spilled material to neutralize acids or caustics, or greatly reduce the level of hazard of the spilled material.

There are several modern methods and devices for use by emergency response personnel or others involved with spill control efforts to safely apply spill control agents to control spilled material hazards. These include portable pressurized applicators similar to hand-held portable fire extinguishing devices, and nozzle and hose systems similar to portable fire fighting foam systems which allow the operator to apply the agent without having to come into contact with the spilled material. The operator is able to apply the agent to the spilled material from a remote position.

The solidification of liquids provides for rapid containment and isolation of hazardous substance spills. By directing the agent at run-off points or at the edges of the spill, the reactant solid will automatically create a barrier to slow or stop the spread of the material. Clean-up of hazardous substances is greatly improved when solidifying agents, acid or caustic neutralizers, or activated carbon adsorbents are used. Properly applied, these agents can totally solidify liquid hazardous substances or neutralize or absorb them, which results in materials which are less hazardous and easier to handle, transport, and dispose of. The concept of spill treatment, to create less hazardous substances, will improve the safety and level of protection of employees working at spill clean-up operations or emergency response operations to spills of hazardous substances.

The use of vapor suppression agents for volatile hazardous substances, such as flammable liquids and those substances which present an inhalation hazard, is important for protecting workers. The rapid and uniform distribution of the agent over the surface of the spilled material can provide quick vapor knockdown. There are temporary and long-term foam-type agents which are effective on vapors and dusts, and activated carbon adsorption agents which are effective for vapor control and soaking-up of the liquid. The proper use of hose lines or hand-held portable pressurized applicators provides good mobility and permits the worker to deliver the agent from a safe distance without having to step into the untreated spilled material. Some of these systems can be recharged in the field to provide coverage of larger spill areas than the design limits of a single charged applicator unit. Some of the more effective agents can solidify the liquid flammable hazardous substances and at the same time elevate the flashpoint above 140F so the resulting substance may be handled as a nonhazardous waste material if it meets the U.S. Environmental Protection Agency's 40 CFR Part 261 requirements (See particularly § 261.21).

All workers performing hazardous substance spill control work are expected to wear the proper protective clothing and equipment for the mate-

rials present and to follow the employer's established standard operating procedures for spill control. All involved workers need to be trained in the established operating procedures; in the use and care of spill control equipment; and in the associated hazards and control of such hazards of spill containment work.

These new tools and agents are the things that employers will want to evaluate as part of their new technology program. The treatment of spills of hazardous substances or wastes at an emergency incident as part of the immediate spill containment and control efforts is sometimes acceptable to EPA and a permit exception is described in 40 CFR § 264.1(g)(8) and 265.1(c)(11).

Appendix D

References (Non-Mandatory)

The following references may be consulted for further information on the subject of this standard:

1. OSHA Instruction DFO CPL 2.70 – January 29, 1986: Special Emphasis Program: Hazardous Waste Sites.
2. OSHA Instruction DFO CPL 2–2.37A – January 29, 1986: Technical Assistance and Guidelines for Superfund and Other Hazardous Waste Site Activities.
3. OSHA Instruction DTS CPL 2.74 – January 29, 1986: Hazardous Waste Activity Form, OSHA 175.
4. Hazardous Waste Inspections Reference Manual; U.S. Department of Labor, Occupational Safety and Health Administration, 1986.
5. Memorandum of Understanding Among the National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration, the United States Coast Guard, and the United States Environmental Protection Agency: Guidance for Worker Protection During Hazardous Waste Site Investigations and Clean-up and Hazardous Substance Emergencies, December 18, 1980.
6. National Priorities List, 1st Edition; October 1984; U.S. Environmental Protection Agency, revised periodically.
7. The Decontamination of Response Personnel; Field Standard Operating Procedures (F.S.O.P.) 7; U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, December 1984.
8. Preparation of a Site Safety Plan; Field Standard Operating Procedures (F.S.O.P.) 9; U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, April 1984.
9. Standard Operating Safety Guidelines; U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, Environmental Response Team; November 1984.
10. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and Environmental Protection Agency (EPA); October 1985.
11. Protecting Health and Safety at Hazardous Waste Sites: An overview; U.S. Environmental Protection Agency, EPA/625/9–85/006; September 1985.
12. Hazardous Waste Sites and Hazardous Substance Emergencies; NIOSH Worker Bulletin, U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health; December 1982.
13. Personal Protective Equipment for Hazardous Materials Incidents: A Selection Guide; U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health; October 1984.
14. Fire Service Emergency Management Handbook; International Association of Fire Chiefs Foundation, 101 East Holly Avenue, Unit 108, Sterling, VA 22170; January, 1985.

15. Emergency Response Guidebook; U.S. Department of Transportation, Washington, DC, 1990.

16. Report to the Congress on Hazardous Materials Training, Planning and Preparedness; Federal Emergency Management Agency, Washington, DC, July 1986.

17. Workbook for Fire Command; Alan V. Brunacini and J. David Beageron, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269, 1985.

18. Site Emergency Response Planning; Chemical Manufacturers Association, Washington, DC 20037, 1986.

19. Hazardous Materials Emergency Planning Guide; NRT-1, Environmental Protection Agency, Washington, DC, March 1987.

20. Community Teamwork: Working Together to Promote Hazardous Materials Transportation Safety; U.S. Department of Transportation, Washington, DC, May 1983.

21. Disaster Planning Guide for Business and Industry; Federal Emergency Management Agency, Publication No. FEMA 141, August 1987.

22. Hazardous Materials Medical Management Protocols; State Emergency Medical Services Authority, Publication #231, March 1989; 1030 15th Street, Suite 302, Sacramento, CA 95814.

23. Hazardous Material Incident Contingency Plan; Office of Emergency Services, Hazardous Materials Division, Sacramento; January 1991.

24. Hazardous Materials Handbook; National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

NOTE: Authority cited: Sections 142.3 and 142.7, Labor Code. Reference: Sections 142.3 and 142.7, Labor Code.

§ 8-5194. Hazard Communication.

(a) (Reserved)

(b) Scope and Application.

(1) This section requires manufacturers or importers to assess the hazards of substances which they produce or import, and all employers to provide information to their employees about the hazardous substances to which they may be exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers.

(2) This section applies to any hazardous substance which is known to be present in the work place in such a manner that employees may be exposed under normal conditions of use or in a reasonably foreseeable emergency resulting from work place operations.

(3) This section applies to laboratories that primarily provide quality control analyses for manufacturing processes or that produce hazardous substances for commercial purposes, and to all other laboratories except those under the direct supervision and regular observation of an individual who has knowledge of the physical hazards, health hazards, and emergency procedures associated with the use of the particular hazardous substances involved, and who conveys this knowledge to employees in terms of safe work practices. Such excepted laboratories must also ensure that labels of incoming containers of hazardous substances are not removed or defaced pursuant to section 5194(f)(4), and must maintain any material safety data sheets that are received with incoming shipments of hazardous substances and ensure that they are readily available to laboratory employees pursuant to section 5194(g).

(4) This section does not require labeling of the following substances:

(A) Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

(B) Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device, including materials intended for use as ingredients in such products (e.g., flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.) and regulations issued under that Act, when they are subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Food and Drug Administration;

(C) Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 et seq.) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, and Firearms; and;

(D) Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission.

(5) This section does not apply to:

(A) Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.), when subject to regulations issued under that Act by the Environmental Protection Agency;

(B) Tobacco or tobacco products;

(C) Wood or wood products (non-excluded hazardous substances which are used in conjunction with wood or wood products, or are known to be present as impurities in those materials, are covered by this section);

(D) Articles (hazardous substances used in the manufacture or use of an article are covered by this section unless otherwise excluded);

(E) Foods, drugs, or cosmetics intended for personal consumption by employees while in the workplace;

(F) Retail food sale establishments and all other retail trade establishments, exclusive of processing and repair work areas;

(G) Consumer products packaged for distribution to, and use by, the general public, provided that employee exposure to the product is not significantly greater than the consumer exposure occurring during the principal consumer use of the product;

(H) The use of a substance in compliance with regulations of the Director of the Department of Pesticide Regulation issued pursuant to section 12981 of the Food and Agricultural Code.

(I) Work operations where employees only handle substances in sealed containers which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or transportation); however, this section does apply to these operations as follows:

1. Employers shall ensure that labels on incoming containers of hazardous substances are not removed or defaced;

2. Employers shall maintain copies of any material safety data sheets that are received with incoming shipments of the sealed containers of hazardous substances, shall obtain a material safety data sheet for sealed containers of hazardous substances received without a material safety data sheet if an employee requests the material safety data sheet, and shall ensure that the material safety data sheets are readily accessible during each work shift to employees when they are in their work area(s); and,

3. Employers shall ensure that employees are provided with information and training in accordance with subsection (h) except for the location and availability of the written hazard communication program under subsection (h)(2)(C), to the extent necessary to protect them in the event of a spill or leak of a hazardous substance from a sealed container.

(6) Proposition 65 Warnings.

(A) Notwithstanding any other provision of law including the preceding subsections, an employer which is a person in the course of doing business within the meaning of Health and Safety Code Section 25249.11(a) and (b), is subject to the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65 or the "Act") (Health and Safety Code § 25249.5 et seq.), and shall comply with the Act in the manner set forth in subsections (B) and (C) below. The following employers are not subject to the Act:

1. an employer employing fewer than ten employees;

2. any city, county, or district or any department or agency thereof or the state or any department or agency thereof or the federal government or any department or agency thereof;

15. Emergency Response Guidebook; U.S. Department of Transportation, Washington, DC, 1990.

16. Report to the Congress on Hazardous Materials Training, Planning and Preparedness; Federal Emergency Management Agency, Washington, DC, July 1986.

17. Workbook for Fire Command; Alan V. Brunacini and J. David Beageron, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269, 1985.

18. Site Emergency Response Planning; Chemical Manufacturers Association, Washington, DC 20037, 1986.

19. Hazardous Materials Emergency Planning Guide; NRT-1, Environmental Protection Agency, Washington, DC, March 1987.

20. Community Teamwork: Working Together to Promote Hazardous Materials Transportation Safety; U.S. Department of Transportation, Washington, DC, May 1983.

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22. Hazardous Materials Medical Management Protocols; State Emergency Medical Services Authority, Publication #231, March 1989; 1030 15th Street, Suite 302, Sacramento, CA 95814.

23. Hazardous Material Incident Contingency Plan; Office of Emergency Services, Hazardous Materials Division, Sacramento; January 1991.

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(2) This section applies to any hazardous substance which is known to be present in the work place in such a manner that employees may be exposed under normal conditions of use or in a reasonably foreseeable emergency resulting from work place operations.

(3) This section applies to laboratories that primarily provide quality control analyses for manufacturing processes or that produce hazardous substances for commercial purposes, and to all other laboratories except those under the direct supervision and regular observation of an individual who has knowledge of the physical hazards, health hazards, and emergency procedures associated with the use of the particular hazardous substances involved, and who conveys this knowledge to employees in terms of safe work practices. Such excepted laboratories must also ensure that labels of incoming containers of hazardous substances are not removed or defaced pursuant to section 5194(f)(4), and must maintain any material safety data sheets that are received with incoming shipments of hazardous substances and ensure that they are readily available to laboratory employees pursuant to section 5194(g).

(4) This section does not require labeling of the following substances:

(A) Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

(B) Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device, including materials intended for use as ingredients in such products (e.g., flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.) and regulations issued under that Act, when they are subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Food and Drug Administration;

(C) Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 et seq.) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, and Firearms; and;

(D) Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission.

(5) This section does not apply to:

(A) Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.), when subject to regulations issued under that Act by the Environmental Protection Agency;

(B) Tobacco or tobacco products;

(C) Wood or wood products (non-excluded hazardous substances which are used in conjunction with wood or wood products, or are known to be present as impurities in those materials, are covered by this section);

(D) Articles (hazardous substances used in the manufacture or use of an article are covered by this section unless otherwise excluded);

(E) Foods, drugs, or cosmetics intended for personal consumption by employees while in the workplace;

(F) Retail food sale establishments and all other retail trade establishments, exclusive of processing and repair work areas;

(G) Consumer products packaged for distribution to, and use by, the general public, provided that employee exposure to the product is not significantly greater than the consumer exposure occurring during the principal consumer use of the product;

(H) The use of a substance in compliance with regulations of the Director of the Department of Pesticide Regulation issued pursuant to section 12981 of the Food and Agricultural Code.

(I) Work operations where employees only handle substances in sealed containers which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or transportation); however, this section does apply to these operations as follows:

1. Employers shall ensure that labels on incoming containers of hazardous substances are not removed or defaced;

2. Employers shall maintain copies of any material safety data sheets that are received with incoming shipments of the sealed containers of hazardous substances, shall obtain a material safety data sheet for sealed containers of hazardous substances received without a material safety data sheet if an employee requests the material safety data sheet, and shall ensure that the material safety data sheets are readily accessible during each work shift to employees when they are in their work area(s); and,

3. Employers shall ensure that employees are provided with information and training in accordance with subsection (h) except for the location and availability of the written hazard communication program under subsection (h)(2)(C), to the extent necessary to protect them in the event of a spill or leak of a hazardous substance from a sealed container.

(6) Proposition 65 Warnings.

(A) Notwithstanding any other provision of law including the preceding subsections, an employer which is a person in the course of doing business within the meaning of Health and Safety Code Section 25249.11(a) and (b), is subject to the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65 or the "Act") (Health and Safety Code § 25249.5 et seq.), and shall comply with the Act in the manner set forth in subsections (B) and (C) below. The following employers are not subject to the Act:

1. an employer employing fewer than ten employees;

2. any city, county, or district or any department or agency thereof or the state or any department or agency thereof or the federal government or any department or agency thereof;

3. any entity in its operation of a public water system as defined in Health and Safety Code Section 4010.1.

(B) Exposures Subject to Proposition 65 and Hazard Communication. Before exposing any employee to any hazardous substance that otherwise falls within the scope of this section and which requires a warning under this Act (see 22 CCR Section 12000, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity) except as provided in subsection (D) below, any employer subject to the Act shall comply with the requirements set forth in subsections (d) through (k). Such compliance shall be deemed compliance with the Act.

(C) Exposures Subject to Proposition 65 Only. Before knowingly and intentionally exposing any employee to any hazardous substance that does not otherwise fall within the scope of the section, but which requires a warning under the Act (see 22 CCR Section 12000, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity) except as provided in subsection (D) below, any employer subject to the Act shall either provide a warning to employees in compliance with California Code of Regulations Title 22 (22 CCR) Section 12601(c) in effect on May 9, 1991 or shall comply with the requirements set forth in subsections (d) through (k).

(D) Exposures Not Subject to Proposition 65. A warning required by subsection (B) and (C) above shall not apply to any of the following:

1. An exposure for which federal law governs warning in a manner that preempts state authority.

2. An exposure that takes place less than twelve months subsequent to the listing of the chemical in 22 CCR Section 12000.

3. An exposure for which the employer responsible can show that the exposure poses no significant risk assuming lifetime exposure at the level in question for the chemicals known to the State to cause cancer, and that the exposure will have no observable effect assuming exposure at one thousand (1,000) times the level in question for chemicals known to the State to cause reproductive toxicity, based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for the listing of such chemical in 22 CCR Section 12000. In any enforcement action the burden of showing that an exposure meets the criteria of this subsection shall be on the employer.

(E) Additional Enforcement of Proposition 65. In addition to any other applicable enforcement provision, violations or threatened violations of the Act may be enforced in the manner set forth in Health and Safety Code Section 25249.7 for violations and threatened violations of Health and Safety Code Section 25249.6. Compliance with 22 CCR Section 12601(c) in effect on May 9, 1991 shall be deemed a defense to an enforcement action under Health and Safety Code Section 25249.7.

(F) All terms and provisions of subsection (b)(6) shall have the same meaning as the following 22 CCR Sections in effect on May 9, 1991: 12201(a), 12201(b), 12201(c), 12201(d), 12201(f), 12201(k), 12502, 12601, 12701(a), 12701(b), 12701(d), 12703, 12705, 12707, 12709, 12711, 12721, 12801, 12803, 12805, 12821 and 12901. The above listed 22 CCR Sections in effect on May 9, 1991 are printed in Appendix E to this section. Additionally, all terms and provisions of subsection (b)(6) shall have the same meaning as in the Act and in 22 CCR Section 12000.

(c) Definitions.

Article.

A manufactured item: (1) Which is formed to a specific shape or design during manufacture; (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (3) which does not release, or otherwise result in exposure to, a hazardous substance under normal conditions of use or in a reasonably foreseeable emergency resulting from workplace operations.

CAS number.

The unique identification number assigned by the Chemical Abstracts Service to specific chemical substances.

Chemical name.

The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS)

rules of nomenclature, or a name which will clearly identify the substance for the purpose of conducting a hazard evaluation.

Chief.

The Chief of the Division of Occupational Safety and Health, P.O. Box 420603, San Francisco, CA 94142, or designee.

Combustible liquid.

Any liquid having a flashpoint at or above 100° F (37.8° C), but below 200° F (93.3° C), except any mixture having components with flashpoints of 200° F (93.3° C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

Common name.

Any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a substance other than by its chemical name.

Compressed gas.

Compressed gas means:

(A) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70° F (21.1° C); or

(B) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130° F (54.4° C) regardless of the pressure at 70° F (21.1° C); or

(C) A liquid having a vapor pressure exceeding 40 psi at 100° F (37.8° C) as determined by ASTM D-323-72.

Container.

Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, tank truck, or the like that contains a hazardous substance. For purposes of this section, pipes or piping systems are not considered to be containers.

Department.

The Department of Industrial Relations, P.O. Box 420603, San Francisco, CA 94142, or designee.

Designated representative.

Any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Director.

The Director of Industrial Relations, P.O. Box 420603, San Francisco, CA 94142, or designee.

Distributor.

A business, other than a manufacturer or importer, which supplies hazardous substances to other distributors or to employers.

Division.

The Division of Occupational Safety and Health (Cal/OSHA), California Department of Industrial Relations, or designee.

Emergency.

Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment, which may or does result in a release of a hazardous substance into the workplace.

Employee.

Every person who is required or directed by any employer, to engage in any employment, or to go to work or be at any time in any place of employment.

Employer.

Employer means:

(A) The State and every State agency.

(B) Each county, city, district, and all public and quasi-public corporations and public agencies therein.

(C) Every person including any public service corporation, which has any natural person in service.

(D) The legal representative of any deceased employer.

Explosive. A substance that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Exposure or Exposed.

Any situation arising from work operation where an employee may ingest, inhale, absorb through the skin or eyes, or otherwise come into contact with a hazardous substance.

Flammable.

A substance that falls into one of the following categories:

(A) Aerosol, flammable. An aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;

(B) Gas, flammable:

1. A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent of volume or less; or

2. A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit;

(C) Liquid, flammable. Any liquid having a flashpoint below 100° F (37.8° C), except any mixture having components with flashpoints of 100° F (37.8° C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.

(D) Solid, flammable. A solid, other than a blasting agent or explosive as defined in section 5237(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.

Flashpoint.

The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:

(A) Tagliabue Closed Tester (see American National Standard Method of Test for Flash Point by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)) for liquids with a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100° F (37.8° C), that do not have a tendency to form a surface film under test; or

(B) Pensky-Martens Closed Tester (see American National Standard Method of Test for Flash Point by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)) for liquids with a viscosity equal to or greater than 45 SUS at 100° F (37.8° C), or that have a tendency to form a surface film under test; or

(C) Setaflash Closed Tester (see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTM D 3278-78)).

Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.

Hazard warning.

Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the health hazards and physical hazards of the substance(s) in the container(s).

Hazardous substance.

Any substance which is a physical hazard or a health hazard or is included in the List of Hazardous Substances prepared by the Director pursuant to Labor Code section 6382.

Health hazard.

A substance for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes substances which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. Appendix A provides further definitions and explanations of the scope of health hazards covered by this section,

and Appendix B describes the criteria to be used to determine whether or not a substance is to be considered hazardous for purposes of this standard.

Identity.

Any chemical or common name which is indicated on the material safety data sheet (MSDS) for the substance. The identity used shall permit crossreferences to be made among the required list of hazardous substances, the label and the MSDS.

Immediate use.

The hazardous substance will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Importer.

The first business with employees within the Customs Territory of the United States which receives hazardous substances produced in other countries for the purpose of supplying them to distributors or purchasers within the United States.

Label.

Any written, printed, or graphic material displayed on or affixed to containers of hazardous substances.

Manufacturer.

A person who produces, synthesizes, extracts, or otherwise makes a hazardous substance.

Material safety data sheet (MSDS). Written or printed material concerning a hazardous substance which is prepared in accordance with section 5194(g).

Mixture.

Any solution or intimate admixture of two or more substances, at least one of which is present as a hazardous substance, which do not react chemically with each other.

NIOSH. The National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services.

Organic peroxide.

An organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

Oxidizer.

A substance other than a blasting agent or explosive as defined in section 5237(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

Physical hazard.

A substance for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

Produce.

To manufacture, process, formulate, repackage, or relabel.

Pyrophoric.

A substance that will ignite spontaneously in air at a temperature of 130° F (54.4° C) or below.

Responsible party.

Someone who can provide additional information on the hazardous substance and appropriate emergency procedures, if necessary.

Specific chemical identity.

The chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

Substance.

Any element, chemical compound or mixture of elements and/or compounds.

Trade secret.

Any confidential formula, pattern, process, device, information, or compilation of information which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it. A trade

secret shall not include chemical identity information which is readily discoverable through qualitative analysis. Appendix D sets out the criteria to be used in evaluating trade secrets.

Unstable (reactive).

A substance which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.

Use.

To package, handle, react, or transfer.

Water-reactive.

A substance that reacts with water to release a gas that is either flammable or presents a health hazard.

Work area.

A room or defined space in a workplace where hazardous substances are produced or used, and where employees are present.

Workplace.

Any place, and the premises appurtenant thereto, where employment is carried on, except a place the health and safety jurisdiction over which is vested by law in, and actively exercised by, any state or federal agency other than the Division.

(d) Hazard Determination.

(1) Manufacturers and importers shall evaluate substances produced in their workplaces or imported by them to determine if they are hazardous. Employers are not required to evaluate substances unless they choose not to rely on the evaluation performed by the manufacturer or importer for the substance to satisfy this requirement.

(2) Manufacturers, importers, or employers evaluating substances shall identify and consider the available scientific evidence concerning such hazards. For health hazards, evidence which is statistically significant and which is based on at least one positive study conducted in accordance with established scientific principles is considered to be sufficient to establish a hazardous effect if the results of the study meet the definitions of health hazards in this section. Appendix A shall be consulted for the scope of health hazards covered, and Appendix B shall be consulted for the criteria to be followed with respect to the completeness of the evaluation, and the data to be reported.

(3) The manufacturer, importer, or employer evaluating substances shall treat any of the following sources as establishing that the substances listed in them are hazardous:

(A) The list of hazardous substances prepared by the Director pursuant to Labor Code section 6382 and as promulgated in title 8, California Code of Regulations, section 339. The concentrations and footnotes which are applicable to the list shall be understood to modify the same substance on all other source lists or hazard determinations set forth in sections 5194(d)(3)(B)-5194(d)(5)(D).

(B) 29 CFR part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

(C) 1991-1992 Threshold Limit Values for Chemical Substances in the Work Environment, American Conference of Governmental Industrial Hygienists (ACGIH).

The manufacturer, importer, or employer is still responsible for evaluating the hazards associated with the substances in these source lists in accordance with the requirements of the standard.

(4) Manufacturers, importers, and employers evaluating substances shall treat any of the following sources as establishing that a substance is a carcinogen or potential carcinogen for hazard communication purposes:

(A) National Toxicology Program (NTP), *Sixth Annual Report on Carcinogens*, 1991.

(B) International Agency for Research on Cancer (IARC) *Monoographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man*, Vols 1-53 and Supplements 1-8. World Health Organization.

(C) 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration.

Note to (d)(4): The Registry of Toxic Effects of Chemical Substances published by the National Institute for Occupational Safety and Health indicates whether a substance has been found by NTP or IARC to be a potential carcinogen.

(5) The manufacturer, importer, or employer shall determine the hazards of mixtures of substances as follows:

(A) If a mixture has been tested as a whole to determine its hazards, the results of such testing shall be used to determine whether the mixture is hazardous;

(B) If a mixture has not been tested as a whole to determine whether the mixture is a health hazard, the mixture shall be assumed to present the same health hazards as do the components which comprise one percent (by weight or volume) or greater of the mixture, except that the mixture shall be assumed to present a carcinogenic hazard if it contains a component in concentrations of 0.1 percent or greater which is considered to be a carcinogen under section 5194(d)(4);

(C) If a mixture has not been tested as a whole to determine whether the mixture is a physical hazard, the manufacturer, importer, or employer may use whatever scientifically valid data is available to evaluate the physical hazard potential of the mixture; and

(D) If the manufacturer, importer, or employer has evidence to indicate that a component present in the mixture in concentrations of less than one percent (or in the case of carcinogens, less than 0.1 percent) could be released in concentrations which would exceed an established permissible exposure limit or ACGIH Threshold Limit Value, or could present a health hazard to employees in those concentrations, the mixture shall be assumed to present the same hazard.

(6) Manufacturers, importers, or employers evaluating hazardous substances shall describe in writing the procedures they use to determine the hazards of the substance they evaluate. The written procedures are to be made available, upon request, to employees, their designated representatives, the Director, and NIOSH. The written description may be incorporated into the written hazard communication program required under section 5194(e).

(e) Written Hazard Communication Program.

(1) Employers shall develop, implement, and maintain at the workplace a written hazard communication program for their employees which at least describes how the criteria specified in sections 5194(f), (g), and (h) for labels and other forms of warning, material safety data sheets, and employee information and training will be met, and which also includes the following:

(A) A list of the hazardous substances known to be present using an identity that is referenced on the appropriate material safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas);

(B) The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with substances contained in unlabeled pipes in their work areas.

(2) In multi-employer workplaces, the written hazard communication program shall include the methods employers will use to inform any employers sharing the same work area of the hazardous substances to which their employees may be exposed while performing their work, and any suggestions for appropriate protective measures, including the following:

(A) The methods the employer will use to provide the other employer(s) with access to the material safety data sheet, or to make it available at a central location in the workplace, for each hazardous substance the other employer(s)' employees may be exposed to while working;

(B) The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace's normal operating conditions and in foreseeable emergencies; and,

(C) The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.

(3) The employer shall make the written hazard communication program available, upon request, to employees, their designated representa-

tives, the Chief, and NIOSH, in accordance with the requirements of section 3204(e).

(f) Labels and Other Forms of Warning.

Note to (f): The requirements at sections 5225-5230 for labeling of all containers containing highly toxic, corrosive, flammable, oxidizing or pyrophoric substances apply to all employers, and apply regardless of any exception or allowance in section 5194(f).

(1) The manufacturer, importer, or distributor shall ensure that each container of hazardous substances leaving the workplace is labeled, tagged or marked with the following information:

(A) Identity of the hazardous substance(s);

(B) Appropriate hazard warnings; and

(C) Name and address of the manufacturer, importer, or other responsible party.

Exception to (f)(1): For solid metal (such as a steel beam or a metal casting) that is not exempted as an article due to its downstream use, the required label may be transmitted to the customer at the time of the initial shipment, and need not be included with subsequent shipments to the same employer unless the information on the label changes. The label may be transmitted with the initial shipment itself, or with the material safety data sheet that is to be provided prior to or at the time of the first shipment. This exception to requiring labels on every container of hazardous substances is only for the solid metal itself and does not apply to hazardous substances used in conjunction with, or known to be present with, the metal and to which the employees handling the metal may be exposed (for example, cutting fluids or lubricants).

(2) Manufacturers, importers, or distributors shall ensure that each container of hazardous substances leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (18 U.S.C. 1801 et seq.) and regulations issued under that Act by the Department of Transportation.

(3) If the hazardous substance is regulated by these orders in a substance-specific health standard, the manufacturer, importer, distributor, or employer shall ensure that the labels or other forms of warning used are in accordance with the requirements of that standard.

(4) Except as provided in sections 5194(f)(5) and (f)(6) the employer shall ensure that each container of hazardous substances in the workplace is labeled, tagged, or marked with the following information:

(A) Identity of the hazardous substance(s) contained therein; and

(B) Appropriate hazard warnings.

(5) The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by section 5194(f)(4) to be on a label. The written materials shall be readily accessible to the employees in their work area throughout each work shift. In construction, the employer may use such written materials in lieu of affixing labels to individual containers as long as the alternative method identifies and accompanies the containers to which it is applicable and conveys the information required to be on a label.

(6) The employer is not required to label portable containers into which hazardous substances are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer. In construction, the employer is not required to label portable containers into which hazardous substances are transferred from labeled containers, so long as either the labeled container stays on the job site or the employer has complied with section 5194(f)(5).

(7) The employer shall not remove or intentionally deface existing labels on incoming containers of hazardous substances, unless the container is immediately marked with the required information.

(8) The employer shall ensure that labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employers having employees who speak other languages may add the information in their language to the material presented, as long as the information is presented in English as well.

(9) The manufacturer, importer, distributor, or employer need not affix new labels to comply with this section if existing labels already convey the required information.

(g) Material Safety Data Sheets.

(1) Manufacturers and importers shall obtain or develop a material safety data sheet for each hazardous substance they produce or import. Employers shall have a material safety data sheet for each hazardous substance which they use.

Note to (g)(1): Employers should also refer to section 3204 concerning information to be retained after a particular substance is no longer in use.

(2) Each material safety data sheet shall be in English and shall contain at least the following information:

(A) The identity used on the label, and, except as provided for in section 5194(i) on trade secrets:

1. If the hazardous substance is a single substance, its chemical and common name(s) and CAS number(s);

2. If the hazardous substance is a mixture which has been tested as a whole to determine its hazards, the chemical, common name(s), and CAS number(s) of the ingredients which contribute to these known hazards, and the common name(s) of the mixture itself; or,

3. If the hazardous substance is a mixture which has not been tested as a whole:

a. The chemical and common name(s), and CAS number(s) of all ingredients which have been determined to be health hazards, and which comprise 1% or greater of the composition, except that substances identified as carcinogens under subsection 5194(d)(4) shall be listed if the concentrations are 0.1% or greater;

b. The chemical and common name(s), and CAS number(s) of all ingredients which comprise less than 1% (0.1% for carcinogens) of the mixture, if there is evidence that the ingredient(s) could be released from the mixture in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health hazard to employees; and,

c. The chemical, common name(s), and CAS number(s) of all ingredients which have been determined to present a physical hazard when present in the mixture;

(B) Physical and chemical properties of the hazardous substance (such as vapor pressure, flash point);

(C) The physical hazards of the hazardous substance, including the potential for fire, explosion, and reactivity;

(D) The health hazards of the hazardous substance, including signs and symptoms of exposure, and any medical conditions which are generally recognized as being aggravated by exposure to the substance;

(E) The potential route(s) of entry;

(F) The OSHA permissible exposure limit, ACGIH Threshold Limit Value, and any other exposure limit used or recommended by the manufacturer, importer, or employer preparing the material safety data sheet, where available.

(G) Whether the hazardous substance is listed in the National Toxicology Program (NTP) *Sixth Annual Report on Carcinogens* or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) *Monographs*, Vols 1-53 and Supplements 1-8, or by OSHA;

(H) Any generally applicable precautions for safe handling and use which are known to the manufacturer, importer, or employer preparing the material safety data sheet, including the appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and procedures for cleanup of spills and leaks;

(I) Any generally applicable control measures which are known to the manufacturer, importer or employer preparing the material safety data sheet, such as appropriate engineering controls, work practices, or personal protective equipment;

(J) Emergency and first-aid procedures;

(K) The date of preparation of the material safety data sheet or the last change to it;

(L) The name, address and telephone number of the manufacturer, importer, employer, or other responsible party preparing or distributing the material safety data sheet, who can provide additional information on the hazardous substance and appropriate emergency procedures, if necessary; and,

(M) A description in lay terms, if not otherwise provided, on either a separate sheet or with the body of the information specified in this section, of the specific potential health risks posed by the hazardous substance intended to alert any person reading the information.

(3) If no relevant information is found for any given category on the material safety data sheet, the manufacturer, importer, or employer preparing the material safety data sheet shall mark it to indicate that no information was found. If the category is not applicable to the hazardous substance involved, the space shall be marked to indicate that.

(4) Where complex mixtures have similar hazards and contents (i.e. the chemical ingredients are essentially the same, but the specific composition varies from mixture to mixture), the manufacturer, importer or employer may prepare one material safety data sheet to apply to all of these similar mixtures.

(5) The manufacturer, importer or employer preparing the material safety data sheet shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If the manufacturer, importer, or employer become aware of any significant information regarding the hazards of a substance, or ways to protect against the hazards, this new information shall be added to the material safety data sheet within three months. If the substance is not currently being produced or imported, the manufacturer or importer shall add the information to the material safety data sheet before the substance is introduced into the workplace again.

(6) Manufacturers or importers shall ensure that distributors and purchasers of hazardous substances are provided an appropriate material safety data sheet with their initial shipment, and with the first shipment after a material safety data sheet is updated. The manufacturer or importer shall either provide material safety data sheets with the shipped containers or send them to the purchaser prior to or at the time of the shipment. If the material safety data sheet is not provided with the shipment, the purchaser shall obtain one from the manufacturer, importer, or distributor as soon as possible.

(7) Distributors shall ensure that material safety data sheets, and updated information, are provided to other distributors and purchasers of hazardous substances.

(8) The employer shall maintain copies of the required material safety data sheets for each hazardous substance in the workplace, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s).

(9) Where employees must travel between workplaces during a work shift, i.e., their work is carried out at more than one geographical location, the material safety data sheets may be kept at a central location at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.

(10) Material safety data sheets may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous substances in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous substances. However, the employer shall ensure that in all cases the required information is provided for each hazardous substance, and is readily accessible during each work shift to employees when they are in their work area(s).

(11) Material safety data sheets shall also be made readily available, upon request, to designated representatives, and to the Chief, in accordance with the requirements of section 3204(e). NIOSH and the employee's physician shall also be given access to material safety data sheets in the same manner.

(12) If the material safety data sheet, or any item of information required by section 5194(g)(2), is not provided by the manufacturer or importer, the employer shall:

(A) Within 7 working days of noting this missing information, either from a request or in attempting to comply with section 5194(1), make written inquiry to the manufacturer or importer of a hazardous substance responsible for the material safety data sheet, asking that the complete material safety data sheet be sent to the employer. If the employer has made written inquiry in the preceding 12 months as to whether the substance or product is subject to the requirements of the Act or the employer has made written inquiry within the last 6 months requesting new, revised or later information on the material safety data sheet for the hazardous substance, the employer need not make additional written inquiry.

(B) Notify the requester in writing of the date that the inquiry was made, to whom it was made, and the response, if any, received. Providing the requestor with a copy of the inquiry sent to the manufacturer, producer or seller and a copy of the response will satisfy this requirement.

(C) Notify the requestor of the availability of the material safety data sheet within 15 days of the receipt of the material safety data sheet from the manufacturer, producer or seller or provide a copy of the material safety data sheet to the requestor within 15 days of the receipt of the material safety data sheet from the manufacturer, producer or seller.

(D) Send the Director a copy of the written inquiry if a response has not been received within 25 working days.

(13) The preparer of a material safety data sheet shall provide the Director with a copy of the material safety data sheet. Where a trade secret claim is made, the preparer shall submit the information specified in section 5194(i)(15).

(h) Employee Information and Training.

(1) Employers shall provide employees with information and training on hazardous substances in their work area at the time of their initial assignment, and whenever a new hazard is introduced into their work area. Information and training may relate to general classes of hazardous substances to the extent appropriate and related to reasonably foreseeable exposures of the job.

(2) Information and training shall consist of at least the following topics:

(A) Employees shall be informed of the requirements of this section.

(B) Employees shall be informed of any operations in their work area where hazardous substances are present.

(C) Employees shall be informed of the location and availability of the written hazard communication program, including the list(s) of hazardous substances and material safety data sheets required by this section.

(D) Employees shall be trained in the methods and observations that may be used to detect the presence or release of a hazardous substance in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous substances when being released, etc.).

(E) Employees shall be trained in the physical and health hazards of the substances in the work area, and the measures they can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous substances, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

(F) Employees shall be trained in the details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

(G) Employers shall inform employees of the right:

1. To personally receive information regarding hazardous substances to which they may be exposed, according to the provisions of this section;

2. For their physician or collective bargaining agent to receive information regarding hazardous substances to which the employee may be exposed according to provisions of this section;

3. Against discharge or other discrimination due to the employee's exercise of the rights afforded pursuant to the provisions of the Hazardous Substances Information and Training Act.

(3) Whenever the employer receives a new or revised material safety data sheet, such information shall be provided to employees on a timely basis not to exceed 30 days after receipt, if the new information indicates significantly increased risks to, or measures necessary to protect, employee health as compared to those stated on a material safety data sheet previously provided.

(i) Trade Secrets.

(1) The manufacturer, importer or employer may withhold the specific chemical identity of a hazardous substance from the material safety data sheet, provided that:

(A) The claim that the information withheld is a trade secret can be supported;

(B) Information contained in the material safety data sheet concerning the properties and effects of the hazardous substance is disclosed;

(C) The material safety data sheet indicates that the specific chemical identity is being withheld as a trade secret; and,

(D) The specific chemical identity is made available to health or safety professionals, employees, and designated representatives in accordance with the applicable provisions of this subsection.

(2) Where a physician or nurse determines that a medical emergency exists and the specific chemical identity of a hazardous substance is necessary for emergency or first-aid treatment, the manufacturer, importer, or employer shall immediately disclose the specific chemical identity of a trade secret substance to that physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The manufacturer, importer, or employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of sections 5194(i)(3) and (4), as soon as circumstances permit.

(3) In non-emergency situations, a manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under section 5194(i)(1), to a health or safety professional (i.e., physician, nurse, industrial hygienist, safety professional, toxicologist, or epidemiologist) providing medical or other occupational health services to exposed employee(s), and to employees and designated representatives, if:

(A) The request is in writing;

(B) The request describes with reasonable detail one or more of the following occupational health needs for the information:

1. To assess the hazards of the substances to which employees will be exposed;

2. To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;

3. To conduct pre-assignment or periodic medical surveillance of exposed employees;

4. To provide medical treatment to exposed employees;

5. To select or assess appropriate personal protective equipment for exposed employees;

6. To design or assess engineering controls or other protective measures for exposed employees; and,

7. To conduct studies to determine the health effects of exposure.

(C) The request explains in detail why the disclosure of the specific chemical identity is essential and that, in lieu thereof, the disclosure of the following information would not enable the health or safety professional, employee or designated representative to provide the occupational health services described in section 5194(i)(3)(B):

1. The properties and effects of the substance;

2. Measures for controlling workers' exposure to the substance;

3. Methods of monitoring and analyzing worker exposure to the substance; and,

4. Methods of diagnosing and treating harmful exposures to the substance;

(D) The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and,

(E) The health or safety professional, employee, or designated representative and the employer or contractor of the health or safety professional's services (i.e., downstream employer, labor organization, or indi-

vidual employee), agree in a written confidentiality agreement that the health or safety professional, employee, or designated representative will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to the Director, as provided in section 5194(i)(6), except as authorized by the terms of the agreement or by the manufacturer, importer, or employer.

(4) The confidentiality agreement authorized by section 5194(i)(3)(D) shall not include requirements for the posting of a penalty bond.

(5) Nothing in this standard is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

(6) If the health or safety professional, employee, or designated representative receiving the trade secret information decides that there is a need to disclose it to the Director, then the manufacturer, importer, or employer who provided the information shall be informed by the health or safety professional, employee, or designated representative prior to, or at the same time as, such disclosure.

(7) If the manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity, the denial must:

(A) Be provided to the health or safety professional, employee, or designated representative within thirty days of the request;

(B) Be in writing;

(C) Include evidence to support the claim that the specific chemical identity is a trade secret;

(D) State the specific reasons why the request is being denied; and,

(E) Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity.

(8) The health or safety professional, employee, or designated representative whose request for information is denied under section 5194(i)(3) may refer the request and the written denial of the request to the Director for consideration.

(9) When a health or safety professional, employee, or designated representative refers the denial to the Director under section 5194(i)(8), or upon the Director's own initiative when receiving information pursuant to section 5194(g)(13) which is claimed to be a trade secret, the Director shall consider the evidence to determine if:

(A) The manufacturer, importer, or employer has supported the claim that the specific chemical identity is a trade secret;

(B) The health or safety professional, employee, or designated representative has supported the claim that there is a medical or occupational health need for the information; and,

(C) The health or safety professional, employee, or designated representative has demonstrated adequate means to protect the confidentiality.

(10) If the Director determines that the specific chemical identity requested under section 5194(i)(3) is not a *bona fide* trade secret, or that it is a trade secret but the requesting health or safety professional, employee, or designated representative has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means to protect the confidentiality of the information, the manufacturer, importer, or employer will be subject to citation by the Director. The Director shall so notify the manufacturer, importer, or employer by certified mail.

(11) The manufacturer, importer, or employer shall have 15 days after receipt of notification under section 5194(i)(10) to provide the Director with a complete justification and statement of the grounds on which the trade secret privilege is claimed. This justification and statement shall be submitted by certified mail.

(12) The Director shall determine whether such information is protected as a trade secret within 15 days after receipt of the justification and statement required by section 5194(i)(11), or if no justification and statement is filed, within 30 days of the original notice, and shall notify the employer or manufacturer and any party who has requested the information pursuant to the California Public Records Act of that determination by certified mail. If the Director determines that the information is not

protected as a trade secret, the final notice shall also specify a date, not sooner than 15 days after the date of mailing of the final notice, when the information shall be available to the public.

(13) Prior to the date specified in the final notice provided pursuant to section 5194(i)(12), a manufacturer, importer, or employer may institute an action in an appropriate superior court for a declaratory judgment as to whether such information is subject to protection from disclosure.

(14) If a manufacturer, importer, or employer demonstrates to the Director that the execution of a confidentiality agreement as provided for by section 5194(i)(10) would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Director may issue such orders to impose such additional limitations or conditions upon the disclosure of the requested information as may be appropriate to assure that the occupational health services are provided without an undue risk of harm to the manufacturer, importer, or employer.

(15) Notwithstanding the existence of a trade secret claim, a manufacturer, importer, or employer shall disclose to the Director the specific chemical identity of any hazardous substance in a product for which trade secrecy is claimed. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Director so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

(16) Nothing in section 5194(i) shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is a trade secret.

(k) Appendices.

(1) Appendices A, B, and D to this section are incorporated as part of this section and the provisions are mandatory.

(2) Appendix C contains information which is not intended to create any additional obligations not otherwise imposed or to detract from any existing obligation.

(3) Appendix E contains the following 22 CCR Sections: 12201(a), 12201(b), 12201(c), 12201(d), 12201(f), 12201(k), 12502, 12601, 12701(a), 12701(b), 12701(d), 12703, 12705, 12707, 12709, 12711, 12721, 12801, 12803, 12805, 12821, and 12901 in effect on May 9, 1991 that are referred to in subsection (b)(6).

NOTE: Authority cited: Sections 50.7, 142.3 and 6398, Labor Code. Reference: Sections 50.7, 142.3 and 6361-6399.7, Labor Code; Sections 25249.6, 25249.7, 25249.8, 25249.10, 25249.11, 25249.12 and 25249.13, Health and Safety Code; *California Lab. Federation v. Occupational Safety and Health Stds. Bd.* (1990) 221 Cal.App.3d 1547 [271 Cal.Rptr. 310]; and *United Steelworkers of America v. Auchter* (3d Cir. 1985) 763 F.2d 728.

HISTORY

1. New section filed 12-9-81; designated effective 180 days following adoption of a list of hazardous substances pursuant to the Act by the Director, Department of Industrial Relations (Register 81, No. 50).
2. Repealer and new section (including appendices A-C) filed 11-22-85; designated effective 11-25-85 pursuant to Government Code section 11346.2(d) (Register 85, No. 47).
3. Order of Repeal of subsection (a) pursuant to Government Code section 11342(b), amendment, and new appendix D filed 5-26-87; operative 6-25-87 (Register 87, No. 23).
4. Change without regulatory effect removing chapter heading filed 3-6-91; operative 4-4-91 (Register 91, No. 15).
5. Change without regulatory effect repealing Article 110 heading "Special Hazardous Substances and Processes" filed 3-6-91 pursuant to section 100, title 1, California Code of Regulations (Register 91, No. 15).
6. New subsections (b)(6)(A)-(E) and (k)(3) filed 5-31-91 as an emergency; operative 5-31-91 (Register 91, No. 33). A Certificate of Compliance must be transmitted to OAL by 9-30-91 or emergency language will be repealed by operation of law on the following day.
7. Amendment of section filed 9-30-91 as an emergency; operative 9-30-91 (Register 92, No. 2). A Certificate of Compliance must be transmitted to OAL 1-28-92 or emergency language will be repealed by operation of law on the following day.
8. Repealed by operation of Government Code section 11346.1(g) (Register 92, No. 12).
9. New subsections (b)(6)(A)-(F) and (k)(3) and amendment of NOTE filed 12-17-91 as an emergency; operative 12-17-91 (Register 92, No. 12). A Certificate of Compliance must be transmitted to OAL 4-15-92 or emergency language will be repealed by operation of law on the following day.

10. Change without regulatory effect amending definitions of Chief, Department, and Director in subsection (c) filed 3-4-92 pursuant to section 100, title 1, California Code of Regulations (Register 92, No. 19).

11. New subsections (b)(5)(I)-(b)(5)(I)3. and (e)(2)(A)-(C), new subsection (g)(2)(a)3.b. and subsection relettering, new subsection (g)(9) and subsection renumbering, and amendment of subsections (b)(4)(B), (b)(5)(H), (d)(3)(A), (d)(3)(C), (d)(4)-(d)(4)(B), (d)(5)(D), (e)(1), (e)(2), (f), (f)(1), (g)(1), (g)(2)(G), (g)(8), (h)(2)(C), (i)(9), (i)(16) and newly designated subsections (g)(10) and (g)(12)(D) filed 4-26-93; operative 5-26-93 (Register 93, No. 18).

Appendix A to Section 5194

Health Hazard Definitions (Mandatory)

Although safety hazards related to the physical characteristics of a substance can be objectively defined in terms of testing requirements (e.g. flammability), health hazard definitions are less precise and more subjective. Health hazards may cause measurable changes in the body—such as decreased pulmonary function. These changes are generally indicated by the occurrence of signs and symptoms in the exposed employees—such as shortness of breath, a non-measurable, subjective feeling. Employees exposed to such hazards must be apprised of both the change in body function and the signs and symptoms that may occur to signal that change.

The determination of occupational health hazards is complicated by the fact that many of the effects or signs and symptoms occur commonly in nonoccupationally exposed populations, so that effects of exposure are difficult to separate from normally occurring illnesses. Occasionally, a substance causes an effect that is rarely seen in the population at large, such as angiosarcomas caused by vinyl chloride exposure, thus making it easier to ascertain that the occupational exposure was the primary causative factor. More often, however, the effects are common, such as lung cancer. The situation is further complicated by the fact that most substances have not been adequately tested to determine their health hazard potential, and data do not exist to substantiate these effects.

There have been many attempts to categorize effects and to define them in various ways. Generally, the terms "acute" and "chronic" are used to delineate between effects on the basis of severity or duration. "Acute" effects usually occur rapidly as a result of short-term exposures, and are of short duration. "Chronic" effects generally occur as a result of long-term exposure, and are of long duration.

The acute effects referred to most frequently are those defined by the American National Standards Institute (ANSI) standard for Precautionary Labeling of Hazardous Industrial Chemicals (Z129.1-1982)—irritation, corrosivity, sensitization and lethal dose. Although these are important health effects, they do not adequately cover the considerable range of acute effects which may occur as a result of occupational exposure, such as, for example, narcosis.

Similarly, the term chronic effect is often used to cover only carcinogenicity, teratogenicity, and mutagenicity. These effects are obviously a concern in the workplace, but again, do not adequately cover the area of chronic effects, excluding, for example, blood dyscrasias (such as anemia), chronic bronchitis and liver atrophy.

The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of substance exposures cannot realistically be accomplished. This does not negate the need for employees to be informed of such effects and protected from them.

Appendix B, which is also mandatory, outlines the principles and procedures of hazard assessment.

For purposes of this section, any substances which meet any of the following definitions, as determined by the criteria set forth in Appendix B are health hazards:

1. Carcinogen: A substance is considered to be a carcinogen if:

(a) It has been evaluated by the International Agency for Research on Cancer (IARC) *Monographs*, Vols 1-53 and Supplements 1-8, and found to be a carcinogen or potential carcinogen; or

(b) It is listed as a carcinogen or potential carcinogen in the *Sixth Annual Report on Carcinogens* published by the National Toxicology Program (NTP) or,

(c) It is regulated by OSHA as a carcinogen.

2. **Corrosive:** A substance that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. For example, a substance is considered to be corrosive if, when tested on the intact skin of albino rabbits by the method described by the U.S. Department of Transportation in Appendix A to 49 CFR Part 173, it destroys or changes irreversibly the structure of the tissue of four hours. This term shall not refer to action on inanimate surfaces.

3. **Highly toxic:** A substance falling within any of the following categories:

(a) A substance that has a median lethal dose (LD50) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

(b) A substance that has a median lethal dose (LD50) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A substance that has a median lethal concentration (LC50) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

4. **Irritant:** A substance, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A substance is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41 for 24 hours exposure or by other appropriate techniques, it results in an empirical score of five or more. A substance is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.

5. **Sensitizer:** A substance that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the substance.

6. **Toxic:** A substance falling within any of the following categories:

(a) A substance that has a median lethal dose (LD50) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

(b) A substance that has a median lethal dose (LD50) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A substance that has a median lethal concentration (LC50) in air of more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

7. **Target organ effects.** The following is a target organ categorization of effects which may occur, including examples of signs and symptoms and substances which have been found to cause such effects. These examples are presented to illustrate the range and diversity of effects and hazards found in the workplace, and the broad scope employers must consider in this area, but are not intended to be all-inclusive.

a. **Hepatotoxins:** Substances which produce liver damage.

Signs and Symptoms: Jaundice; liver enlargement.

Substances: Carbon tetrachloride; nitrosamines.

b. **Nephrotoxins:** Substances which produce kidney damage.

Signs and Symptoms: Edema; proteinuria.

Substances: Halogenated hydrocarbons; uranium.

c. **Neurotoxins:** Substances which produce their primary toxic effects on the nervous system.

Signs and Symptoms: Narcosis; behavioral changes; decrease in motor functions.

Substances: Mercury; carbon disulfide.

d. **Agents which act on the blood or hematopoietic system:** Decrease hemoglobin function; deprive the body tissues of oxygen.

Signs and Symptoms: Cyanosis; loss of consciousness.

Substances: Carbon monoxide; cyanides.

e. **Agents which damage the lung:** Substances which irritate or damage the pulmonary tissue.

Signs and Symptoms: Cough; tightness in chest; shortness of breath.

Substances: Silica; asbestos.

f. **Reproductive toxins:** Substances which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis).

Signs and Symptoms: Birth defects; sterility.

Substances: Lead; DBCP.

g. **Cutaneous hazards:** Substances which affect the dermal layer of the body.

Signs and Symptoms: Defatting of the skin; rashes; irritation.

Substances: Ketones; chlorinated compounds.

h. **Eye hazards:** Substances which affect the eye or visual capacity.

Signs and Symptoms: Conjunctivitis; corneal damage.

Substances: Organic solvents; acids.

NOTE: Authority cited: Sections 142.3 and 6398, Labor Code. Reference: Sections 142.3 and 6361-6399.7, Labor Code; and *United Steelworkers of America v. Auctier* (3d Cir. 1985) 763 F.2d 728.

HISTORY

1. Amendment of subsections 1.(a), 1.(b) and 4. of Appendix A filed 4-26-93; operative 5-26-93 (Register 93, No. 18).

Appendix B to Section 5194

Hazard Determination (Mandatory)

The quality of a hazard communication program is largely dependent upon the adequacy and accuracy of the hazard determination. The hazard determination requirement of this standard is performance-oriented. Manufacturers, importers, and employers evaluating substances are not required to follow any specific methods for determining hazards, but they must be able to demonstrate that they have adequately ascertained the hazards of the substances produced or imported in accordance with the criteria set forth in this Appendix.

Hazard evaluation is a process which relies heavily on the professional judgment of the evaluator, particularly in the area of chronic hazards. The performance orientation of the hazard determination does not diminish the duty of the manufacturer, importer or employer to conduct a thorough evaluation, examining all relevant data and producing a scientifically defensible evaluation. For purposes of this standard, the following criteria shall be used in making hazard determinations that meet the requirements of this standard.

1. **Carcinogenicity:** As described in subsection 5194(d)(4) and Appendix A, a determination by the National Toxicology Program, the International Agency for Research on Cancer, or OSHA that a substance is a carcinogen or potential carcinogen will be considered conclusive evidence for purposes of this section.

2. **Human data:** Where available, epidemiological studies and case reports of adverse health effects shall be considered in the evaluation.

3. **Animal data:** Human evidence of health effects in exposed populations is generally not available for the majority of substances produced or used in the workplace. Therefore, the available results of toxicological testing in animal populations shall be used to predict the health effects that may be experienced by exposed workers. In particular, the definitions of certain acute hazards refer to specific animal testing results (see Appendix A).

4. **Adequacy and reporting of data:** The results of any studies which are designed and conducted according to established scientific principles, and which report statistically significant conclusions regarding the health effects of a substance, shall be a sufficient basis for a hazard determination and reported on any material safety data sheet. The manufacturer, importer, or employer may also report the results of other scientifically valid studies which tend to refute the findings of hazard.

NOTE: Authority cited: Sections 142.3 and 6398, Labor Code. Reference: Sections 142.3 and 6361-6399.7, Labor Code; and *United Steelworkers of America v. Auctier* (3d Cir. 1985) 763 F.2d 728.

HISTORY

1. Amendment filed 4-26-93; operative 5-26-93 (Register 93, No. 18).

Appendix C to Section 5194 Information Sources (Advisory)

The following is a list of available data sources which the manufacturer, importer, or employer may wish to consult to evaluate the hazards of substances they produce or import:

Any information in their own company files such as toxicity testing results or illness experience of company employees.

Any information obtained from the supplier of the substance, such as material safety data sheets or product safety bulletins.

Any pertinent information obtained from the following source list (latest editions should be used):

Condensed Chemical Dictionary, Van Nostrand Reinhold Co., 135 West 50th Street, New York, NY 10020

The Merck Index: An Encyclopedia of Chemicals and Drugs, Merck and Company, Inc., 126 East Lincoln Avenue, Rahway, NJ 07065

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man and Supplements, Geneva: World Health Organization, International Agency for Research on Cancer, 1972-Present (multivolume work), 49 Sheridan Avenue, Albany, NY 12210

Industrial Hygiene and Toxicology, by F. A. Patty, John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158-0012 (multivolume work)

Clinical Toxicology of Commercial Products, Gleason, Gosselin and Hodge

Casarett and Doull's Toxicology: The Basic Science of Poisons, Doull, Klaassen, and Amdur, Macmillan Publishing Co., Inc., New York, NY

Industrial Toxicology, by Alice Hamilton and Harriet L. Hardy, Publishing Sciences Group, Inc., Acton, MA

Toxicology of the Eye, by W. Morton Grant, Charles C. Thomas, 301-327 East Lawrence Avenue, Springfield, IL

Recognition of Health Hazards in Industry, William A. Burgess, John Wiley and Sons, 605 Third Avenue, New York, NY 10158-0012

Chemical Hazards of the Workplace, Gloria J. Hathaway, Nick H. Proctor, James P. Hughes and Michael L. Fischman, J. P. Lipincott Company, East Washington Square, Philadelphia, PA 19105

CRC Handbook of Chemistry and Physics, CRC Press, Inc., Boca Raton, FL

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, 6500 Glenway Avenue, Bldg. D-7, Cincinnati, OH 45211-4438

Information on the physical hazards of chemicals may be found in publications of the National Fire Protection Association, Boston, MA.

NOTE:—The following documents are on sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Out-of-print documents may be available from the National Technical Information Service (NTIS), Springfield, VA 22161.

Occupational Health Guidelines (NIOSH Pub. No. 81-123).

Occupational Health Guidelines, Supplement 1 (NIOSH Pub. No. 88-1188).

Occupational Health Guidelines, Supplement 2 (NIOSH Pub. No. 89-104).

NIOSH Pocket Guide to Chemical Hazards, NIOSH Pub. No. 90-117.

Registry of Toxic Effects of Chemical Substances, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health (latest edition).

The Industrial Environment—Its Evaluation and Control, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health (NIOSH Pub. No. 74-117).

Miscellaneous Documents—National Institute for Occupational Safety and Health:

1. Criteria for a recommended standard * * * Occupational Exposure to "_____"

2. Special Hazard Reviews

3. Occupational Hazard Assessment

4. Current Intelligence Bulletins

OSHA's General Industry Standards (29 CFR Part 1910)

NTP Annual Report on Carcinogens and Summary of the Annual Report on Carcinogens.

BIBLIOGRAPHIC DATA BASES

Service Provider and File Name:

BRS Information Technologies, Inc., a division of Maxwell Online, Inc., 8000 Westpark Dr., McLean, VA 22102

AGRICOLA

BIOSIS PREVIEWS

CA SEARCH

DRUG INFORMATION FULL TEXT

MEDLINE

NTIS

POLLUTION ABSTRACTS

TOXLINE

DIALOG, Dialog Information Services, Inc., 3460 Hillview Avenue, Palo Alto, CA 94304

AGRICOLA

BIOSIS PREVIEWS, 1969-PRESENT

CAB ABSTRACTS 1972-PRESENT

CHEMICAL EXPOSURE 1974-PRESENT

CA SEARCH 1967-PRESENT

CHEMNAME 1967-PRESENT

CHEMSEARCH 1957-PRESENT

CONFERENCE PAPERS INDEX

EMBASE 1974-PRESENT

ENVIRONMENTAL BIBLIOGRAPHY 1973-PRESENT

ENVIROLINE 1971-PRESENT

FEDERAL RESEARCH IN PROGRESS

FOOD SCIENCE & TECHNOLOGY ABSTRACTS

FOODS ADLIBRA

INTL. PHARMACEUTICAL ABSTRACTS

LIFE SCIENCES COLLECTION 1978-PRESENT

NTIS

OCCUPATIONAL SAFETY AND HEALTH (NIOSH) 1973-PRESENT

PAPERCHEM 1967-PRESENT

POLLUTION ABSTRACTS

SCISEARCH 1974-PRESENT

Orbit Search Service, a division of Maxwell Online, Inc., 8000 Westpark Dr., McLean, VA 22102

CHEMICAL ABSTRACTS

CHEMDEX

ENVIROLINE

LABORDOC

NTIS

Fein-Marquart Associates (FMA), Chemical Information Systems, Inc. (CIS), 7215 Yorke Road, Baltimore, MD 21212

Structure & Nomenclature Search System (SANSS)

RTECS

Clinical Toxicology of Commercial Products (CTCP)

Oil and Hazardous Materials Technical Assistance Data System

MEDLARS Management Section, National Library of Medicine, Department of Health and Human Services, Public Health Service, National Institutes of Health, 8600 Rockville Pike, Bethesda, MD 20894

BACKFILES

CANCERLIT

CHEMLINE

HAZARDOUS SUBSTANCES DATABANK

MEDLINE

RTECS

SDILINE

TOXLINE
TOXLINE65
TOXLIT
TOXLIT65

TOXNET/TOXICOLOGIC DATA & TRI

Questel, Inc., 2300 Clarendon Blvd., Suite 1111, Arlington, VA 22201
CIS/ILO

NOTE: Sections 142.3 and 6398, Labor Code. Reference: Sections 142.3 and 6361-6399.7, Labor Code; and *United Steelworkers of America v. Aucther* (3d Cir. 1985) 763 F.2d 728.

HISTORY

1. Amendment filed 4-26-93; operative 5-26-93 (Register 93, No. 18).

Appendix D to Section 5194

Definition of "Trade Secret" (Mandatory)

The following is a reprint of the Restatement of Torts Section 757, comment b (1939):

b. Definition of trade secret. A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers. It differs from other secret information in a business (see Section 759 of the Restatement of Torts which is not included in this Appendix) in that it is not simply information as to single or ephemeral events in the conduct of the business, as, for example, the amount or other terms of a secret bid for a contract or the salary of certain employees, or the security investments made or contemplated, or the date fixed for the announcement of a new policy or for bringing out a new model or the like. A trade secret is a process or device for continuous use in the operations of the business. Generally it relates to the production of goods, as, for example, a machine or formula for the production of an article. It may, however, relate to the sale of goods or to other operations in the business, such as a code for determining discounts, rebates or other concessions in the price list or catalogue, or a list of specialized customers, or a method of bookkeeping or other office management.

Secrecy. The subject matter of a trade secret must be secret. Matters of public knowledge or of general knowledge in an industry cannot be appropriated by one as his secret. Matters which are completely disclosed by the goods which one markets cannot be his secret. Substantially, a trade secret is know only in the particular business in which it is used. It is not requisite that only the proprietor of the business know it. He may, without losing his protection, communicate it to employees involved in its use. He may likewise communicate it to others pledged to secrecy. Others may also know of it independently, as, for example, when they have discovered the process or formula by independent invention and are keeping it secret. Nevertheless, a substantial element of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring the information. An exact definition of a trade secret is not possible. Some factors to be considered in determining whether given information is one's trade secret are: (1) The extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of measures taken by him to guard the secrecy of the information; (4) the value of the information to him and his competitors; (5) the amount of effort or money expended by him in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.

Novelty and prior art. A trade secret may be a device or process which is patentable; but it need not be that. It may be device or process which is clearly anticipated in the prior art or one which is merely a mechanical improvement that a good mechanic can make. Novelty and invention are not requisite for a trade secret as they are for patentability. These requirements are essential to patentability. These requirements are essential to patentability because a patent protects against unlicensed use of the pat-

ented device or process even by one who discovers it properly through independent research. The patent monopoly is a reward to the inventor. But such is not the case with a trade secret. Its protection is not based on a policy of rewording or otherwise encouraging the development of secret processes or devices. The protection is merely against a breach of faith and reprehensible means of learning another's secret. For this limited protection it is not appropriate to require also the kind of novelty and invention which is a requisite of patentability. The nature of the secret is, however, an important factor in determining the kind of relief that is appropriate against one who acquires the secret wrongfully is ordinarily enjoined from further use of it and is required to account for the profits derived from his past use. If, on the other hand, the secret consists of mechanical improvements that a good mechanic can make without resort to the secret, the wrongdoer's liability may be limited to damages, and an injunction against future use of the improvements made with the aid of the secret may be inappropriate.

NOTE: Authority cited: Sections 142.3 and 6398, Labor Code. Reference: Sections 142.3 and 6361-6399.7, Labor Code; and *United Steelworkers of America v. Aucther* (3d Cir. 1985) 763 F.2d 728.

Appendix E to Section 5194

WHOLE APPENDIX
new

Terms and Provisions for subsection (b)(6)

The following Sections from Title 22 of the California Code of Regulations (22 CCR) in effect on May 9, 1991 are printed in this Appendix because they provide terms and provisions referred to in subsection (b)(6):

12201. Definitions.

(a) In The Course of doing Business.

For purposes of Health and Safety Code Sections 25249.5 and 25249.6, "in the course of doing business" means any act or omission, whether or not for profit, except:

(1) as excluded by subdivision (b) of Section 25249.11 of the Health and Safety Code; or

(2) when caused by acts of war or grave and irresistible natural disasters such that no reasonable amount of resistance or advance preparation would be sufficient to avoid the discharge, release or exposure.

(b) In The Course of Doing Business, Acts of Employees.

"In the course of doing business" includes any act or omission of any employee which furthers the purpose or operation of the business, or which is expressly or implicitly authorized, except for the personal use, consumption or production of listed chemicals by an employee on the business premises or while performing activities for the business, unless the employer knows or should know of such use, consumption or production and knows or should know that such use, consumption or production will expose other individuals within the meaning of Health and Safety Code Section 25249.6 to a listed chemical.

(c) Employee.

The term "employee" shall have the same meaning as it does in Unemployment Insurance Code Section 621 and in Labor Code Section 3351. Generally, and without limiting the applicability of the definitions in these two statutes, this means that an employee is a person who performs services for remuneration under any appointment or contract of hire or apprenticeship, express or implied, oral or written, whether lawfully or unlawfully employed. In computing whether a person employs ten or fewer employees in his business, all full-time and part-time employees on the date on which the discharge, release or exposure occurs must be counted. Thus, the prohibitions on discharge or release and exposures to certain chemicals will apply to any person who has ten or more full-time or part-time employees on the date in question.

(d) Knowingly.

"Knowingly" refers only to knowledge of the fact that a discharge of, release of, or exposure to a chemical listed pursuant to Health and Safety Code Section 25249.8(a) is occurring. No knowledge that the discharge, release or exposure is unlawful is required. However, a person in the course of doing business who, through misfortune or accident and with-

out evil design, intention or negligence, commits an act or omits to do something which results in a discharge, release or exposure has not violated Health and Safety Code Sections 25249.5 or 25249.6.

(e) ED NOTE: Cal-OSHA Standards Board did not incorporate subsection (e) into 5194(b)(6).

(f) Expose.

The term "expose" means to cause to ingest, inhale, contact via body surfaces or otherwise come into contact with a chemical. An individual may come into contact with a chemical through water, air, food, consumer products and any other environmental exposure as well as occupational or workplace exposures.

(g) - (j) ED NOTE: Cal-OSHA Standards Board did not incorporate subsections (g), (h), (i), and (j) into 5194(b)(6).

(k) For purposes of this chapter, "listed chemical" means a chemical listed pursuant to Health and Safety Code Section 25249.8, subsection (a).

12502. Exposure to a Listed Chemical in Drinking Water.

(a) A person otherwise responsible for an exposure to a listed chemical which involves the use of drinking water, including the use of drinking water in food or any other consumer product, does not "expose" an individual within the meaning of Section 25249.6 to the extent that the person can show that the listed chemical was contained in drinking water which was received from:

(1) a public water system, as defined in Section 4010.1 of the Health and Safety Code;

(2) a commercial supplier of drinking water, or

(3) a source of drinking water in compliance with all applicable primary drinking water standards for all listed chemicals and the chemical in question is the result of treatment of the water in order to achieve compliance with primary drinking water standards.

Where the source of the listed chemical is in part from such drinking water and in part from other sources, "exposure" can occur only as to that portion of the listed chemical from sources other than such drinking water.

(b) For purposes of subdivision (a), the amount of a listed chemical contained in drinking water shall be determined by sampling of the drinking water at the point of delivery and by testing pursuant to Section 12901. If sampling and testing is impractical, the amount of a listed chemical shall be based on test results of the most recent sample of the drinking water taken by the public water system or the commercial drinking water supplier, provided that all sampling and testing has been conducted at the frequency and in the manner required by law, or alternatively, such amount shall be calculated at five percent of the maximum contaminant level set forth in the primary drinking water standard for the listed chemical.

(c) ED NOTE: Cal-OSHA Standards Board did not incorporate subsection (c) into 5194(b)(6).

12601. Clear and Reasonable Warnings.

(a) Whenever a clear and reasonable warning is required under Section 25249.6 of the Health and Safety Code, the method employed to transmit the warning must be reasonably calculated, considering the alternative methods available under the circumstances, to make the warning message available to the individual prior to exposure. The message must clearly communicate that the chemical in question is known to the state to cause cancer, or birth defects or other reproductive harm. Nothing in this section shall be construed to preclude a person from providing warnings other than those specified in subdivisions (b), (c), and (d) which satisfy the requirements of this subdivision, or to require that warnings be provided separately to each exposed individual.

(b) Warnings for consumer products exposures which include the methods of transmission and the warning messages as specified by this subdivision shall be deemed to be clear and reasonable. A "consumer products exposure" is an exposure which results from a person's acquisition, purchase, storage, consumption, or other reasonably foreseeable use

of a consumer good, or any exposure that results from receiving a consumer service.

(1) The warning may be provided by using one or more of the following methods singly or in combination:

(A) A warning that appears on a product's label or other labeling. The term "label" means a display of written, printed or graphic matter upon a product or its immediate container. The term "labeling" means any label or other written, printed or graphic matter affixed to or accompanying a product or its container or wrapper.

(B) Identification of the product at the retail outlet in a manner which provides a warning. Identification may be through shelf labeling, signs, menus, or a combination thereof.

(C) A system of signs, public advertising identifying the system and toll-free information services, or any other system, that provides clear and reasonable warnings.

(D) For alcoholic beverages, including, without limitation, beer, malt beverages, wine and distilled spirits:

1. Primarily intended for consumption off the premises where sold or distributed:

(i) at least one notice or sign, no smaller than 10 inches wide by 10 inches high, and bearing the warning message set forth in paragraph (4) (E) of this subsection; or

(ii) at least one horizontal strip marker no smaller than 10 1/2 inches wide by 1 1/4 inches high, and bearing the warning message set forth in paragraph (4)(E) of this subsection; or

(iii) a notice no smaller than 5 inches by 5 inches, and bearing the warning message set forth in (4)(E) of this subsection.

(iv) If signs 10 inches high by 10 inches wide are used, the word "warning" shall be centered, three-quarters of an inch from the top of the sign in ITC Garamond bold condensed type face all in one-inch capital letters. Three-sixteenths of an inch from the base of the word "warning" shall be a line extending from left to right across the width of the sign one-sixteenth of an inch in thickness. Centered one-half inch below the line shall be the body of the warning message in 36/50 ITC Garamond bold condensed type face with the initial letter of each word, other than the conjunctive "and," capitalized. For the body of the warning message, left and right margins of at least one-half of an inch, and a bottom margin of at least one-half inch shall be observed. Larger signs shall bear substantially the same proportions of type size and spacing to sign dimension as the sign 10 inches high by 10 inches wide.

(v) If the 10 1/2 inch by 1 1/4 inch horizontal strip markers are used, the word "WARNING," punctuated by a colon, shall be justified left and located three-sixteenths of an inch from the top of the strip notice in ITC Garamond bold condensed type face all in capital letters measuring eleven sixteenth of an inch in height.

Three thirty-seconds of an inch from the base of the word "WARNING" shall be a line extending from left to right across the width of the word "WARNING" and the punctuation colon one thirty-second of an inch in thickness. Located one-fourth of an inch from the top and one-fourth of an inch from the bottom of the strip notice, and to the immediate right of the word "WARNING," shall be the body of the warning message in 12/16 point ITC Garamond bold condensed type face with the initial letter of each word, other than the conjunctive "and," capitalized. The word "WARNING" shall be one-half inch from the left edge of the strip notice and the requisite warning message shall extend to within one-half inch from the right edge.

(vi) If the 5 inch by 5 inch signs are used, they shall bear substantially the same proportions of type size and spacing to sign dimension as the sign 10 inches high by 10 inches wide, with both the word "WARNING" and the warning text set in white on a contrasting red background.

(vii) Such sign or notice shall be placed in the retail establishment so as to assure that it is readable and likely to be read either at each retail point of sale or each point of display. Such sign or notice shall be placed either at all retail points of sale or all points of display, but need not be placed at both. If 10 inch by 10 inch signs or notices are placed at the point of display, each shall be placed no more than ten feet from any alcoholic

beverage container and in a manner associating the sign or notice with the display. If horizontal strip notices are used, they shall be placed at ten foot intervals horizontally along the display. If a 5 inch by 5 inch sign is used, it shall be conspicuously placed at each retail point of sale (e.g., check-out counter, cash register, cash box) so that it is likely to be read and understood during the sales transaction.

(viii) All measurements specified or referred to in paragraphs (iv), (v) and (vi), above, are not required to be precisely accurate.

2. Provided for consumption on the premises at tables served by food or beverage persons, or sold or distributed through over the counter service;

(i) a notice or sign displayed at each of the tables where alcoholic beverages are served or may be consumed at least 5 inches high by 5 inches wide bearing substantially the same type face and substantially the same proportion of type size and spacing to sign dimension as described in paragraph (D)1. (vi); or

(ii) the warning message set forth in paragraph (4)(E) of this subdivision, placed upon a menu or list in association with the alcoholic beverages listed thereon and served at such premises, or if alcoholic beverages are not listed thereon, on any menu or list provided to patrons in association with the listing of food or beverage offerings, in type size and design, such that the text is conspicuous and likely to be read prior to consumption of alcoholic beverages or,

(iii) at least one 10 inch by 10 inch sign, meeting the specifications set forth in paragraph (D)1. (iv) of this subsection, placed so that it is readable and likely to be read by patrons as they enter each public entrance to the establishment. If the establishment does not have clearly defined physical boundaries delineating those areas where, by permit or license, alcoholic beverages are served, the 10 inch by 10 inch sign shall be posted so that it is readable and likely to be read by patrons as they enter the area or areas where, by permit or license, alcoholic beverages are served; and

(iv) If sold or distributed through over-the-counter service, at least one sign, meeting the specifications set forth in paragraph (D)1., (iv) of this subsection, placed in the retail establishment so that the warning message is, prior to the consumption of alcoholic beverages, readable and likely to be read from all counter locations available to the public. Therefore, a retail establishment providing a warning pursuant to the preceding sentence, also would be required to provide a warning in accordance with either paragraph 2.(i), 2.(ii) or 2.(iii) of this subsection.

3. For premises which are specially licensed to sell and serve alcoholic beverages both on and off the licensed premises (e.g., in facilities that offer both "tasting" and retail sales), the off-sale portion of the premises shall comply with the provisions of subsection (D)1., above, and the portion of the premises where alcoholic beverages are served shall comply with the provisions of subsection (D)2., above.

4. For alcoholic beverages sold or distributed to consumers through the mail or package delivery services, warnings may be provided by incorporating or placing the warning message set forth in paragraph (4)(E) on or in the shipping container or delivery package in such a manner so that the warning message is likely to be read by the recipient prior to consumption of the alcoholic beverage(s).

5. All signs or notices referred to in subsections (D)1., (D)2. and (D)3., above, shall be displayed so that they are clearly visible under all lighting conditions normally encountered during business hours.

(2) To the extent practicable, warning materials such as signs, notices, menu stickers, or labels shall be provided by the manufacturer, producer, or packager of the consumer product, rather than by the retail seller. For alcoholic beverages, the placement and maintenance of the warning shall be the responsibility of the manufacturer or its distributor at no cost to the retailer, and any consequences for failure to do the same shall rest solely with the manufacturer or its distributor, provided that the retailer does not remove, deface, or obscure the requisite signs or notices, or obstruct, interfere with, or otherwise frustrate the manufacturer's reasonable efforts to post, maintain, or periodically replace said materials. For prescription drugs, the labeling approved or otherwise provided under federal law and the prescriber's accepted practice of obtaining a patient's informed consent shall be deemed to be a clear and reasonable warning.

(3) The warnings provided pursuant to paragraphs (1)(A) and (1)(B) shall be prominently placed upon a product's label or other labeling or displayed at the retail outlet with such conspicuousness, as compared with other words, statements, designs, or devices in the label, labeling or display as to render it likely to be read and understood by an ordinary individual under customary conditions of purchase or use.

(4) The warning message must include the following language:

(A) For consumer products that contain a chemical known to the state to cause cancer:

"WARNING: This product contains a chemical known to the State of California to cause cancer."

(B) For consumer products that contain a chemical known to the state to cause reproductive toxicity:

"WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm."

(C) For food, other than alcoholic beverages, sold, served, or otherwise provided in food facilities, as defined in Health and Safety Code Section 27521(a), which is intended for immediate consumption:

"WARNING: Chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm may be present in foods or beverages sold or served here."

(D) For fresh fruits, nuts and vegetables:

"WARNING: This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm."

(E) For alcoholic beverages, including, without limitation, beer, malt beverages, wine and distilled spirits:

"WARNING: Drinking Distilled Spirits, Beer, Coolers, Wine and Other Alcoholic Beverages May Increase Cancer Risk, and, During Pregnancy, Can Cause Birth Defects."

(5) A person in the course of doing business, who manufactures, produces, assembles, processes, handles, distributes, stores, sells or otherwise transfers a consumer product which he or she knows to contain a chemical known to the state to cause cancer or reproductive toxicity in an amount which requires a warning shall provide a warning to any person to whom the product is sold or transferred unless the product is packaged or labeled with a clear and reasonable warning.

(c) Warnings for occupational exposures which include the methods of transmission and the warning messages as specified by this subdivision shall be deemed clear and reasonable. An "occupational exposure" is an exposure, in the workplace of the employer causing the exposure, to any employee.

(1) The method employed to transmit the warning must include one of the following alternative methods:

(A) A warning that appears on the label or labeling of a product or substance present or used in the workplace. The label or labeling shall be prominently displayed on the product or substance and the product or substance shall be used under circumstances which make it likely that the warnings will be read and understood by employees or other individuals prior to the exposure for which the warning is given.

(B) A warning that appears on a sign in the workplace posted in a conspicuous place and under conditions that make it likely to be read and understood by employees and other individuals prior to the exposure for which the warning is given.

(C) A warning to the exposed employee about the chemical n question which complies with all information, training and labeling requirements of the federal Hazard Communication Standard (29 CFR Section 1910.1200, as amended and filed September 30, 1986), the California Hazard Communication Standard (Cal. Code Regs., Title 8, Section 5194, as amended and filed May 26, 1987), or, for pesticides, the Pesticides and Worker Safety requirements (Cal. Code Regs., Title 3, Ch. 6, Subch. 3, Group 3, Section 6700 et seq., in effect on February 16, 1988) authorized in Food and Agricultural Code Section 12981 (as amended by Statutes of 1980, Ch. 926, P. 2945, Section 1).

(2) For purposes of paragraph (1)(A) of this subdivision, the warning shall be provided in terms which would provide a clear warning for a consumer product as specified above.

(3) For purposes of paragraph (1)(B) of this subdivision, the following specific warning messages shall be deemed to clearly communicate that an individual is being exposed to a chemical known to the state to cause cancer, or birth defects or other reproductive harm.

(A) For exposure to a chemical known to the state to cause cancer:

"WARNING: This area contains a chemical known to the State of California to cause cancer."

(B) For exposure to a chemical known to the state to cause reproductive toxicity:

"WARNING: This area contains a chemical known to the State of California to cause birth defects or other reproductive harm."

(d) Warnings for environmental exposures which include the methods of transmission and the warning messages as specified by this subdivision shall be deemed clear and reasonable. An "environmental exposure" is an exposure which may foreseeably occur as the result of contact with an environmental medium, including, but not limited to, ambient air, indoor air, drinking water, standing water, running water, soil, vegetation, or manmade or natural substances, either through inhalation, ingestion, skin contact or otherwise. Environmental exposures include all exposures which are not consumer products exposures, or occupational exposures.

(1) The method employed to transmit the warning must include the most appropriate of the following alternative methods under the circumstances:

(A) A warning that appears on a sign in the affected area. The term "sign" means a presentation of written, printed or graphic matter. The term "affected area" means the area in which an exposure to a chemical known to the state to cause cancer or reproductive toxicity is at a level that requires a warning. A posting of signs in the manner described in Section 6776, (e)(1) of Title 3 of the California Code of Regulations, (as amended and filed August 15, 1986) shall be sufficient for purposes of this paragraph.

(B) A warning which is in a notice mailed or otherwise delivered to each occupant in the affected area. Such notice shall be provided at least once in any three-month period.

(C) A warning provided by public media announcements which target the affected area. Such announcements shall be made at least once in any three-month period.

(2) Environmental exposure warnings shall be provided in a conspicuous manner and under such conditions as to make it likely to be read, seen or heard and understood by an ordinary individual in the course of normal daily activity, and reasonably associated with the location and source of the exposure.

(3) For purposes of paragraph (1)(A) of this subdivision, the following specific warning messages shall be deemed to clearly communicate that an individual is being exposed to a chemical known to the state to cause cancer, or birth defects or other reproductive harm.

(A) For exposure to a chemical known to the state to cause cancer:

"WARNING: This area contains a chemical known to the State of California to cause cancer."

(B) For exposure to a chemical known to the state to cause reproductive toxicity:

"WARNING: This area contains a chemical known to the State of California to cause birth defects or other reproductive harm."

12701. General.

(a) The determination of whether a level of exposure to a chemical known to the state to cause cancer poses no significant risk for purpose of Health and Safety Code Section 25249.10(c) shall be based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for the listing of the chemical as known to the state to cause cancer. Nothing in this article shall preclude a person from using evidence, standards, risk assessment methodologies, principles, assumptions or levels not described in this article to establish that a level of exposure to a listed chemical poses no significant risk.

(b) A level of exposure to a listed chemical, assuming daily exposure at that level, shall be deemed to pose no significant risk provided that the level is determined:

(1) By means of a quantitative risk assessment that meets the standards described in Section 12703;

(2) By application of Section 12707 (Routes of Exposure); or

(3) By one of the following, as applicable:

(A) If a specific regulatory level has been established for the chemical in question in Section 12705, by application of that level.

(B) If no specific level is established for the chemical in question in Section 12705, by application of Section 12709 (Exposure to Trace Elements), 12711 (Levels Based on State or Federal Standards) or 12713 (Exposure to Food, Drugs, Cosmetics and Medical Devices), unless otherwise provided.

(c) ED NOTE: Cal-OSHA Standards Board did not incorporate subsection (c) into 5194(b)(6).

(d) This article establishes exposure levels posing no significant risk solely for purposes of Health and Safety Code Section 25249.10(c). Nothing in this article shall be construed to establish exposure or risk levels for other regulatory purposes.

12703. Quantitative Risk Assessment.

(a) A quantitative risk assessment which conforms to this section shall be deemed to determine the level of exposure to a listed chemical which, assuming daily exposure at that level, poses no significant risk. The assessment shall be based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for listing the chemical as known to the state to cause cancer. In the absence of principles or assumptions scientifically more appropriate, based upon the available data, the following default principles and assumptions shall apply in any such assessment:

(1) Animal bioassay studies for quantitative risk assessment shall meet generally accepted scientific principles, including the thoroughness of experimental protocol, the degree to which dosing resembles the expected manner of human exposure, the temporal exposure pattern, the duration of study, the purity of test material, the number and size of exposed groups, the route of exposure, and the extent of tumor occurrence.

(2) The quality and suitability of available epidemiologic data shall be appraised to determine whether the study is appropriate as the basis of a quantitative risk assessment, considering such factors as the selection of the exposed and reference groups, reliable ascertainment of exposure, and completeness of follow-up. Biases and confounding factors shall be identified and quantified.

(3) Risk analysis shall be based on the most sensitive study deemed to be of sufficient quality.

(4) The results obtained for the most sensitive study deemed to be of sufficient quality shall be applicable to all routes of exposure for which the results are relevant.

(5) The absence of a carcinogenic threshold dose shall be assumed and no-threshold models shall be utilized. A linearized multistage model for extrapolation from high to low doses, with the upper 95 percent confidence limit of the linear term expressing the upper bound of potency shall be utilized. Time-to-tumor models may be appropriate where data are available on the time of appearance of individual tumors, and particularly when survival is poor due to competing toxicity.

(6) Human cancer potency shall be derived from data on human or animal cancer potency. Potency shall be expressed in reciprocal milligrams of chemical per kilogram of bodyweight per day. Interspecies conversion of animal cancer potency to human cancer potency shall be determined by multiplying by a surface area scaling factor equivalent to the ratio of human to animal bodyweight, taken to the one-third power. This is equivalent to a scaling factor of 14 when extrapolating from mouse data, and a scaling factor of 6.5 when extrapolating from rat data.

(7) When available data are of such quality that physiologic, pharmacokinetic and metabolic considerations can be taken into account with

confidence, they may be used in the risk assessment for inter-species, inter-dose, and inter-route extrapolations.

(8) When the cancer risk applies to the general population, human body weight of 70 kilograms shall be assumed. When the cancer risk applies to a certain subpopulation, the following assumptions shall be made, as appropriate:

| Subpopulation | Kilograms of Body Weight |
|---------------------------------|--------------------------|
| Man (18+ years of age) | 70 |
| Woman (18+ years of age) | 58 |
| Woman with conceptus | 58 |
| Adolescent (11-18 years of age) | 40 |
| Child (2-10 years of age) | 20 |
| Infant (0-2 years of age) | 10 |

(b) For chemicals assessed in accordance with this section, the risk level which represents no significant risk shall be one which is calculated to result in one excess case of cancer in an exposed population of 100,000, assuming lifetime exposure at the level in question, except where sound considerations of public health support an alternative level, as, for example:

- (1) where chemicals in food are produced by cooking necessary to render the food palatable or to avoid microbiological contamination; or
- (2) where chlorine disinfection in compliance with all applicable state and federal safety standards is necessary to comply with sanitation requirements; or
- (3) where a clean-up and resulting discharge is ordered and supervised by an appropriate governmental agency or court of competent jurisdiction.

12705. Specific Regulatory Levels Posing No Significant Risk.

(a) Daily exposure to a chemical at a level which does not exceed the level set forth in subsection (b) for such chemical shall be deemed to pose no significant risk within the meaning of Health and Safety Code section 25249.10(c).

(b)

| Chemical Name | Level micrograms/day |
|---|-------------------------|
| Acrylonitrile | 0.7 |
| Aldrin | 0.04 |
| Asbestos | 100 fibers inhaled/day* |
| Benzene | 7 |
| Benzidine | 0.001 |
| Bis(2-chloroethyl) ether | 0.3 |
| Bis(chloromethyl) ether | 0.02 |
| Carbon tetrachloride | 5 |
| DDT, DDE and DDD (in combination) | 2 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.1 |
| para-Dichlorobenzene | 20 |
| 3,3'-Dichlorobenzidine | 0.6 |
| Dieldrin | 0.04 |
| 1,4-Dioxane | 30 |
| Epichlorohydrin | 9 |
| Ethylene dibromide | 0.2 (ingestion) |
| 3 (inhalation) | |
| Ethylene dichloride | 10 |
| Ethylene oxide | 2 |
| Hexachlorobenzene | 0.4 |
| Hexachlorocyclohexane (technical grade) | 0.2 |
| N-Nitroso-n-dibutylamine | 0.06 |
| N-Nitrosodiethylamine | 0.02 |
| N-Nitrosodimethylamine | 0.04 |
| N-Nitrosodiphenylamine | 80 |
| N-Nitrosodi-n-propylamine | 0.1 |
| N-Nitroso-N-ethylurea | 0.03 |
| N-Nitroso-N-methylurea | 0.006 |
| Polybrominated biphenyls | 0.02 |
| Toxaphene | 0.6 |
| 2,4,6-Trichlorophenol | 10 |
| Urethane | 0.7 |

*Fibers equal to or greater than 5 micrometers in length and 0.3 micrometers in width, with a length to width ratio of greater than or equal to 3:1 as measured by phase contrast microscopy.

(c) Whenever the lead agency proposes to formally adopt, pursuant to this section, a level which shall be deemed to pose no significant risk of cancer, assuming daily exposure at that level, the lead agency shall provide to each member of the Scientific Advisory Panel notice of the proposed action, a copy of the proposed level, and a copy of initial statement of reasons supporting the proposal. The close of the public comment period for any such proposal shall be scheduled by the lead agency so as to permit the Scientific Advisory Panel the opportunity to review such proposal and provide comment to the lead agency. Any such comment by the Scientific Advisory Panel shall become a part of the formal rulemaking file. Nothing in this subdivision shall be construed to prevent members of the Scientific Advisory Panel from providing comments individually on any such proposal, or to require the Scientific Advisory Panel to submit any comment.

12707. Routes of Exposure.

(a) Where scientifically valid absorption studies conducted according to generally accepted standards demonstrate that absorption of a chemical through a specific route of exposure can be reasonably anticipated to present no significant risk of cancer at levels of exposure not in excess of current regulatory levels, the lead agency may identify the chemical as presenting no significant risk by that route of exposure. Any exposure, discharge or release of a chemical so identified shall be deemed to present no significant risk to the extent that it results in exposure to humans by the identified route, and does not exceed the level established in any other applicable federal or state standard, regulation, guideline, action level, license, permit, condition, requirement or order.

(b) The following chemicals present no significant risk of cancer by the route of ingestion:

- (1) Asbestos
- (2) Beryllium and beryllium compounds
- (3) Cadmium and cadmium compounds
- (4) Chromium (hexavalent compounds)
- (5) Nickel and nickel compounds

12709. Exposure to Trace Elements.

(a) Except where a specific regulatory level is established in Section 12705, exposure to a trace element listed in (b) shall be deemed to pose no significant cancer risk so long as the reasonably anticipated level of exposure to the chemical does not exceed the level set forth in (b).

(b)

| Element | No Significant Risk Level in micrograms per day |
|---------------------|---|
| Arsenic (inorganic) | 10 |
| Beryllium | 0.1 |
| Cadmium | 1 |

12711. Levels Based on State or Federal Standards.

(a) Except as otherwise provided in section 12705, 12707, 12709, or 12713, levels of exposure deemed to pose no significant risk may be determined as follows:

(1) Where a state or federal agency has developed a regulatory level for a chemical known to the state to cause cancer which is calculated to result in not more than one excess case of cancer in an exposed population of 100,000, such level shall constitute the no significant risk level.

(2) The following levels based on state or federal risk assessments shall be deemed to pose no significant risk:

| Chemical Name | Level micrograms/day |
|-------------------|----------------------|
| Acetaldehyde | 90 |
| Acrylamide | 0.2 |
| Allyl chloride | 30 |
| Aniline | 100 |
| Azobenzene | 6 |
| Benzo (a) pyrene | 0.06 |
| Beryllium oxide | 0.1 |
| Beryllium sulfate | 0.0002 |
| 1,3-Butadiene | 0.4 |
| Chlordane | 0.5 |
| Chloroform | 9 |

| <i>Chemical Name</i> | <i>Level micrograms/day</i> |
|---|---------------------------------|
| Chromium (hexavalent) | 0.001 |
| Coke oven emissions | 0.3 |
| DDVP (Dichlorvos) | 2 |
| Dichloromethane (Methylene Chloride) | 50 |
| Di (2-ethylhexyl) phthalate | 80 |
| 2,4-Dinitrotoluene | 2 |
| Folpet | 200 |
| Formaldehyde (gas) | 15 |
| Furmecyclox | 20 |
| Heptachlor | 0.2 |
| Heptachlor epoxide | 0.08 |
| Hexachlorocyclohexane | |
| alpha isomer | 0.3 |
| beta isomer | 0.5 |
| gamma isomer | 0.6 |
| Hydrazine | 0.04 |
| Hydrazine sulfate | 0.2 |
| 4,4'-Methylene bis (N,N-dimethyl)benzeneamine | 20 |
| Nickel refinery dust | 0.8 |
| Nickel subsulfide | 0.4 |
| N-Nitrosodiethanolamine | 0.3 |
| N-nitrosomethylethylamine | 0.03 |
| N-nitrosopyrrolidine | 0.3 |
| Pentachlorophenol | 40 |
| Polychlorinated Biphenyls (PCBs) | 0.09 |
| Tetrachlorodibenzo-p-dioxin (TCDD) | 0.000005 |
| Tetrachloroethylene | 14 |
| Trichloroethylene | 60 |
| Vinyl chloride | 0.3 |

(3) For drinking water, the following levels shall be deemed to pose no significant risk:

(A) Drinking water maximum contaminant levels adopted by the Department of Health Services for chemicals known to the state to cause cancer;

(B) Drinking water action levels for chemicals known to the state to cause cancer for which maximum contaminant levels have not been adopted;

(C) Specific numeric levels of concentration for chemicals known to the state to cause cancer which are permitted to be discharged or released into sources of drinking water by a Regional Water Quality Control Board in a water quality control plan or in waste discharge requirements, when such levels are based on considerations of minimizing carcinogenic risks associated with such discharge or release.

12721. Level of Exposure to Carcinogens.

(a) For the purposes of the Act, "level in question" means the chemical concentration of a listed chemical for the exposure in question. The exposure in question includes the exposure for which the person in the course of doing business is responsible, and does not include exposure to a listed chemical from any other source or product.

(b) For purposes of the Act, "lifetime exposure" means the reasonably anticipated rate of exposure for an individual to a given medium of exposure measured over a lifetime of seventy years.

(c) For purposes of Health and Safety Code Section 25249.10(c), the level of exposure to a listed carcinogen, assuming lifetime exposure at the level in question, shall be determined by multiplying the level in question (stated in terms of a concentration of a chemical in a given medium) times the reasonably anticipated rate of exposure for an individual to the given medium of exposure measured over a lifetime of seventy years.

(d) The following assumptions shall be used to calculate the reasonably anticipated rate of exposure to a listed carcinogen, unless more specific and scientifically appropriate data are available:

(1) For an exposure reasonably expected to affect the general population in any geographic area:

(A) The exposed individual ingests two liters of drinking water per day.

(B) The exposed individual inhales twenty cubic meters of air per day.

(C) The exposed individual has a lifespan of seventy years.

(2) For an exposure reasonably anticipated to affect a certain subpopulation of the general population in any geographic area, specific date (if

available) relating to that subpopulation shall be used to determine the level of exposure.

(A) In the absence of more specific and scientifically appropriate data, the following assumptions should be made as appropriate:

| <i>Subpopulation</i> | <i>Water liters/day</i> | <i>Air cubic meters/day</i> |
|---------------------------------|-----------------------------|-------------------------------------|
| Man (18+ years of age) | 2 | 20 |
| Woman (18+ years of age) | 2 | 20 |
| Woman with conceptus | 2 | 20 |
| Adolescent (10-18 years of age) | 2 | 20 |
| Child (2-10 years of age) | 2 | 15 |
| Infant (0-2 years of age) | 1 | 4 |

(B) For an exposure reasonably expected to affect the conceptus (embryo or fetus), the gestation period for the exposed conceptus is nine months.

(3) For workplace exposures, the exposed worker inhales ten cubic meters of workplace air per eight-hour day, forty hours per week, fifty weeks per year over a forty-year period. The exposed individual from the general population who occasionally enters a workplace inhales 1.25 cubic meters of workplace air for one hour per month for a seventy-year lifetime.

(4) For exposures to consumer products, lifetime exposure shall be calculated using the average rate of intake or exposure for average users of the consumer product, and not on a per capita basis for the general population. The average rate of intake or exposure shall be based on data for use of a general category or categories of consumer products, such as the United States Department of Agriculture Home Economic Research Report, Foods Commonly Eaten by Individuals: Amount Per Day and Per Eating Occasion, where such data are available.

12801. General.

(a) The determination of whether a level of exposure to a chemical known to the state to cause reproductive toxicity has no observable effect for purposes of Health and Safety Code Section 25249.10(c) shall be based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for the listing of a chemical as known to the state to cause reproductive toxicity. Nothing in this article shall preclude a person from using evidence, standards, assessment methodologies, principles, assumptions or levels not described in this article to establish that a level of exposure has no observable effect at one thousand (1,000) times the level in question.

(b) A level of exposure to a listed chemical shall be deemed to have no observable effect, assuming exposure at one thousand times that level, provided that the level is determined:

(1) By means of an assessment that meets the standards described in section 12803 to determine the maximum dose level having no observable effect, and dividing that level by one thousand (1,000) to arrive at the maximum allowable dose level; or

(2) By application of a specific regulatory level for the chemical in question as provided in section 12805.

(c) For purposes of this article, "NOEL" shall mean that no observable effect level, which is the maximum dose level at which a chemical has no observable reproductive effect.

(d) The chemicals specifically contained in this article do not include all listed reproductive toxicants for which there is a level of exposure which has no observable effect assuming exposure at one thousand times the level in question. The fact that a chemical does not specifically appear in this article does not mean that it has an observable effect at any level.

(e) This article establishes exposure levels solely for purposes of Health and Safety Code Section 25249.10(c). Nothing in this article shall be construed to establish exposure levels for other regulatory purposes.

12803. Assessment.

(a) A quantitative risk assessment which conforms to this section shall be deemed to determine the level of exposure to a listed chemical which has no observable effect, assuming exposure at one thousand times the level in question. The assessment shall be based on evidence and stan-

dards of comparable scientific validity to the evidence and standards which form the scientific basis for listing the chemical as known to the state to cause reproductive toxicity. In the absence of principles or assumptions scientifically more appropriate, based upon the available data, the following default principles and assumptions shall apply in any such assessment:

(1) Only studies producing the reproductive effect which provides the basis for the determination that a chemical is known to the state to cause reproductive toxicity shall be utilized for the determination of the NOEL. Where multiple reproductive effects provide the basis for the determination that a chemical is known to the state to cause reproductive toxicity, the reproductive effect for which studies produce the lowest NOEL shall be utilized for the determination of the NOEL. The NOEL shall be the highest dose level which results in no observable reproductive effect, expressed in milligrams of chemical per kilogram of bodyweight per day.

(2) The quality and suitability of available epidemiologic data shall be appraised to determine whether the study is appropriate as the basis of an assessment considering such factors as the selection of the exposed and reference groups, the reliable ascertainment of exposure, and completeness of follow-up. Biases and confounding factors shall be identified and quantified.

(3) Animal bioassay studies for assessment shall meet generally accepted scientific principles, including the thoroughness of experimental protocol, the degree to which dosing resembles the expected manner of human exposure, the temporal exposure pattern, the duration of study, the purity of test material, the number and size of exposed groups, and the route of exposure and the extent of occurrence of effects.

(4) The NOEL shall be based on the most sensitive study deemed to be of sufficient quality.

(5) The results obtained for the most sensitive study deemed to be of sufficient quality shall be applicable to all routes of exposure for which the results are relevant.

(6) When available data are of such quality that anatomic, physiologic, pharmacokinetics and metabolic considerations can be taken into account with confidence, they may be used in the assessment.

(7) When data do not allow the determination of a NOEL, the lowest observable effect level (LOEL) shall be divided by 10 to establish a NOEL for purposes of assessment.

(b) The NOEL shall be converted to a milligram per day dose level by multiplying the assumed human body weight by the NOEL. When the applicable reproductive effect is upon the male, human body weight of 70 kilograms shall be assumed. When the applicable reproductive effect is upon the female or conceptus, human body weight of 58 kilograms shall be assumed.

12805. Specific Regulatory Levels: Reproductive Toxicants.

(a) Exposure to a chemical at a level which does not exceed the level set forth in subsection (b) for such chemical has no observable effect assuming exposure at one thousand (1,000) times that level.

(b)

| <i>Chemical Name</i> | <i>Level Micrograms/day</i> |
|----------------------|---------------------------------|
| Ethylene Oxide | 20.0 |
| Lead | 0.5 |

(c) Unless a specific level is otherwise provided in this section, an assessment by an agency of the state or federal government that is the substantial equivalent of the assessment described in subdivision (a) of Section 12803, and establishes a maximum allowable daily dose level in the manner provided in paragraph (b)(1) of Section 12801, shall constitute the allowable daily dose level having no observable effect within the meaning of Health and Safety Code Section 25249.10(c).

12821. Level of Exposure to Reproductive Toxicants.

(a) For purposes of the Act, "level in question" means the chemical concentration of a listed chemical for the exposure in question. The expo-

sure in question includes the exposure for which the person in the course of doing business is responsible, and does not include exposure to a listed chemical from any other source or product.

(b) For purposes of Health and Safety Code Section 25249.10(c), the level of exposure to a listed reproductive toxicant shall be determined by multiplying the level in question (stated in terms of a concentration of a chemical in a given medium) times the reasonably anticipated rate of exposure for an individual to a given medium. The reasonably anticipated rate of exposure shall be based on the pattern and duration of exposure that is relevant to the reproductive effect which provided the basis for the determination that a chemical is known to the state to cause reproductive toxicity. (For example, an exposure of short duration is appropriate for a teratogenic chemical, whereas a chronic or protracted exposure is appropriate for one that retards fetal growth).

(c) The following assumptions shall be used to calculate the reasonably anticipated rate of exposure to a listed reproductive toxicant, unless more specific and scientifically appropriate data are available:

(1) The assumptions set forth in subdivision (d) of Section 12721 shall be used to calculate the reasonably anticipated rate of exposure to a listed reproductive toxicant, unless more specific and scientifically appropriate data are available.

(2) For exposures to consumer products, the level of exposure shall be calculated using the reasonably anticipated rate of intake or exposure for average users of the consumer product, and not on a per capita basis for the general population. The rate of intake or exposure shall be based on data for use of a general category or categories of consumer products, such as the United States Department of Agriculture Home Economic Research Report, Foods Commonly Eaten by Individuals: Amount Per Day and Per Eating Occasion, where such data are available.

(3) Where a maternal exposure to a listed reproductive toxicant has an effect on the conceptus (embryo or fetus), the level of exposure shall be based on the reasonably anticipated rate of exposure for the mother during the nine-month gestation period.

12901. Methods of Detection.

(a) For purposes of Section 25249.11, subdivision (c), of the Health and Safety Code, the term "any detectable amount" means a level detected using a method of analysis referred to in this section. For purposes of this section, "method of analysis" refers to the method of detection or detection and calculation for a listed chemical in a specific medium, including, but not limited to, water, air, food, or soil, and shall include methods and procedures concerning the number of samples and the frequency and site of sampling that are specific for the listed chemical in question.

(b) Where the California Department of Health Services, the California Department of Food and Agriculture, the Air Resources Board, a local air pollution control district, the State Water Resources Control Board, or a Regional Water Quality Control Board has adopted or employs a method of analysis for a listed chemical in a specific medium, such method shall be the method of analysis for that chemical in that medium. Where more than one method of analysis has been so adopted or is so employed, each may be utilized as the method of analysis.

(c) Where no state or local agency identified in subdivision (b) has adopted or employs a method of analysis, a method of analysis, a method of analysis for a listed chemical in a specific medium adopted or employed by a federal agency shall be the method of analysis for that chemical in that medium. When more than one method of analysis has been so adopted or is so employed, each may be utilized as the method of analysis.

(d) Where no regulatory agency identified in subdivision (b) or (c) has adopted or employs a method of analysis, a method of analysis for a listed chemical in a specific medium which is generally accepted by the scientific community, as evidenced by its publication in compilations by professional and scientific associations or societies, such as the Association of Official Analytical Chemists, or in peer-reviewed technical journals published by such associations or societies, such method shall be the method of analysis for that chemical in that medium. When more than one

method of analysis is generally accepted, each may be utilized as the method of analysis.

(e) Where no method of analysis as described in subsections (b) or (c) has been adopted or is employed, or is generally accepted by the scientific community as described in subsection (d), and a scientifically valid method of analysis has been developed for a listed chemical in a specific medium, such method shall be the method of analysis for that chemical in that medium. Where more than one method of analysis has been developed for a chemical in a specific medium, each may be utilized as the method of analysis.

(f) In performing an analysis to determine the concentration of a chemical known to the state to cause cancer or reproductive toxicity in a given medium, generally accepted standards and practice for sampling, collection, storage, preparation, chemical analysis, statistical analysis of data, interpretation of results and modeling shall be observed.

(g) For purposes of Health and Safety Code Sections 25249.5 and 25249.6, no discharge, release or exposure occurs unless a listed chemical is detectable as provided in this section.

NOTE: Authority cited: Sections 50.7 and 142.3, Labor Code. Reference: Sections 50.7 and 142.3, Labor Code; Sections 25249.6, 25249.7, 25249.8, 25249.10, 25249.11, 25249.12 and 25249.13, Health and Safety Code; and *California Lab. Federation v. Occupational Safety and Health Stds. Bd.* (1990) 221 Cal.App.3d 1547 [271 Cal. Rptr. 310].

HISTORY

1. New appendix E filed 5-31-91 as an emergency; operative 5-31-91 (Register 91, No. 33). A Certificate of Compliance must be transmitted to OAL by 9-30-91 or emergency appendix E language will be repealed by operation of law on the following day.
2. Amendment of section filed 9-30-91 as an emergency; operative 9-30-91 (Register 92, No. 2). A Certificate of Compliance must be transmitted to OAL 1-28-92 or emergency language will be repealed by operation of law on the following day.
3. Repealed by operation of Government code section 11346.1(g) (Register 92, No. 12).
4. New Appendix E filed 12-17-91 as an emergency; operative 12-17-91 (Register 92, No. 12). A Certificate of Compliance must be transmitted to OAL 4-15-92 or emergency language will be repealed by operation of law on the following day.

§ 8-5195. Nitrous Oxide.

The piped systems for the in-plant transfer and distribution of nitrous oxide shall be designed, installed, maintained, and operated in accordance with Compressed Gas Association Pamphlet G-8.1-1979, incorporated herein by this reference.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. New section filed 7-17-75; effective thirtieth day thereafter (Register 75, No. 29).
2. Amendment filed 3-2-76; effective thirtieth day thereafter (Register 76, No. 10).
3. Amendment filed 12-10-87; operative 1-9-88 (Register 87, No. 51).

§ 8-5196. Sulfur.

All requirements of NFPA 655-1982, "Prevention of Sulfur Fires and Explosions," incorporated herein by this reference, shall apply to the crushing, grinding or pulverizing of sulfur and to the handling of sulfur. This standard shall not apply to the mining or transportation of sulfur, nor to the use of sulfur for fumigation, preservation of fruit or similar operations. At locations for which a building permit was issued before December 29, 1981, NFPA 655-1971, "Standard for Prevention of Sulfur Fires and Explosions," incorporated herein by this reference, shall apply. (Title 24, Part 6, Section 5196)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. Amendment of subsections (b) and (d) filed 4-27-79; effective thirtieth day thereafter (Register 79, No. 17).
2. Amendment filed 12-10-87; operative 1-9-88 (Register 87, No. 51).

§ 8-5197. Repair of Magnesium Dust Collecting Units.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. Repealer filed 12-10-87; operative 1-9-88 (Register 87, No. 51).

[The next page is 224.11.]

| Chemical | CAS Number | Date | Chemical | CAS Number | Date |
|--|------------|-------------------|--|------------|-------------------|
| Dibenz[a,h]anthracene | 53703 | January 1, 1988 | Glycidaldehyde | 765344 | January 1, 1988 |
| H-Dibenzolc,g]carbazole | 194592 | January 1, 1988 | Glycidol | 556525 | July 1, 1990 |
| benzo[a,e]pyrene | 192654 | January 1, 1988 | Griseofulvin | 126078 | January 1, 1990 |
| benzo[a,h]pyrene | 189640 | January 1, 1988 | Gyromitrin (Acetaldehyde methylformylhydrazone) | 16568028 | January 1, 1988 |
| benzo[a,i]pyrene | 189559 | January 1, 1988 | HC Blue 1 | 2784943 | July 1, 1989 |
| benzo[a,l]pyrene | 191300 | January 1, 1988 | Heptachlor | 76448 | July 1, 1988 |
| 1,1-Dibromo-3-chloropropane (DBCP) | 96128 | July 1, 1987 | Heptachlor epoxide | 1024573 | July 1, 1988 |
| Dichlorobenzene | 106467 | January 1, 1989 | Hexachlorobenzene | 118741 | October 1, 1987 |
| 3,3'-Dichlorobenzidine | 91941 | October 1, 1987 | Hexachlorocyclohexane (technical grade) | — | October 1, 1987 |
| 1,4-Dichloro-2-butene | 764410 | January 1, 1990 | Hexachlorodibenzodioxin | 34465468 | April 1, 1988 |
| 3,3'-Dichloro-4,4'-diaminodiphenyl ether | 28434868 | January 1, 1988 | Hexachloroethane | 67721 | July 1, 1990 |
| 1,1-Dichloroethane | 75343 | January 1, 1990 | Hexamethylphosphoramide | 680319 | January 1, 1988 |
| Dichloromethane (Methylene chloride) | 75092 | April 1, 1988 | Hydrazine | 302012 | January 1, 1988 |
| 1,2-Dichloropropane | 78875 | January 1, 1990 | Hydrazine sulfate | 10034932 | January 1, 1988 |
| 1,3-Dichloropropene | 542756 | January 1, 1989 | Hydrazobenzene (1,2-Diphenylhydrazine) | 122667 | January 1, 1988 |
| Dieldrin | 60571 | July 1, 1988 | Indeno [1,2,3-cd]pyrene | 193395 | January 1, 1988 |
| Dienestrol | 84173 | January 1, 1990 | IQ (2-Amino-3-methylimidazo[4,5-f]quinoline) | 76180966 | April 1, 1990 |
| Diepoxybutane | 1464535 | January 1, 1988 | Iron dextran complex | 9004664 | January 1, 1988 |
| Diesel engine exhaust | — | October 1, 1990 | Isosafrole | 120581 | October 1, 1989 |
| Di(2-ethylhexyl)phthalate | 117817 | January 1, 1988 | Lactofen | 77501634 | January 1, 1989 |
| 1,2-Diethylhydrazine | 1615801 | January 1, 1988 | Lasiocarpine | 303344 | April 1, 1988 |
| Diethyl sulfate | 64675 | January 1, 1988 | Lead acetate | 301042 | January 1, 1988 |
| Diethylstilbestrol | 56531 | February 27, 1987 | Lead and lead compounds | — | October 1, 1992 |
| Diglycidyl resorcinol ether (DGRE) | 101906 | July 1, 1989 | Lead phosphate | 7446277 | April 1, 1988 |
| Dihydro safrole | 94586 | January 1, 1988 | Lead subacetate | 1335326 | October 1, 1989 |
| 3,3'-Dimethoxybenzidine (ortho-Dianisidine) | 119904 | January 1, 1988 | Lindane and other hexachlorocyclohexane isomers | — | October 1, 1989 |
| 3,3'-Dimethoxybenzidine dihydrochloride (ortho-Dianisidine dihydrochloride) | 20325400 | October 1, 1990 | Mancozeb | 8018017 | January 1, 1990 |
| Dimethyl sulfate | 77781 | January 1, 1988 | Maneb | 12427382 | January 1, 1990 |
| 4-Dimethylaminoazobenzene | 60117 | January 1, 1988 | Me-A-alpha-C (2-Amino-3-methyl-9H-pyrido [2,3-b] indole) | 68006837 | January 1, 1990 |
| trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl]-1,3,4-oxadiazole | 55738540 | January 1, 1988 | Medroxyprogesterone acetate | 71589 | January 1, 1990 |
| 7,12-Dimethylbenz(a)anthracene | 57976 | January 1, 1990 | Melphalan | 148823 | February 27, 1987 |
| 3,3'-Dimethylbenzidine(ortho-Tolidine) | 119937 | January 1, 1988 | Merphalan | 531760 | April 1, 1988 |
| 3,3'-Dimethylbenzidine dihydrochloride | 612828 | April 1, 1992 | Mestranol | 72333 | April 1, 1988 |
| Dimethylcarbamoyl chloride | 79447 | January 1, 1988 | 8-Methoxy psoralen with ultraviolet A therapy | 298817 | February 27, 1987 |
| 1,1-Dimethylhydrazine (UMDH) | 57147 | October 1, 1989 | 5-Methoxy psoralen with ultraviolet A therapy | 484208 | October 1, 1988 |
| 1,2-Dimethylhydrazine | 540738 | January 1, 1988 | 2-Methylaziridine (Propyleneimine) | 75558 | January 1, 1988 |
| Dimethylvinylchloride | 513371 | July 1, 1989 | Methylazoxymethanol | 590965 | April 1, 1988 |
| 1,6-Dinitropyrene | 42397648 | October 1, 1990 | Methylazoxymethanol acetate | 592621 | April 1, 1988 |
| 1,8-Dinitropyrene | 42397659 | October 1, 1990 | 3-Methylcholanthrene | 56495 | January 1, 1990 |
| 2,4-Dinitrotoluene | 121142 | July 1, 1988 | 5-Methylchrysene | 3697243 | April 1, 1988 |
| 1,4-Dioxane | 123911 | January 1, 1988 | 4,4'-Methylene bis(2-chloroaniline) | 101144 | July 1, 1987 |
| Diphenylhydantoin (Phenytoin) | 57410 | January 1, 1988 | 4,4'-Methylene bis(N,N-dimethyl)benzenamine | 101611 | October 1, 1989 |
| Diphenylhydantoin (Phenytoin), sodium salt | 630933 | January 1, 1988 | 4,4'-Methylene bis(2-methylaniline) | 838880 | April 1, 1988 |
| Direct Black 38 (technical grade) | 1937377 | January 1, 1988 | 4,4'-Methylenedianiline | 101779 | January 1, 1988 |
| Direct Blue 6 (technical grade) | 2602462 | January 1, 1988 | 4,4'-Methylenedianiline dihydrochloride | 13552448 | January 1, 1988 |
| Direct Brown 95 (technical grade) | 16071866 | October 1, 1988 | Methylhydrazine and its salts | — | July 1, 1992 |
| Disperse Blue 1 | 2475458 | October 1, 1990 | Methyl iodide | 74884 | April 1, 1988 |
| Epichlorohydrin | 106898 | October 1, 1987 | Methyl methanesulfonate | 66273 | April 1, 1988 |
| Erionite | 12510428 | October 1, 1988 | 2-Methyl-1-nitroanthraquinone (of uncertain purity) | 129157 | April 1, 1988 |
| Estradiol 17β | 50282 | January 1, 1988 | N-Methyl-N'-nitro-N-nitrosoguanidine | 70257 | April 1, 1988 |
| Estrone | 53167 | January 1, 1988 | N-Methylolacrylamide | 924425 | July 1, 1990 |
| | CAS | | Methylthiouracil | 56042 | October 1, 1989 |
| Chemical | Number | Date | Metiram | 9006422 | January 1, 1990 |
| Ethinylestradiol | 57636 | January 1, 1988 | Metronidazole | 443481 | January 1, 1988 |
| Ethyl acrylate | 140885 | July 1, 1989 | Michler's ketone | 90948 | January 1, 1988 |
| Ethyl methanesulfonate | 62500 | January 1, 1988 | Mirex | 2385855 | January 1, 1988 |
| Ethyl-4,4'-dichlorobenzilate | 510156 | January 1, 1990 | Mitomycin C | 50077 | April 1, 1988 |
| Ethylene dibromide | 106934 | July 1, 1987 | Monocrotaline | 315220 | April 1, 1988 |
| Ethylene dichloride (1,2-Dichloroethane) | 107062 | October 1, 1987 | 5-(Morpholinomethyl)-3-[(5-nitro-furfurylidene)-amino]-2-oxalolidinone | 139913 | April 1, 1988 |
| Ethylene oxide | 75218 | July 1, 1987 | Mustard Gas | 505602 | February 27, 1987 |
| Ethylene thiourea | 96457 | January 1, 1988 | Nafenopin | 3771195 | April 1, 1988 |
| Ethyleneimine | 151564 | January 1, 1988 | 1-Naphthylamine | 134327 | October 1, 1989 |
| Folpet | 133073 | January 1, 1989 | 2-Naphthylamine | 91598 | February 27, 1987 |
| Formaldehyde (gas) | 50000 | January 1, 1988 | Nickel and certain nickel compounds | — | October 1, 1989 |
| 2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole | 3570750 | January 1, 1988 | Nickel carbonyl | 13463393 | October 1, 1987 |
| Furazolidone | 67458 | January 1, 1990 | Nickel refinery dust from the pyrometallurgical process | — | October 1, 1987 |
| Furmecycloz | 60568050 | January 1, 1990 | Nickel subsulfide | 12035722 | October 1, 1987 |
| Gasoline engine exhaust (condensates/extracts) | — | October 1, 1990 | | | |
| Glasswool fibers (airborne particles of respirable size) | — | July 1, 1990 | | | |
| Glu-P-1 (2-Amino-6-methylpiperido [1,2-a:3',2'-d] imidazole) | 67730114 | January 1, 1990 | | | |
| Glu-P-2 (2-Aminodipyrido [1,2-a:3',2'-d] imidazole) | 67730103 | January 1, 1990 | | | |

| <i>Chemical</i> | <i>CAS Number</i> | <i>Date</i> | <i>Chemical</i> | <i>CAS Number</i> | <i>Date</i> |
|--|-------------------|-----------------|--|-------------------|-------------------|
| Nitridazole | 61574 | April 1, 1988 | Propylthiouracil | 51525 | January 1, 1988 |
| Nitrioltriacetic acid | 139139 | January 1, 1988 | Radionuclides | — | July 1, 1989 |
| Nitrioltriacetic acid, trisodium salt monohydrate | 18662538 | April 1, 1989 | Reserpine | 50555 | October 1, 1989 |
| 5-Nitroacenaphthene | 602879 | April 1, 1988 | Residual (heavy) fuel oils | — | October 1, 1990 |
| 5-Nitro-o-anisidine | 99592 | October 1, 1989 | Saccharin | 81072 | October 1, 1989 |
| o-Nitroanisole | 91236 | October 1, 1992 | Saccharin, sodium | 128449 | January 1, 1988 |
| o-Nitrobiphenyl | 91236 | October 1, 1992 | Safrole | 94597 | January 1, 1988 |
| 4-Nitrobiphenyl | 92933 | April 1, 1988 | Selenium sulfide | 7446346 | October 1, 1989 |
| 6-Nitrochrysene | 7496028 | October 1, 1990 | Shale-oils | 68308349 | April 1, 1990 |
| Nitrofen (technical grade) | 1836755 | January 1, 1988 | Silica, crystalline (airborne particles of respirable size) | — | October 1, 1988 |
| 2-Nitrofluorene | 607578 | October 1, 1990 | Soots, tars, and mineral oils (untreated and mildly treated oils and used engine oils) | — | February 27, 1987 |
| Nitrofurazone | 59870 | January 1, 1990 | Sterigmatocystin | 10048132 | April 1, 1988 |
| 1-(5-Nitrofurfurylidene)-amino]-2-imidazolidinone | 555840 | April 1, 1988 | Streptozotocin | 18883664 | January 1, 1988 |
| N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide | 531828 | April 1, 1988 | Styrene oxide | 96093 | October 1, 1988 |
| Nitrogen mustard (Mechlorethamine) | 51752 | January 1, 1988 | Sulfallate | 95067 | January 1, 1988 |
| Nitrogen mustard hydrochloride (Mechlorethamine hydrochloride) | 55867 | April 1, 1988 | Talc containing asbestiform fibers | — | April 1, 1990 |
| Nitrogen mustard N-oxide | 126852 | April 1, 1988 | Testosterone and its esters | 58220 | April 1, 1988 |
| Nitrogen mustard N-oxide hydrochloride | 302705 | April 1, 1988 | 2,3,7,8-Tetrachlorodibenzo-para-dioxin (TCDD) | 1746016 | January 1, 1988 |
| 2-Nitropropane | 79469 | January 1, 1988 | 1,1,2,2-Tetrachloroethane | 79345 | July 1, 1990 |
| 1-Nitropyrene | 5522430 | October 1, 1990 | Tetrachloroethylene (Perchloroethylene) | 127184 | April 1, 1988 |
| 4-Nitropyrene | 57835924 | October 1, 1990 | p- α,α,α -Tetrachlorotoluene | 5216251 | January 1, 1990 |
| N-Nitrosodi-n-butylamine | 924163 | October 1, 1987 | Tetranitromethane | 509148 | July 1, 1990 |
| N-Nitrosodiethanolamine | 1116547 | January 1, 1988 | Thioacetamide | 62555 | January 1, 1988 |
| N-Nitrosodimethylamine | 55185 | October 1, 1987 | 4,4'-Thiodianiline | 139651 | April 1, 1988 |
| N-Nitrosodiphenylamine | 156105 | January 1, 1988 | Thiourea | 62566 | January 1, 1988 |
| N-Nitrosodiphenylamine | 86306 | April 1, 1988 | Thorium dioxide | 1314201 | February 27, 1987 |
| N-Nitrosodi-n-propylamine | 621647 | January 1, 1988 | Tobacco, oral use of smokeless products | — | April 1, 1988 |
| N-Nitroso-N-ethylurea | 759739 | October 1, 1987 | Tobacco smoke | — | April 1, 1988 |
| 3-(N-Nitrosomethylamino)propionitrile | 60153493 | April 1, 1990 | Toluene diisocyanate | 26471625 | October 1, 1989 |
| 4-(N-Nitrosomethylamino)-1-(3-pyridyl) 1-butanone | 64091914 | April 1, 1990 | ortho-Toluidine | 95534 | January 1, 1988 |
| N-Nitrosomethylethylamine | 10595956 | October 1, 1989 | ortho-Toluidine hydrochloride | 636215 | January 1, 1988 |
| N-Nitroso-N-methylurea | 684935 | October 1, 1987 | para-Toluidine | 106490 | January 1, 1990 |
| N-Nitroso-N-methylurethane | 615532 | April 1, 1988 | Toxaphene (Polychlorinated camphenes) | 8001352 | January 1, 1988 |
| N-Nitrosomethylvinylamine | 4549400 | January 1, 1988 | Treosulfan | 299752 | February 27, 1987 |
| N-Nitrosomorpholine | 59892 | January 1, 1988 | Trichlormethine (Trimustine hydrochloride) | 817094 | January 1, 1992 |
| N-Nitrososarcosine | 13256229 | January 1, 1988 | 2,4,6-Trichlorophenol | 88062 | January 1, 1988 |
| N-Nitrosopiperidine | 100754 | January 1, 1988 | 1,2,3-Trichloropropane | 96184 | October 1, 1992 |
| N-Nitrosopyrrolidine | 930552 | October 1, 1987 | Triphenyltin hydroxide | 76879 | July 1, 1992 |
| N-Nitrososarcosine | 13256229 | January 1, 1988 | Trichloroethylene | 79016 | April 1, 1988 |
| Norethisterone (Norethindrone) | 68224 | October 1, 1989 | Tris (aziridiny)-para-benzoquinone (Triaziquone) | 68768 | October 1, 1989 |
| Ochratoxin A | 303479 | July 1, 1990 | Tris(1-aziridiny)phosphine sulfide (Thiotepa) | 52244 | January 1, 1988 |
| Oil Orange SS | 2646175 | April 1, 1988 | Tris(2-chloroethyl) phosphate | 115968 | April 1, 1992 |
| Oral contraceptives, combined | — | October 1, 1989 | Tris(2,3-dibromopropyl)phosphate | 126727 | January 1, 1988 |
| Oral contraceptives, sequential | — | October 1, 1989 | Trp-P-1 (Tryptophan-P-1) | 62450060 | April 1, 1988 |
| Oxadiazole | 19666309 | July 1, 1991 | Trp-P-2 (Tryptophan-P-2) | 62450071 | April 1, 1988 |
| Oxymetholone | 434071 | January 1, 1988 | Trypan blue (commercial grade) | 72571 | October 1, 1989 |
| Panfuran S | — | January 1, 1988 | Unleaded gasoline (wholly vaporized) | — | April 1, 1988 |
| Pentachlorophenol | 87865 | January 1, 1990 | Uracil mustard | 66751 | April 1, 1988 |
| Phenacetin | 62442 | October 1, 1989 | Urethane (Ethyl carbamate) | 51796 | January 1, 1988 |
| Phenazopyridine | 94780 | January 1, 1988 | Vinyl bromide | 593602 | October 1, 1988 |
| Phenazopyridine hydrochloride | 136403 | January 1, 1988 | Vinyl chloride | 75014 | February 27, 1987 |
| Phenesterin | 3546109 | July 1, 1989 | 4-Vinyl-1-cyclohexene diepoxide (Vinyl cyclohexene dioxide) | 106876 | July 1, 1990 |
| Phenobarbital | 50066 | January 1, 1990 | Vinyl trichloride (1,1,2-Trichloroethane) | 79005 | October 1, 1990 |
| Phenoxybenzamine | 59961 | April 1, 1988 | 2,6-Xylidine (2,6-Dimethylaniline) | 87627 | January 1, 1991 |
| Phenoxybenzamine hydrochloride | 63923 | April 1, 1988 | Zineb | 12122677 | January 1, 1990 |
| Phenyl glycidyl ether | 122601 | October 1, 1990 | (c) Chemicals known to the state to cause reproductive toxicity. | | |
| Phenylhydrazine and its salts | — | July 1, 1992 | | | |
| o-Phenylphenate, sodium | 132274 | January 1, 1990 | | | |
| Polybrominated biphenyls | — | January 1, 1988 | | | |
| Polychlorinated biphenyls | — | October 1, 1989 | | | |
| Polychlorinated biphenyls (containing 60 or more percent chlorine by molecular weight) | — | January 1, 1988 | | | |
| Polychlorinated dibenzo-p-dioxins | — | October 1, 1992 | | | |
| Polychlorinated dibenzofurans | — | October 1, 1992 | | | |
| Poligeenan | 53973981 | January 1, 1988 | | | |
| Ponceau MX | 3761533 | April 1, 1988 | | | |
| Ponceau 3R | 3564098 | April 1, 1988 | | | |
| Potassium bromate | 7758012 | January 1, 1990 | | | |
| Procarbazine | 671169 | January 1, 1988 | | | |
| Procarbazine hydrochloride | 366701 | January 1, 1988 | | | |
| Progesterone | 57830 | January 1, 1988 | | | |
| 1,3-Propane sultone | 1120714 | January 1, 1988 | | | |
| beta-Propiolactone | 57578 | January 1, 1988 | | | |
| Propylene oxide | 75569 | October 1, 1988 | | | |

(c) Chemicals known to the state to cause reproductive toxicity.

| <i>Chemical</i> | <i>CAS Number</i> | <i>Date</i> |
|----------------------------|-------------------|-----------------|
| (1) Developmental toxicity | | |
| Acetohydroxamic acid | 546883 | April 1, 1990 |
| Actinomycin D | 50760 | October 1, 1992 |
| All-trans retinoic acid | 302794 | January 1, 1989 |
| Alprazolam | 28981977 | July 1, 1990 |
| Amikacin sulfate | 39831555 | July 1, 1990 |
| Aminoglutethimide | 125848 | July 1, 1990 |
| Aminoglycosides | — | October 1, 1992 |
| Aminopterin | 54626 | July 1, 1987 |

| Chemical | CAS Number | Date | Chemical | CAS Number | Date |
|---|------------|-------------------|--|-------------|-----------------|
| Angiotensin converting enzyme (ACE) inhibitors | — | October 1, 1992 | Lorazepam | 846491 | July 1, 1990 |
| Anisindione | 117373 | October 1, 1992 | Lovastatin | 75330755 | October 1, 1992 |
| Aspirin (NOTE: It is especially important not to use aspirin during the last three months of pregnancy, unless specifically directed to do so by a physician because it may cause problems in the unborn child or complications during delivery.) | 50782 | July 1, 1990 | Mexdroxyprogesterone acetate | 71589 | April 1, 1990 |
| Barbiturates | — | October 1, 1992 | Megestrol acetate | 595335 | January 1, 1991 |
| Benomyl | 17804352 | July 1, 1991 | Melphalan | 148823 | July 1, 1990 |
| Benzphetamine hydrochloride | 5411223 | April 1, 1990 | Menotropins | 9002680 | April 1, 1990 |
| Benzodiazepines | — | October 1, 1992 | Meprobamate | 57534 | January 1, 1992 |
| Bischlorethyl nitrosourea (BCNU) (Carmustine) | 154938 | July 1, 1990 | Mercaptopurine | 6112761 | July 1, 1990 |
| Bromoxynil | 1689845 | October 1, 1990 | Mercury and mercury compounds | — | July 1, 1990 |
| Butabarbital sodium | 143817 | October 1, 1992 | Methacycline hydrochloride | 3963959 | January 1, 1991 |
| 1,4-Butanediol dimethylsulfonate (Busulfan) | 55981 | January 1, 1989 | Methimazole | 60560 | July 1, 1990 |
| Carbon disulfide | 75150 | July 1, 1989 | Methotrexate | 59052 | January 1, 1989 |
| Carbon monoxide | 630080 | July 1, 1989 | Methotrexate sodium | 15475566 | April 1, 1990 |
| Carboplatin | 41575944 | July 1, 1990 | Methyl bromide | 74839 | January 1, 1993 |
| Chenodiol | 474259 | April 1, 1990 | Methyl mercury | — | July 1, 1987 |
| Chlorambucil | 305033 | January 1, 1989 | Methyltestosterone | 58184 | April 1, 1990 |
| Chlorcyclizine hydrochloride | 1620219 | July 1, 1987 | Midazolam hydrochloride | 59467968 | July 1, 1990 |
| Chlordecone (Kepone) | 143500 | January 1, 1989 | Minocycline hydrochloride (internal use) | 13614987 | January 1, 1992 |
| Chlordiazepoxide | 58253 | January 1, 1992 | Misoprostol | 62015398 | April 1, 1990 |
| Chlordiazepoxide hydrochloride | 438415 | January 1, 1992 | Mitoxantrone hydrochloride | 70476823 | July 1, 1990 |
| 1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU) (Lomustine) | 13010474 | July 1, 1990 | Nafarelin acetate | 86220420 | April 1, 1990 |
| Clomiphene citrate | 50419 | April 1, 1990 | Neomycin sulfate (internal use) | 1405103 | October 1, 1992 |
| Clorazepate dipotassium | 57109907 | October 1, 1992 | Netilmicin sulfate | 56391572 | July 1, 1990 |
| Cocaine | 50362 | July 1, 1989 | Nicotine | 54115 | April 1, 1990 |
| Colchicine | 64868 | October 1, 1992 | Nitrogen mustard (Methchlorothamine) | 51752 | January 1, 1989 |
| Conjugated estrogens | — | April 1, 1990 | Nitrogen mustard hydrochloride (Methchlorothamine hydrochloride) | 55867 | July 1, 1990 |
| Cyanazine | 21725462 | April 1, 1990 | Norethisterone (Norethindrone) | 68224 | April 1, 1990 |
| Cycloheximide | 66819 | January 1, 1989 | Norethisterone acetate (Norethindrone acetate) | 51989 | October 1, 1991 |
| Cyclophosphamide (anhydrous) | 50180 | January 1, 1989 | Norethisterone (Norethindrone)/Ethinyl estradiol | 68224/57636 | April 1, 1990 |
| Cyclophosphamide (hydrated) | 6055192 | January 1, 1989 | Norethisterone (Norethindrone)/Mestranol | 68224/72333 | April 1, 1990 |
| Cyhexatin | 13121705 | January 1, 1989 | Norgestrel | 6533002 | April 1, 1991 |
| Cytarabine | 147944 | January 1, 1989 | Oxazepam | 604751 | October 1, 1992 |
| Danazol | 17230885 | April 1, 1990 | Oxytetracycline (internal use) | 79572 | January 1, 1991 |
| Daunorubicin hydrochloride | 23541506 | July 1, 1990 | Oxytetracycline hydrochloride (internal use) | 2058460 | October 1, 1991 |
| Demeclocycline hydrochloride (internal use) | 64733 | January 1, 1992 | Paramethadione | 115673 | July 1, 1990 |
| Diazepam | 439145 | January 1, 1992 | Penicillamine | 52675 | January 1, 1991 |
| Dicumarol | 66762 | October 1, 1992 | Pentobarbital sodium | 57330 | July 1, 1990 |
| Diethylstilbestrol (DES) | 56531 | July 1, 1987 | Phenacemide | 63989 | July 1, 1990 |
| Dinocap | 39300453 | April 1, 1990 | Phenprocoumon | 435972 | October 1, 1992 |
| Dinoseb | 88857 | January 1, 1989 | Pipobroman | 54911 | July 1, 1990 |
| Diphenylhydantoin (Phenytoin) | 57410 | July 1, 1987 | Plicamycin | 18378897 | April 1, 1990 |
| Doxycycline (internal use) | 564250 | July 1, 1990 | Polychlorinated biphenyls | — | January 1, 1991 |
| Doxycycline calcium (internal use) | 94088854 | January 1, 1992 | Procarbazine hydrochloride | 366701 | July 1, 1990 |
| Doxycycline hyclate (internal use) | 24390145 | October 1, 1991 | Propylthiouracil | 51525 | July 1, 1990 |
| Doxycycline monohydrate (internal use) | 17086281 | October 1, 1991 | Retinol/retinyl esters, when in daily dosages in excess of 10,000 IU, or 3,000 retinol equivalents. (NOTE: Retinol/retinyl esters are required and essential for maintenance of normal reproductive function. The recommended daily level during pregnancy is 8,000 IU.) | — | July 1, 1989 |
| Ergotamine tartrate | 379793 | April 1, 1990 | Ribavirin | 36791045 | April 1, 1990 |
| Ethyl alcohol in alcoholic beverages | — | October 1, 1987 | Secobarbital sodium | 309433 | October 1, 1992 |
| Ethylene glycol monoethyl ether | 110805 | January 1, 1989 | Streptomycin sulfate | 3810740 | January 1, 1991 |
| Ethylene glycol monomethyl ether | 109864 | January 1, 1989 | Tamoxifen citrate | 54965241 | July 1, 1990 |
| Ethylene glycol monoethyl ether acetate | 111159 | January 1, 1993 | Temazepam | 846504 | April 1, 1990 |
| Ethylene glycol monomethyl ether acetate | 110496 | January 1, 1993 | Testosterone cypionate | 58208 | October 1, 1991 |
| Ethylene thiourea | 96457 | January 1, 1993 | Testosterone enanthate | 315377 | April 1, 1990 |
| Etoposide | 33419420 | July 1, 1990 | 2,3,7,8-Tetrachlorodibenzo-para-dioxin (TCDD) | 1746016 | April 1, 1991 |
| Etretinate | 54350480 | July 1, 1987 | Tetracycline | 60548 | October 1, 1991 |
| Fluorouracil | 51218 | January 1, 1989 | Tetracyclines (internal use) | — | October 1, 1992 |
| Fluoxymesterone | 76437 | April 1, 1990 | Tetracycline hydrochloride (internal use) | 64755 | January 1, 1991 |
| Flurazepam hydrochloride | 1172185 | October 1, 1992 | Thalidomide | 50351 | July 1, 1987 |
| Flutamide | 13311847 | July 1, 1990 | Thioguanine | 154427 | July 1, 1990 |
| Halazepam | 23092173 | July 1, 1990 | Tobacco smoke (primary) | — | April 1, 1988 |
| Hexachlorobenzene | 118741 | January 1, 1989 | Tobramycin sulfate | 49842071 | July 1, 1990 |
| Ifosfamide | 3778732 | July 1, 1990 | Toluene | 108883 | January 1, 1991 |
| Iodine-131 | 24267569 | January 1, 1989 | Triazolam | 28911015 | April 1, 1990 |
| Isotretinoin | 4759482 | July 1, 1987 | Trilostane | 13647353 | April 1, 1990 |
| Lead | — | February 27, 1987 | Trimethadione | 127480 | January 1, 1991 |
| Lithium carbonate | 554132 | January 1, 1991 | | | |
| Lithium citrate | 919164 | January 1, 1991 | | | |

| Chemical | CAS Number | Date |
|---|------------|-------------------|
| Uracil mustard | 66751 | January 1, 1992 |
| Urofollitropin | 26995915 | April 1, 1990 |
| Valproate (Valproic acid) | 99661 | July 1, 1987 |
| Vinblastine sulfate | 143679 | July 1, 1990 |
| Vincristine sulfate | 2068782 | July 1, 1990 |
| Warfarin | 81812 | July 1, 1987 |
| (2) Female reproductive toxicity | | |
| Aminopterin | 54626 | July 1, 1987 |
| Anabolic steroids | — | April 1, 1990 |
| Aspirin (NOTE: It is especially important not to use aspirin during the last three months of pregnancy, unless specifically directed to do so by a physician because it may cause problems in the unborn child or complications during delivery.) | | |
| Carbon disulfide | 50782 | July 1, 1990 |
| Cocaine | 75150 | July 1, 1989 |
| Cyclophosphamide (anhydrous) | 50362 | July 1, 1989 |
| Cyclophosphamide (hydrated) | 50180 | January 1, 1989 |
| Ethylene oxide | 6055192 | January 1, 1989 |
| Lead | 75218 | February 27, 1987 |
| Tobacco smoke (primary) | — | February 27, 1987 |
| Uracil mustard | — | April 1, 1988 |
| | 66751 | January 1, 1992 |
| (3) Male reproductive toxicity | | |
| Anabolic steroids | — | April 1, 1990 |
| Benomyl | 17804352 | July 1, 1991 |
| Carbon disulfide | 75150 | July 1, 1989 |
| Colchicine | 64868 | October 1, 1992 |
| Cyclophosphamide (anhydrous) | 50180 | January 1, 1989 |
| Cyclophosphamide (hydrated) | 6055192 | January 1, 1989 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 96128 | February 27, 1987 |
| m-Dinitrobenzene | 99650 | July 1, 1990 |
| o-Dinitrobenzene | 528290 | July 1, 1990 |
| p-Dinitrobenzene | 100254 | July 1, 1990 |
| Dinoseb | 88857 | January 1, 1989 |
| Ethylene glycol monoethyl ether | 110805 | January 1, 1989 |
| Ethylene glycol monomethyl ether | 109864 | January 1, 1989 |
| Ethylene glycol monoethyl ether acetate | 111159 | January 1, 1993 |
| Ethylene glycol monomethyl ether acetate | 110496 | January 1, 1993 |
| Lead | — | February 27, 1987 |
| Nitrofurantoin | 67209 | April 1, 1991 |
| Tobacco smoke (primary) | — | April 1, 1988 |
| Uracil mustard | 66751 | January 1, 1992 |

Date: January 1, 1993 - *NEW CHEMICALS ADDED*

HISTORY

1. New chapter 3 (section 12000) submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 88, No. 4).
2. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 88, No. 17).
3. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 88, No. 30).
4. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 88, No. 45).
5. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 89, No. 4).
6. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 89, No. 16).
7. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 89, No. 29).
8. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 89, No. 41).
9. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 90, No. 2).
10. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 90, No. 28).
11. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 90, No. 35).

12. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 90, No. 45).
13. Editorial correction of printer error inadvertently omitting several chemicals (Register 90, No. 45).
14. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 91, No. 15).
15. Editorial correction of errors in chemical name, CAS number, and spelling (Register 91, No. 15).
16. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 91, No. 17).
17. Editorial correction of printing errors (Register 91, No. 43).
18. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 92, No. 6).
19. Editorial correction of printing errors (Register 92, No. 29).
20. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 92, No. 43).
21. Editorial correction instituting inadvertently omitted amendment. Submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 93, No. 20).

Guideline and Safe Use Determination Procedures

Preamble

(a) It is the practice of the Health and Welfare Agency, as lead agency for implementing the Safe Drinking Water and Toxic Enforcement Act of 1986 (Health and Safety Code Section 25249.5 et seq.) to answer inquiries of individuals and organizations, whenever appropriate, as to the application of the Safe Drinking Water and Toxic Enforcement Act of 1986 to their activities. One of Agency's functions is to issue public rulings on the requirements of the Act.

(b) It is the practice of the lead agency to respond to inquiries concerning the Act as expeditiously as possible. Requests for consideration of an interpretive guideline, safe use determination or information letter ahead of its regular order or by a specified date will be considered as circumstances warrant. However, persons or organizations making such requests should consider the time necessary to comply with public notice and hearing requirements specified in these procedures and any additional delay that may result from compliance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.), if necessary prior to issuing a guideline or determination. Therefore, no assurance can be given that any request will be processed by the time requested.

§ 22-12102. Definitions.

The following definitions shall apply to the regulations contained in this article:

(a) The "Act" refers to the Safe Drinking Water and Toxic Enforcement Act of 1986 (Health and Safety Code Section 25249.5 et seq.) which was originally adopted by California voters as Proposition 65 on November 4, 1986.

(b) An "interpretive guideline" is a draft regulatory proposal which has been published for the information, comment, and guidance of California businesses, law enforcement agencies and others concerned.

(c) A "safe use determination" is a written statement issued by the lead agency to a person affected by the Act or an authorized representative which interprets and applies the Act to a specific set of facts.

(d) An "information letter" is a statement issued by the lead agency which does no more than call attention to an established interpretation of the Act or a related principle, without applying it to a specific set of facts.

(e) The "lead agency" refers to the Health and Welfare Agency as designated by the Governor in Executive Order D-61-87, dated January 6, 1987.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.12, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12103. Interpretive Guideline Request.

(a) Any interested person may request the lead agency to issue an interpretive guideline concerning any subject related to the Act. A request for interpretive guideline shall contain:

(1) A clear and concise description of the substance or nature of the guideline requested; and

(2) A description of the reason for the request.

(b) Upon receipt of a request for interpretive guideline, the lead agency shall notify the requester in writing of the receipt and provide an estimate of the time required to determine whether an interpretive guideline will be proposed or adopted. Except where the proposed guideline will be considered by the panel of qualified experts referred to in Health and Safety Code Section 25249.8, a decision on the request will normally be made within 60 days. Where the proposed guideline is considered by the panel of qualified experts, a decision will normally be made not later than 30 days after the guideline is considered by the panel.

(c) When appropriate, in the discretion of the lead agency, a request for interpretive guideline may be treated as a request for a safe use determination under these procedures, or the lead agency may issue an information letter to the requester.

(d) All interpretive guidelines issued by the lead agency will be numbered and published either by the lead agency or in the California Regulatory Notice Register.

(e) Within a reasonable time after an interpretive guideline is published pursuant to paragraph (d), the lead agency may rescind the interpretive guideline, propose that it be formally adopted as originally published, or modify it and either republish it as an interpretive guideline for further comment or propose formal regulatory adoption of the modified interpretive guideline. Nothing in this section shall preclude the lead agency from making proposals for formal regulatory adoption which have not been published as interpretive guidelines.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.12, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12104. Safe Use Determinations.

(a) As a part of its overall responsibility to provide guidance to persons or organizations that are or may be affected by the Act, the lead agency will consider the applicability of the Act or the exemptions specified in the Act to business activities or prospective business activities. A safe use determination issued by the lead agency represents the state's best judgment concerning the application of the Act to the particular facts presented in the request. A safe use determination is advisory only. It does not affect the authority of the Attorney General, district attorneys, certain city attorneys and any other person in the public interest to prosecute violations of the Act pursuant to Section 25249.7 nor does it affect the responsibility of courts to interpret the Act and apply the provisions of the Act to particular facts.

(b) Safe use determinations will not be issued under the following circumstances:

(1) Where the subject matter of a request for safe use determination is at issue in a civil or criminal case pending in any court.

(2) Where the individual or organization requesting the safe use determination is not directly required to enforce or comply with the provisions of the Act; provided, however, where two or more businesses which are members of the same trade association share a business practice which may be the subject matter of a request for a safe use determination, the request may be made by the trade association on behalf of such members.

(3) Where the request for determination concerns compliance with laws other than the Act, or with regulations, permits, requirements or orders of any federal, state or local agency. For example, questions concerning whether chemical discharges comply with the Water Code, state regulations and waste discharge requirements should be addressed to the appropriate Regional Water Quality Control Board.

(4) Where the request for determination does not involve a current or planned activity of the requester. Safe use determination will not be issued concerning hypothetical situations or on each of several alternative plans in a proposed activity.

(5) Where, in the discretion of the lead agency, issuance of a safe use determination will not further the public interest, or is otherwise inappropriate under the circumstances presented in or related to a particular request for safe use determination. For example, where the subject matter of the request is at issue in an administrative proceeding before a government agency or does not concern a chemical listed pursuant to Health and Safety Code Section 25249.8.

(c) A request for a safe use determination shall be submitted in writing to the lead agency and shall contain the following:

(1) A complete statement of all relevant facts related to the activity for which the safe use determination is requested. Such facts include the names and addresses of all interested parties, a description of the business reason for the activity and a carefully detailed description of the activity.

(2) True copies of any contracts, agreements, instruments, reports, analyses or other documents directly related to the activity for which the safe use determination is requested and to the applicability of the Act to the activity.

(3) A clear statement of the issue or issues on which a safe use determination is sought.

(4) If the determination request includes references to a specific chemical, the request should include the chemical name and the Chemical Abstract Services (CAS) Registry Number, if applicable.

(5) If the activity for which the safe use determination is sought is only one step of a larger integrated process, the description of the activity shall include a description of the entire process.

(6) If the requester is contending for a particular result in the determination, the request shall include an explanation of the grounds for the contention together with an identification of any relevant authorities which support such view.

(7) If the request for safe use determination contains any information which the requester claims should not be available for public inspection under the Public Records Act (Government Code Section 6250 et seq.), the request shall specifically identify the information and the basis for the claim.

(A) If the request for determination contains information which the requester claims should not be available for public inspection, it shall be accompanied by a copy of the request and any supporting documents on which shall be indicated, by the use of brackets, the material which the requester contends should be deleted.

(B) All requests for safe use determination shall be open for public inspection except as otherwise specifically identified by the requester under this section. If the lead agency determines that information which the requester claims should not be available for public inspection must be released to the public under the Public Records Act, it will promptly notify the requester by telephone or in writing of this determination and provide a reasonable opportunity for the requester to submit additional justification for the claim or to contest the determination in an appropriate proceeding.

(8) If the requester claims that fees or other charges for the safe use determination should be waived, the request shall include an explanation of the basis for the claim.

(9) A statement concerning whether to the best of the requester's knowledge the subject matter of the request is:

(A) An issue in a civil or criminal case pending in any court.

(B) An issue in any administrative proceeding pending before a federal, state or local agency.

(C) The subject of a notice of violation to the Attorney General, a district attorney or a city attorney as described in Health and Safety Code Section 25249.7(d).

(10) The signature of the person making the request for determination. Where the request is made by an authorized representative for an individual or organization, the request shall indicate the source of the authority to make the request.

(d) Each request for a safe use determination shall be accompanied by a nonrefundable processing fee of \$500. In addition, the requester shall

be assessed a charge in the amount of any costs to the lead agency or other state agency which are necessarily incurred in considering the request and which exceed \$500. Such additional assessment shall be made only after the requester has been provided an estimate of the amount, has elected to proceed with the request for safe use determination and has agreed to pay the additional assessment. All or part of the processing fee or other charges assessed pursuant to this section may be waived if the lead agency determines that payment of the fee would present a hardship to the requester or that it is otherwise in the public interest to proceed with the request without payment of such fees or charges.

(e) Any request for safe use determination that does not comply with these procedures will be acknowledged in writing within 30 days of receipt by the lead agency, with an indication of the requirements that have not been met. If the request lacks essential information, the requester will be advised that the request will be closed if the additional information is not received within 30 days. If the information is received after the request is closed, the request will be reopened and treated as a new request as of the date of receipt.

(f) A request for safe use determination that appears to comply with these procedures will be acknowledged in writing within 30 days of receipt by the lead agency and a public notice of the receipt of the request will be published in the California Notice Register and sent to interested persons. The public notice will include the text or a summary of the request as appropriate. It will advise interested parties that they can comment on the request in writing or in person at a public hearing which shall be held on a date not less than 30 days after the notice is published.

(g) At any time while a request for a safe use determination is pending, the lead agency or any other state agency that is considering the request may ask for any additional information or explanation from the requester as necessary to complete a consideration of the request.

(h) After considering the request, any comments of the public received

in writing or at the public hearing, and the comments of any other state agencies that have considered the request, the lead agency shall in response to the request:

(1) Issue a safe use determination.

(2) Decline to issue a safe use determination because the facts are insufficient to clearly establish the basis for the requested determination or for any other reason.

(3) Issue an information letter to the requester.

(4) Issue an interpretive guideline.

(i) The lead agency's response to the request shall be sent to the requester and the text or a summary of the response shall be published in the California Notice Register and sent to interested persons, including any person who submitted comments on the request.

(j) Safe use determinations issued by the lead agency are limited to the particular facts on which they are based and they reflect the lead agency's view of the best interpretation of the Act and the state of scientific knowledge at the time they are issued. Whenever the issuance of a safe use determination requires the performance by a state agency of a risk assessment of the carcinogenicity or reproductive toxicity of a chemical, such assessment shall be performed pursuant to the methodologies adopted by the lead agency. A safe use determination found to be in error or not in accord with the best interpretation of the Act or the current state of scientific knowledge may be modified or revoked. Modification or revocation of a safe use determination may be effected by a notice to the individual or organization that requested the ruling along with notice in the California Notice Register or by the issuance of an interpretive guideline.

(k) A safe use determination shall be issued to a particular individual or organization with respect to the application of particular provisions of the Act to particular facts. Determinations are not intended to affect other individuals or organizations, or other activities of the requester.

[The next page is 717.]

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.10 and 25249.12, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12201. Definitions.

(a) In The Course of doing Business.

For purposes of Health and Safety Code Sections 25249.5 and 25249.6, "in the course of doing business" means any act or omission, whether or not for profit, except:

(1) as excluded by subdivision (b) of Section 25249.11 of the Health and Safety Code; or

(2) when caused by acts of war or grave and irresistible natural disasters such that no reasonable amount of resistance or advance preparation would be sufficient to avoid the discharge, release or exposure.

(b) In The Course of Doing Business, Acts of Employees.

"In the course of doing business" includes any act or omission of any employee which furthers the purpose or operation of the business, or which is expressly or implicitly authorized, except for the personal use, consumption or production of listed chemicals by an employee on the business premises or while performing activities for the business, unless the employer knows or should know of such use, consumption or production and knows or should know that such use, consumption or production will expose other individuals within the meaning of Health and Safety Code Section 25249.6 to a listed chemical.

(c) Employee.

The term "employee" shall have the same meaning as it does in Unemployment Insurance Code Section 621 and in Labor Code Section 3351. Generally, and without limiting the applicability of the definitions in these two statutes, this means that an employee is a person who performs services for remuneration under any appointment or contract of hire or apprenticeship, express or implied, oral or written, whether lawfully or unlawfully employed.

In computing whether a person employs ten or fewer employees in his business, all full-time and part-time employees on the date on which the discharge, release or exposure occurs must be counted. Thus, the prohibitions on discharge or release and exposures to certain chemicals will apply to any person who has ten or more full-time or part-time employees on the date in question.

(d) Knowingly.

"Knowingly" refers only to knowledge of the fact that a discharge of, release of, or exposure to a chemical listed pursuant to Health and Safety Code Section 25249.8 (a) is occurring. No knowledge that the discharge, release or exposure is unlawful is required. However, a person in the course of doing business who, through misfortune or accident and without evil design, intention or negligence, commits an act or omits to do something which results in a discharge, release or exposure has not violated Health and Safety Code Sections 25249.5 or 25249.6

(e) Discharge or Release to Water or Land.

(1) The term "water" includes both surface and ground water.

(2) "Probably will pass into any source of drinking water" refers to a discharge or release which more likely than not will pass into any source of drinking water.

(3) "Discharge or release into water or onto or into land" includes a discharge or release to air that is directly and immediately deposited into water or onto land.

(4) Except as provided in paragraphs (5) and (6), "discharge or release into water or onto or into land" includes the direct or indirect transfer by any person in the course of doing business of any listed chemical to any person within the meaning of Health and Safety Code Section 25249.11 (a) for the purpose of discharging or releasing the chemical to land or water in a manner which, if committed by the transferor, would violate Health and Safety Code Section 25249.5.

(5) "Discharge or release into water or onto or into land" does not include the sale, exchange or other transfer of a chemical to a solid waste disposal facility as defined in Sections 66714 and 66719 of the Govern-

ment Code, or a hazardous waste facility as defined in Health and Safety Code Section 25117.1 provided that the disposal to such facility complies with all applicable state and federal statutes, rules, regulations, permits, requirements and orders. "Sale, exchange or other transfer," as used in this paragraph, does not include disposal to a facility owned or operated by the transferor.

(6) "Discharge or release into water or onto or into land" does not include the sale, exchange or other transfer of a chemical to any treatment works as defined in 33 United States Code Section 1292 provided that the discharge or release to such treatment works complies with all applicable standards and limitations imposed, and permits required, under federal law or an approved state program. "Sale, exchange or other transfer," as used in this paragraph, does not include disposal to a facility owned or operated by the transferor.

(f) Expose.

The term "expose" means to cause to ingest, inhale, contact via body surfaces or otherwise come into contact with a chemical. An individual may come into contact with a chemical through water, air, food, consumer products and any other environmental exposure as well as occupational or workplace exposures.

(g) Threatened Illegal Discharges.

A "threatened illegal discharge" means the creation of a condition or the taking of an action which is intended to or will foreseeably create a substantial probability that an illegal discharge will occur.

(h) Substantial Injury.

The term "substantial injury" means a real and immediate physical injury or a resulting adverse physical condition of a substantial nature to one or more persons.

(i) General Public Knowledge.

The term "general public knowledge" means knowledge which has been disseminated to the general public, including information in newspapers of general circulation or radio or television reports in the geographic area affected by the discharge. In order to demonstrate general public knowledge, it shall not be necessary to prove that any members of the public have actually acquired such knowledge but only that the information has been disseminated.

(j) For purposes of this chapter, "Act" means the Safe Drinking Water and Toxic Enforcement Act of 1986 (Health and Safety Code Sections 25249.5, et seq.).

(k) For purposes of this chapter, "listed chemical" means a chemical listed pursuant to Health and Safety Code Section 25249.8, subsection (a).

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25180.7, 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. Amendment of subsection (e) and new subsections (j) and (k) refiled 2-21-89 as an emergency; operative 2-24-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-26-89. For prior history, see Register 88, No. 47.

2. Amendment of subsection (e) and new subsections (j) and (k) refiled 6-19-89 as an emergency; operative 6-26-89 (Register 89, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-24-89.

3. Certificate of Compliance as to 6-19-89 order transmitted to OAL 10-20-89 and filed 11-20-89 (Register 89, No. 48).

§ 22-12301. Definitions.

(a) The "Scientific Advisory Panel" or the "Panel" refers to the Safe Drinking Water and Toxic Enforcement Act Scientific Advisory Panel.

(b) The "Act" refers to the Safe Drinking Water and Toxic Enforcement Act of 1986 (Health and Safety Code Section 25249.5 et seq.) which was originally adopted by California voters as Initiative Measure Proposition 65 on November 4, 1986.

(c) The "lead agency" refers to the Health and Welfare Agency as designated by the Governor in Executive Order D-61-87, dated January 6, 1987.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.12 and 25249.8, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12302. Scientific Advisory Panel.

(a) There is created in the Health and Welfare Agency a Scientific Advisory Panel to advise and assist the Governor in the implementation of Health and Safety Code Section 25249.8. The Panel shall be the "state's qualified experts" as the term is used in that section.

(b) The Panel shall be composed of twelve members. The members shall include experts in each of the following areas of specialization: epidemiology, oncology, pathology, reproductive toxicology, teratology, and toxicology. The members of the Panel shall be appointed by the Governor and shall serve at the pleasure of the Governor. Vacancies which occur on the Panel shall be filled only by the Governor.

(c) The Panel shall meet not less than once in any six-month period. The Governor shall designate from among the Panel members a Chairperson who will call and preside over meetings, and an Executive Secretary who shall be a state employee who has expertise in one or more of the areas of specialization listed in subsection (b). The Chairperson, with the consent of the other Panel members, shall designate from among the Panel members such subcommittees as may be appropriate in fully discharging the responsibilities of the Panel.

(d) Except as otherwise expressly authorized by statute, all meetings of the Panel and all subcommittee meetings shall be open to the public and convened only after reasonable public notice of the meeting, including the date, time, location and an agenda of items of business to be transacted or discussed, has been provided. All official correspondence to or from the Panel, any subcommittee, or any member of the Panel shall be available for public inspection as provided in the Public Records Act.

(e) Panel members may be asked to provide advice and counsel both at formally convened Panel and subcommittee meetings and individually in response to written materials submitted to them by lead agency, the Executive Secretary, or the Governor. The Panel shall act as a body in making recommendations to the Governor or the lead agency. Questions posed to the members of the Panel shall be decided by a majority of those voting. However, no official action of the Panel may be taken unless at least one-half of the authorized number of members has voted on a question.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.8, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12303. Compensation.

Panel members shall be entitled to reimbursement for actual and necessary expenses incurred while attending meetings or otherwise carrying out the duties of the Panel. In addition, a Panel member who is not an officer or employee in the State Civil Service or an appointed state official shall be entitled to compensation for time spent on attending the Panel meetings and other actual and necessary work of the Panel, as determined by the lead agency and pursuant to a consulting services contract executed prior to appointment of the member to the Panel.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.8, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12304. Financial Disclosure.

Upon appointment and annually thereafter, panel members shall make a public disclosure on forms provided of investments in, income from or business positions in any partnership, corporation or other entity that imports, manufactures, distributes, sells, buys or uses chemicals that are or may be considered carcinogens or reproductive toxicants. The disclosure made upon appointment shall cover the two-year period immediately prior to the date of appointment. Individuals serving in academic appointments shall also provide a description of funding sources for all significant research undertaken during the two years immediately prior to their appointment.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.8, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12305. Duties.

As an advisory body to the Governor and the lead agency, the Panel may undertake the following activities:

(a) Determine whether specific chemicals are "known to the state to cause cancer or reproductive toxicity" pursuant to Health and Safety Code Section 25249.8(b).

(b) Identify bodies which are considered to be authoritative and which have formally identified carcinogens or reproductive toxicants.

(c) Identify specific chemicals that are required by state or federal law to have been tested for potential to cause cancer or reproductive toxicity but which have not been adequately tested.

(d) Review or propose standards and procedures for determining carcinogenicity and reproductive toxicity of chemicals.

(e) Review or propose standards, procedures and definitions related to the implementation, administration or interpretation of the Act upon request by the lead agency.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.8, Health and Safety Code.

HISTORY

1. New section filed 2-24-88; operative 2-26-88 (Register 88, No. 11).

§ 22-12306. Chemicals Formally Identified by Authoritative Bodies.

(a) Pursuant to Health and Safety Code section 25249.8(b), a chemical is known to the state to cause cancer or reproductive toxicity if a body is considered to be authoritative by the state's qualified experts and the lead agency has determined that the body has formally identified the chemical as causing cancer or reproductive toxicity, as described in this section.

(b) A "body considered to be authoritative" is an agency or formally organized program or group which utilizes one of the methods set forth in subsection (c)(1) for the identification of chemicals, and which the Panel has identified as having expertise in the identification of chemicals as causing cancer or reproductive toxicity. For purposes of this section, "authoritative body" means a "body considered to be authoritative" by the Panel. The Panel shall have the authority to revoke or rescind any determination by it that a body is authoritative on the grounds that the Panel no longer considers the body to have expertise in the identification of chemicals as causing cancer or reproductive toxicity, in which case chemicals listed pursuant to this section prior to the effective date of the revocation shall remain on the list. Nothing in this section shall be construed to limit or otherwise interfere with such authority.

(c) The lead agency shall determine which chemicals have been formally identified by an authoritative body as causing cancer or reproductive toxicity.

(d) For purposes of this section a chemical is "formally identified" by an authoritative body when the lead agency determines that:

(1) the chemical has been included on a list of chemicals causing cancer or reproductive toxicity issued by the authoritative body; or is the subject of a report which is published by the authoritative body and which concludes that the chemical causes cancer or reproductive toxicity; or has otherwise been identified as causing cancer or reproductive toxicity by the authoritative body in a document that indicates that such identification is a final action; and

(2) the list, report, or document specifically and accurately identifies the chemical, and has been:

(A) Reviewed by an advisory committee in a public meeting, if a public meeting is required, or

(B) Made subject to public review and comment prior to its issuance, or

(C) Published by the authoritative body in a publication, such as, but not limited to, the federal register for an authoritative body which is a federal agency, or

(D) Signed, where required, by the chief administrative officer of the authoritative body or a designee, or

(E) Adopted as a final rule by the authoritative body, or

(F) Otherwise set forth in an official document utilized by the authoritative body for regulatory purposes.

(e) For purposes of this section, "as causing cancer" means that either of the following criteria has been satisfied:

(1) Sufficient evidence of carcinogenicity exists from studies in humans. For purposes of this paragraph, "sufficient evidence" means studies in humans indicate that there is a causal relationship between the chemical and cancer.

(2) Sufficient evidence of carcinogenicity exists from studies in experimental animals. For purposes of this paragraph, "sufficient evidence" means studies in experimental animals indicate that there is an increased incidence of malignant tumors or combined malignant and benign tumors in multiple species or strains, in multiple experiments (e.g., with different routes of administration or using different dose levels), or, to an unusual degree, in a single experiment with regard to high incidence, site or type of tumor, or age at onset.

(f) The lead agency shall find that a chemical does not satisfy the definition of "as causing cancer" if scientifically valid data which were not considered by the authoritative body clearly establish that the chemical does not satisfy the criteria of subsection (e)(1) or (e)(2).

(g) For purposes of this section, "as causing reproductive toxicity" means that either of the following criteria have been satisfied:

(1) Studies in humans indicate that there is a causal relationship between the chemical and reproductive toxicity, or

(2) Studies in experimental animals indicate that there are sufficient data, taking into account the adequacy of the experimental design and other parameters such as, but not limited to, route of administration, frequency and duration of exposure, numbers of test animals, choice of species, choice of dosage levels, and consideration of maternal toxicity, indicating that an association between adverse reproductive effects in humans and the toxic agent in question is biologically plausible.

(h) The lead agency shall find that a chemical does not satisfy the definition of "as causing reproductive toxicity" if scientifically valid data which were not considered by the authoritative body clearly establish that the chemical does not satisfy the criteria of subsection (g)(1) or (g)(2).

(i) At least 60 days prior to adding a chemical determined to have been formally identified by an authoritative body as causing cancer or reproductive toxicity to the list of chemicals known to the state to cause cancer or reproductive toxicity, the lead agency shall cause to be published in the California Regulatory Notice Register a notice identifying the authoritative body and the chemical, and stating the lead agency's intention to cause the chemical to be added to the list. Copies of the notice shall be provided to the Panel to permit the Panel at least 30 days to review and comment on the proposed action. Within 30 days following the publication of the notice, interested parties, including any member of the Panel, shall submit to the lead agency their written objections to the addition of the chemical to the list of chemicals known to the state to cause cancer or reproductive toxicity, along with any supporting documentation. Objections shall be made on the basis that there is no substantial evidence that the criteria identified in subsection (e) or in subsection (g) have been satisfied. The lead agency shall review such objections. If the lead agency finds that there is no substantial evidence that the criteria identified in subsection (e) or in subsection (g) have been satisfied, the lead agency shall refer the chemical to the Panel to determine whether, in the Panel's opinion, the chemical has been clearly shown through scientifically valid testing according to generally accepted principles to cause cancer or reproductive toxicity.

(j) Subsequent to the addition of a chemical determined to have been formally identified by an authoritative body as causing cancer or reproductive toxicity to the list of chemicals known to the state to cause cancer or reproductive toxicity, the lead agency shall reconsider its determina-

tion that the chemical has been formally identified as causing cancer or reproductive toxicity if the lead agency finds:

(1) there is no substantial evidence that the criteria identified in subsection (e) or subsection (g) have been satisfied, or

(2) the chemical is no longer identified as causing cancer or reproductive toxicity by the authoritative body.

Reconsideration may be initiated by the lead agency on its own motion, or on a request from an interested party, including any member of the Panel. The lead agency shall refer chemicals under reconsideration pursuant to this subsection to the Panel for a recommendation concerning whether the chemical should continue to be included on the list of chemicals known to the state to cause cancer or reproductive toxicity. Pending such reconsideration, the chemical shall remain on the list.

(k) The Panel may condition any determination that a body is considered to be authoritative upon the subsequent application of the controls set forth in this section to the determination of which chemicals have been formally identified by the body as causing cancer or reproductive toxicity. In the event that this section or any portion thereof is found to be invalid by any court of competent jurisdiction, the Panel may determine that such invalidation constitutes a failure of the condition. Upon finding such failure of condition, the determination that the body is authoritative shall be deemed to be revoked. Chemicals which the lead agency has determined have been formally identified by the body as causing cancer or reproductive toxicity pursuant to the controls set forth in this section and which have been placed upon the list of chemicals known to the state to cause cancer or reproductive toxicity prior to such revocation shall remain on the list.

(l) The Panel has identified the following as an authoritative body, for purposes of this section.

- (1) International Agency for Research on Cancer
- (2) National Institute for Occupational Safety and Health
- (3) National Toxicology Program
- (4) U. S. Environmental Protection Agency
- (5) U. S. Food and Drug Administration

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.8 and 25249.12, Health and Safety Code.

HISTORY

1. New section filed 10-30-89 as an emergency; operative 10-30-89 (Register 89, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-27-90.
2. Change without regulatory effect filed 10-31-89 pursuant to section 100, Title 1, California Code of Regulations (Register 89, No. 44).
3. Certificate of Compliance as to 10-30-89 order including amendment of subsections (c) - (l) transmitted to OAL 2-27-90 and filed 3-29-90 (Register 90, No. 16).
4. Amendment of subsection (l) submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 90, No. 28).
5. Editorial correction of printing error relettering subsection (d) (Register 90, No. 45).

§ 22-12401. Discharge of Water Containing a Listed Chemical at Time of Receipt.

(a) Whenever a person otherwise responsible for the discharge or release receives water containing a listed chemical from:

(1) a public water system, as defined in section 4010.1 of the Health and Safety Code;

(2) a commercial supplier of drinking water; or

(3) a source of drinking water in compliance with all primary drinking water standards and the chemical is the result of treatment of the water in order to achieve such compliance; the person does not "discharge" or "release" within the meaning of the Act to the extent that the person can show that the listed chemical was contained in the water received. "Discharge or release" shall apply only to that amount of the listed chemical derived from sources other than the drinking water.

(b) Whenever a person otherwise responsible for the discharge or release receives water containing a listed chemical from a source other than a source specified in subdivision (a) the person does not "discharge" or

"release" within the meaning of the Act to the extent that the person can show that the listed chemical was contained in the water received, and "discharge or release" shall apply only to that amount of the listed chemical derived from sources other than the water, provided that:

- (1) The water is returned to the same source of water supply, or
- (2) The water meets all primary drinking water standards for the listed chemical or, where there is no primary drinking water standard established for the listed chemical, the water shall not contain a significant amount of the chemical.

(c) Stormwater runoff from a place of doing business containing a listed chemical, the presence of which is not the direct and immediate result of the business activities conducted at the place from which the runoff flows, is not a "discharge" or "release" within the meaning of the Act. For purposes of this paragraph, "business activities" does not include parking lots.

(d) The movement of naturally occurring chemicals as the result of the application, unavoidable runoff, or percolation of agricultural irrigation water is not a "discharge" or "release" within the meaning of section 25249.5 of the Health and Safety Code. For purposes of this paragraph, "naturally occurring chemicals" means chemicals present in the soil solely as a result of natural geologic processes.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 10-17-88 as an emergency; operative 10-17-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-14-89.
2. Certificate of Compliance filed 11-15-88 (Register 89, No. 30).

§ 22-12403. Discharges from Hazardous Waste Facilities.

(a) For a discharge or release of a listed chemical from a low-level radioactive waste disposal facility licensed pursuant to Chapter 7.6 of Division 20 Commencing with Section 25800) of the Health and Safety Code, a solid waste disposal facility" as defined in Government Code section 66714, a solid waste "disposal site" as defined in Government Code section 66714.1 or a hazardous waste "disposal site" as defined in Health and Safety Code section 25114, it shall be presumed that the chemical probably will not pass into any source of drinking water for purposes of Health and Safety Code section 25249.5, provided that the operator of the facility or site can show that the facility or site is subject to and in compliance with requirements of state or federal statutes, regulations, permits and orders adopted to avoid contamination of surface or groundwater.

(b) The presumption in subsection (a) may be rebutted by any admissible evidence, including, but not limited to, that compliance with the same or substantially the same requirements of state or federal statutes, regulations, permits and orders adopted to avoid contamination of surface or groundwater has failed to prevent surface or groundwater contamination at similar facilities or sites under similar circumstances.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.5, Health and Safety Code.

HISTORY

1. New section filed 10-21-88 as an emergency; operative 10-27-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-24-89.
2. New section refiled 2-21-89 as an emergency; operative 2-24-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-26-89.
3. New section, with amendment of subsection (a) adding certain low-level radioactive waste disposal facilities, refiled 6-5-89 as an emergency; operative 6-26-89 (Register 89, No. 24). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-24-89.
4. Certificate of Compliance as to 6-5-89 order transmitted to OAL 10-23-89 and filed 11-22-89 (Register 89, No. 48).

§ 22-12405. Discharge of an Economic Poison.

For a discharge or release of a listed chemical which is an active ingredient, other specified ingredient, or degradation product of an economic poison as defined in The Pesticide Contamination Prevention Act of 1985, Article 15 of Chapter 2 of Division 7 (commencing with section

13141) of the Food and Agricultural Code, if the person responsible for the application can show that the registrant of the economic poison has completely and adequately satisfied all of the data submission requirements of section 13143(a) of the Food and Agricultural Code and that the economic poison has not been placed on the Groundwater Protection List described in section 13145 of the Food and Agricultural Code and that the application is otherwise in compliance with the Pesticide Contamination Prevention Act of 1985 and all regulations promulgated thereunder, then it shall be presumed that the chemical probably will not pass into any source of drinking water for purposes of Health and Safety Code section 25249.5. For purposes of this section only, the person responsible for the application may rely upon information regarding a registrant's compliance with section 13143(a), Food and Agricultural Code, which is obtained from the State Department of Food and Agriculture through the office of a county agriculture commissioner.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.5, Health and Safety Code.

HISTORY

1. New section refiled 6-5-89 as an emergency; operative 6-26-89 (Register 89, No. 24). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-24-89. For prior history, see Register 89, No. 10.
2. New section refiled 10-19-89 as an emergency; operative 10-24-89 (Register 89, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-21-90.
3. Certificate of Compliance as to 10-19-89 order including amendment transmitted to OAL 1-5-90 and filed 1-23-90 (Register 90, No. 5).

§ 22-12501. Exposure to a Naturally Occurring Chemical in a Food.

(a) Human consumption of a food shall not constitute an "exposure" for purposes of Health and Safety Code Section 25249.6 to a listed chemical in the food to the extent that the person responsible for the contact can show that the chemical is naturally occurring in the food.

(1) For the purposes of this section, a chemical is "naturally occurring" if it is a natural constituent of a food, or if it is present in a food solely as a result of absorption or accumulation of the chemical which is naturally present in the environment in which the food is raised, or grown, or obtained; for example, minerals present in the soil solely as a result of natural geologic processes, or toxins produced by the natural growth of fungi.

(2) The "naturally occurring" level of a chemical in a food may be established by determining the natural background level of the chemical in the area in which the food is raised, or grown, or obtained, based on reliable local or regional data.

(3) A chemical is naturally occurring only to the extent that the chemical did not result from any known human activity. Where a food contains a chemical, in part naturally occurring and in part added as a result of known human activity, "exposure" can only occur as to that portion of the chemical which resulted from such human activity. For purposes of this section, "human activity" does not include sowing, planting, irrigation, or plowing or other mechanical preparation of soil for agricultural purposes; but does include the addition of chemicals to irrigation water applied to soil or crops.

(4) Where a chemical contaminant can occur naturally in a food, the chemical is naturally occurring only to the extent that it was not avoidable by good agricultural or good manufacturing practices. The producer, manufacturer, distributor, or holder of the food shall at all times utilize quality control measures that reduce natural chemical contaminants to the "lowest level currently feasible," as this term is used in the Code of Federal Regulations, Title 21, Section 110.110, subdivision (c) (1988).

(b) A person otherwise responsible for an exposure to a listed chemical in a consumer product, other than food, does not "expose" an individual within the meaning of Section 25249.6, to the extent that the person can show that the chemical was a naturally occurring chemical in food, and the food was used in the manufacture, production, or processing of the consumer product. Where a consumer product contains a listed chemical, and the source of the chemical is in part from a naturally occurring chemi-

cal in food and in part from other sources, "exposure" can only occur as to that portion of the chemical from other sources.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.6, Health and Safety Code.

HISTORY

1. New section refiled 6-19-89 as an emergency; operative 6-22-89 (Register 89, No. 30). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-20-89. For prior history, see Register 89, No. 10.
2. Emergency Section 12501 repealed 7-10-89; repealer operative 8-9-89. New Section 12501 filed 7-10-89; operative 8-9-89 (Register 89, No. 30).

§ 22-12502. Exposure to a Listed Chemical in Drinking Water.

(a) A person otherwise responsible for an exposure to a listed chemical which involves the use of drinking water, including the use of drinking water in food or any other consumer product, does not "expose" an individual within the meaning of Section 25249.6 to the extent that the person can show that the listed chemical was contained in drinking water which was received from:

- (1) a public water system, as defined in Section 4010.1 of the Health and Safety Code;
- (2) a commercial supplier of drinking water; or
- (3) a source of drinking water in compliance with all applicable primary drinking water standards for all listed chemicals and the chemical in question is the result of treatment of the water in order to achieve compliance with primary drinking water standards.

Where the source of the listed chemical is in part from such drinking water and in part from other sources, "exposure" can occur only as to that portion of the listed chemical from sources other than such drinking water.

(b) For purposes of subdivision (a), the amount of a listed chemical contained in drinking water shall be determined by sampling of the drinking water at the point of delivery and by testing pursuant to Section 12901. If sampling and testing is impractical, the amount of a listed chemical shall be based on test results of the most recent sample of the drinking water taken by the public water system or the commercial drinking water supplier, provided that all sampling and testing has been conducted at the frequency and in the manner required by law, or alternatively, such amount shall be calculated at five percent of the maximum contaminant level set forth in the primary drinking water standard for the listed chemical.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.6 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 7-10-89; operative 8-9-89 (Register 89, No. 30).

§ 22-12503. Exposure to Water.

A person otherwise responsible for an exposure to a listed chemical does not "expose" an individual within the meaning of Health and Safety Code Section 25249.6 to the extent that the person can show that the listed chemical was contained in water which the person moved or which was handled in the manner described in Section 12401. Nothing in this section shall be interpreted to affect the responsibility for an exposure which arises from any activity other than that described in Section 12401.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.6 and 25249.11, Health and Safety Code.

HISTORY

1. New section refiled 6-19-89 as an emergency; operative 6-22-89 (Register 89, No. 30). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-20-89. For prior history, see Register 89, No. 10.
2. Emergency Section 12503 repealed 7-10-89; repealer operative 8-9-89. New Section 12503 filed 7-10-89; operative 8-9-89 (Register 89, No. 30).

§ 22-12504. Exposure to Air.

A person otherwise responsible for an exposure to a listed chemical in air does not "expose" an individual within the meaning of Health and Safety Code Section 25249.6 to the extent that the person can show that the listed chemical was contained in air that the person received from the

ambient air. Where the source of the listed chemical is in part from the ambient air and in part from other sources, "exposure" does not occur as to that portion of the listed chemical from the ambient air to the extent that the person did not put the listed chemical into the ambient air.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.6, Health and Safety Code.

HISTORY

1. New section filed 7-10-89; operative 8-9-89 (Register 89, No. 30).

§ 22-12505. Miscellaneous.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.6 and 25249.11, Health and Safety Code.

HISTORY

1. New section refiled 6-19-89 as an emergency; operative 6-22-89 (Register 89, No. 30). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-20-89. For prior history, see Register 89, No. 10.
2. Emergency Section 12505 repealed 7-10-89; repealer operative 8-9-89 (Register 89, No. 30).

§ 22-12601. Clear and Reasonable Warnings.

(a) Whenever a clear and reasonable warning is required under section 25249.6 of the Health and Safety Code, the method employed to transmit the warning must be reasonably calculated, considering the alternative methods available under the circumstances, to make the warning message available to the individual prior to exposure. The message must clearly communicate that the chemical in question is known to the state to cause cancer, or birth defects or other reproductive harm. Nothing in this section shall be construed to preclude a person from providing warnings other than those specified in subdivisions (b), (c), and (d) which satisfy the requirements of this subdivision, or to require that warnings be provided separately to each exposed individual.

(b) Warnings for consumer products exposures which include the methods of transmission and the warning messages as specified by this subdivision shall be deemed to be clear and reasonable. A "consumer products exposure" is an exposure which results from a person's acquisition, purchase, storage, consumption, or other reasonably foreseeable use of a consumer good, or any exposure that results from receiving a consumer service.

(1) The warning may be provided by using one or more of the following methods singly or in combination:

(A) A warning that appears on a product's label or other labeling. The term "label" means a display of written, printed or graphic matter upon a product or its immediate container. The term "labeling" means any label or other written, printed or graphic matter affixed to or accompanying a product or its container or wrapper.

(B) Identification of the product at the retail outlet in a manner which provides a warning. Identification may be through shelf labeling, signs, menus, or a combination thereof.

(C) A system of signs, public advertising identifying the system and toll-free information services, or any other system, that provides clear and reasonable warnings.

(D) For alcoholic beverages, including, without limitation, beer, malt beverages, wine and distilled spirits:

1. Primarily intended for consumption off the premises where sold or distributed:

(i) at least one notice or sign, no smaller than 10 inches wide by 10 inches high, and bearing the warning message set forth in paragraph (4)(E) of this subsection; or

(ii) at least one horizontal strip marker no smaller than 10 1/2 inches wide by 1 1/4 inches high, and bearing the warning message set forth in paragraph (4)(E) of this subsection; or

(iii) a notice no smaller than 5 inches by 5 inches, and bearing the warning message set forth in (4)(E) of this subsection.

(iv) If signs 10 inches high by 10 inches wide are used, the word "warning" shall be centered three-quarters of an inch from the top of the sign in ITC Garamond bold condensed type face all in one-inch capital letters. Three-sixteenths of an inch from the base of the word "warning" shall be a line extending from left to right across the width of the sign one-six-

teenth of an inch in thickness. Centered one-half inch below the line shall be the body of the warning message in 36/50 ITC Garamond bold condensed type face with the initial letter of each word, other than the conjunctive "and," capitalized. For the body of the warning message, left and right margins of at least one-half of an inch, and a bottom margin of at least one-half inch shall be observed. Larger signs shall bear substantially the same proportions of type size and spacing to sign dimension as the sign 10 inches high by 10 inches wide.

(v) If the 10 1/2 inch by 1 1/4 inch horizontal strip markers are used, the word "WARNING," punctuated by a colon, shall be justified left and located three-sixteenths of an inch from the top of the strip notice in ITC Garamond bold condensed type face all in capital letters measuring eleven sixteenths of an inch in height. Three thirty-seconds of an inch from the base of the word "WARNING" shall be a line extending from left to right across the width of the word "WARNING" and the punctuating colon one thirty-second of an inch in thickness. Located one-fourth of an inch from the top and one-fourth of an inch from the bottom of the strip notice, and to the immediate right of the word "WARNING," shall be the body of the warning message in 12/16 point ITC Garamond bold condensed type face with the initial letter of each word, other than the conjunctive "and," capitalized. The word "WARNING" shall be one-half inch from the left edge of the strip notice and the requisite warning message shall extend to within one-half inch from the right edge.

(vi) If the 5 inch by 5 inch signs are used, they shall bear substantially the same proportions of type size and spacing to sign dimension as the sign 10 inches high by 10 inches wide, with both the word "WARNING" and the warning text set in white on a contrasting red background.

(vii) Such sign or notice shall be placed in the retail establishment so as to assure that it is readable and likely to be read either at each retail point of sale or each point of display. Such sign or notice shall be placed either at all retail points of sale or all points of display, but need not be placed at both. If 10 inch by 10 inch signs or notices are placed at the point of display, each shall be placed no more than ten feet from any alcoholic beverage container and in a manner associating the sign or notice with the display. If horizontal strip notices are used, they shall be placed at ten foot intervals horizontally along the display. If a 5 inch by 5 inch sign is used, it shall be conspicuously placed at each retail point of sale (e.g., check-out counter, cash register, cash box) so that it is likely to be read and understood during the sales transaction.

(viii) All measurements specified or referred to in paragraphs (iv), (v) and (vi), above, are not required to be precisely accurate.

2. Provided for consumption on the premises at tables served by food or beverage persons, or sold or distributed through over the counter service;

(i) a notice or sign displayed at each of the tables where alcoholic beverages are served or may be consumed at least 5 inches high by 5 inches wide bearing substantially the same type face and substantially the same proportion of type size and spacing to sign dimension as described in paragraph (D)1. (vi); or

(ii) the warning message set forth in paragraph (4)(E) of this subdivision, placed upon a menu or list in association with the alcoholic beverages listed thereon and served at such premises, or if alcoholic beverages are not listed thereon, on any menu or list provided to patrons in association with the listing of food or beverage offerings, in type size and design, such that the text is conspicuous and likely to be read prior to consumption of alcoholic beverages or,

(iii) at least one 10 inch by 10 inch sign, meeting the specifications set forth in paragraph (D)1. (iv) of this subsection, placed so that it is readable and likely to be read by patrons as they enter each public entrance to the establishment. If the establishment does not have clearly defined physical boundaries delineating those areas where, by permit or license, alcoholic beverages are served, the 10 inch by 10 inch sign shall be posted so that it is readable and likely to be read by patrons as they enter the area or areas where, by permit or license, alcoholic beverages are served; and

(iv) If sold or distributed through over-the-counter service, at least one sign, meeting the specifications set forth in paragraph (D)1. (iv) of this subsection, placed in the retail establishment so that the warning message is, prior to the consumption of alcoholic beverages, readable and likely to be read from all counter locations available to the public. Therefore, a retail establishment providing a warning pursuant to the preceding sentence, also would be required to provide a warning in accordance with either paragraph 2.(i), 2.(ii) or 2.(iii) of this subsection.

3. For premises which are specially licensed to sell and serve alcoholic beverages both on and off the licensed premises (e.g., in facilities that offer both "tasting" and retail sales), the off-sale portion of the premises shall comply with the provisions of subsection (D)1, above, and the portion of the premises where alcoholic beverages are served shall comply with the provisions of subsection (D)2, above.

4. For alcoholic beverages sold or distributed to consumers through the mail or package delivery services, warnings may be provided by incorporating or placing the warning message set forth in paragraph (4)(E) on or in the shipping container or delivery package in such a manner so that the warning message is likely to be read by the recipient prior to consumption of the alcoholic beverage(s).

5. All signs or notices referred to in subsections (D)1., (D)2. and (D)3., above, shall be displayed so that they are clearly visible under all lighting conditions normally encountered during business hours.

(2) To the extent practicable, warning materials such as signs, notices, menu stickers, or labels shall be provided by the manufacturer, producer, or packager of the consumer product, rather than by the retail seller. For alcoholic beverages, the placement and maintenance of the warning shall be the responsibility of the manufacturer or its distributor at no cost to the retailer, and any consequences for failure to do the same shall rest solely with the manufacturer or its distributor, provided that the retailer does not remove, deface, or obscure the requisite signs or notices, or obstruct, interfere with, or otherwise frustrate the manufacturer's reasonable efforts to post, maintain, or periodically replace said materials. For prescription drugs, the labeling approved or otherwise provided under federal law and the prescriber's accepted practice of obtaining a patient's informed consent shall be deemed to be a clear and reasonable warning.

(3) The warnings provided pursuant to paragraphs (1)(A) and (1)(B) shall be prominently placed upon a product's label or other labeling or displayed at the retail outlet with such conspicuousness, as compared with other words, statements, designs, or devices in the label, labeling or display as to render it likely to be read and understood by an ordinary individual under customary conditions of purchase or use.

(4) The warning message must include the following language:

(A) For consumer products that contain a chemical known to the state to cause cancer:

"WARNING: This product contains a chemical known to the State of California to cause cancer."

(B) For consumer products that contain a chemical known to the state to cause reproductive toxicity:

"WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm."

(C) For food, other than alcoholic beverages, sold, served, or otherwise provided in food facilities, as defined in Health and Safety Code section 27521(a), which is intended for immediate consumption:

"WARNING: Chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm may be present in foods or beverages sold or served here."

(D) For fresh fruits, nuts and vegetables:

"WARNING: This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm."

(E) For alcoholic beverages, including, without limitation, beer, malt beverages, wine and distilled spirits:

"WARNING: Drinking Distilled Spirits, Beer, Coolers, Wine and Other Alcoholic Beverages May Increase Cancer Risk, and, During Pregnancy, Can Cause Birth Defects."

(5) A person in the course of doing business, who manufactures, produces, assembles, processes, handles, distributes, stores, sells or otherwise transfers a consumer product which he or she knows to contain a chemical known to the state to cause cancer or reproductive toxicity in an amount which requires a warning shall provide a warning to any person to whom the product is sold or transferred unless the product is packaged or labeled with a clear and reasonable warning.

(c) Warnings for occupational exposures which include the methods of transmission and the warning messages as specified by this subdivision shall be deemed clear and reasonable. An "occupational exposure" is an exposure, in the workplace of the employer causing the exposure, to any employee.

(1) The method employed to transmit the warning must include one of the following alternative methods:

(A) A warning that appears on the label or labeling of a product or substance present or used in the workplace. The label or labeling shall be prominently displayed on the product or substance and the product or substance shall be used under circumstances which make it likely that the warnings will be read and understood by employees or other individuals prior to the exposure for which the warning is given.

(B) A warning that appears on a sign in the workplace posted in a conspicuous place and under conditions that make it likely to be read and understood by employees and other individuals prior to the exposure for which the warning is given.

(C) A warning to the exposed employee about the chemical in question which fully complies with all information, training and labeling requirements of the federal Hazard Communication Standard (29 CFR section 1910.1200, as amended and filed September 30, 1986), the California Hazard Communication Standard (Cal. Code Regs., title 8, section 5194, as amended and filed May 26, 1987), or, for pesticides, the Pesticides and Worker Safety requirements (Cal. Code Regs., title 3, ch. 6, subch. 3, group 3, section 6700 et seq., in effect on February 16, 1988) authorized in Food and Agricultural Code section 12981 (as amended by Statutes of 1980, ch. 926, p. 2945, section 1).

(2) For purposes of paragraph (1)(A) of this subdivision, the warning shall be provided in terms which would provide a clear warning for a consumer product as specified above.

(3) For purposes of paragraph (1)(B) of this subdivision, the following specific warning messages shall be deemed to clearly communicate that an individual is being exposed to a chemical known to the state to cause cancer, or birth defects or other reproductive harm.

(A) For exposure to a chemical known to the state to cause cancer:

"WARNING: This area contains a chemical known to the State of California to cause cancer."

(B) For exposure to a chemical known to the state to cause reproductive toxicity:

"WARNING: This area contains a chemical known to the State of California to cause birth defects or other reproductive harm."

(d) Warnings for environmental exposures which include the methods of transmission and the warning messages as specified by this subdivision shall be deemed clear and reasonable. An "environmental exposure" is an exposure which may foreseeably occur as the result of contact with an environmental medium, including, but not limited to, ambient air, indoor air, drinking water, standing water, running water, soil, vegetation, or manmade or natural substances, either through inhalation, ingestion, skin contact or otherwise. Environmental exposures include all exposures which are not consumer products exposures, or occupational exposures.

(1) The method employed to transmit the warning must include the most appropriate of the following alternative methods under the circumstances:

(A) A warning that appears on a sign in the affected area. The term "sign" means a presentation of written, printed or graphic matter. The term "affected area" means the area in which an exposure to a chemical known to the state to cause cancer or reproductive toxicity is at a level that requires a warning. A posting of signs in the manner described in section 6776(e)(1) of title 3 of the California Code of Regulations (as amended and filed August 15, 1986) shall be sufficient for purposes of this paragraph.

(B) A warning which is in a notice mailed or otherwise delivered to each occupant in the affected area. Such notice shall be provided at least once in any three-month period.

(C) A warning provided by public media announcements which target the affected area. Such announcements shall be made at least once in any three-month period.

(2) Environmental exposure warnings shall be provided in a conspicuous manner and under such conditions as to make it likely to be read, seen or heard and understood by an ordinary individual in the course of normal daily activity, and reasonably associated with the location and source of the exposure.

(3) For purposes of paragraph (1)(A) of this subdivision, the following specific warning messages shall be deemed to clearly communicate that an individual is being exposed to a chemical known to the state to cause cancer, or birth defects or other reproductive harm.

(A) For exposure to a chemical known to the state to cause cancer:

"WARNING: This area contains a chemical known to the State of California to cause cancer."

(B) For exposure to a chemical known to the state to cause reproductive toxicity:

"WARNING: This area contains a chemical known to the State of California to cause birth defects or other reproductive harm."

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.6 and 25249.11, Health and Safety Code.

HISTORY

1. Amendment of subsection (b) filed 6-7-89 as an emergency; operative 7-1-89 (Register 89, No. 24). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-30-89. For prior history, see Register 88, No. 53.
2. Certificate of Compliance as to 6-7-89 order transmitted to OAL 10-23-89 and filed 11-22-89 (Register 89, No. 48).
3. Editorial correction of printing error in subsection (c)(1)(C) (Register 91, No. 31).

§ 22-12701. General.

(a) The determination of whether a level of exposure to a chemical known to the state to cause cancer poses no significant risk for purpose of Health and Safety Code Section 25249.10(c) shall be based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for the listing of the chemical as known to the state to cause cancer. Nothing in this article shall preclude a person from using evidence, standards, risk assessment methodologies, principles, assumptions or levels not described in this article to establish that a level of exposure to a listed chemical poses no significant risk.

(b) A level of exposure to a listed chemical, assuming daily exposure at that level, shall be deemed to pose no significant risk provided that the level is determined:

- (1) By means of a quantitative risk assessment that meets the standards described in Section 12703;
- (2) By application of Section 12707 (Routes of Exposure); or
- (3) By one of the following, as applicable:

(A) If a specific regulatory level has been established for the chemical in question in Section 12705, by application of that level.

(B) If no specific level is established for the chemical in question in Section 12705, by application of Section 12709 (Exposure to Trace Elements), 12711 (Levels Based on State or Federal Standards) or 12713 (Exposure to Food, Drugs, Cosmetics and Medical Devices), unless otherwise provided.

(c) The chemicals, routes of exposure and conditions of use specifically listed in this article do not include all chemicals, routes of exposure and conditions of use that pose no significant risk. The fact that a chemical, route of exposure or condition of use does not appear in this article does not mean that it poses a significant risk.

(d) This article establishes exposure levels posing no significant risk solely for purposes of Health and Safety Code Section 25249.10(c). Nothing in this article shall be construed to establish exposure or risk levels for other regulatory purposes.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.

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3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).

§ 22-12703. Quantitative Risk Assessment.

(a) A quantitative risk assessment which conforms to this section shall be deemed to determine the level of exposure to a listed chemical which, assuming daily exposure at that level, poses no significant risk. The assessment shall be based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for listing the chemical as known to the state to cause cancer. In the absence of principles or assumptions scientifically more appropriate, based upon the available data, the following default principles and assumptions shall apply in any such assessment:

(1) Animal bioassay studies for quantitative risk assessment shall meet generally accepted scientific principles, including the thoroughness of experimental protocol, the degree to which dosing resembles the expected manner of human exposure, the temporal exposure pattern, the duration of study, the purity of test material, the number and size of exposed groups, the route of exposure, and the extent of tumor occurrence.

(2) The quality and suitability of available epidemiologic data shall be appraised to determine whether the study is appropriate as the basis of a quantitative risk assessment, considering such factors as the selection of the exposed and reference groups, reliable ascertainment of exposure, and completeness of follow-up. Biases and confounding factors shall be identified and quantified.

(3) Risk analysis shall be based on the most sensitive study deemed to be of sufficient quality.

(4) The results obtained for the most sensitive study deemed to be of sufficient quality shall be applicable to all routes of exposure for which the results are relevant.

(5) The absence of a carcinogenic threshold dose shall be assumed and no-threshold models shall be utilized. A linearized multistage model for extrapolation from high to low doses, with the upper 95 percent confidence limit of the linear term expressing the upper bound of potency shall be utilized. Time-to-tumor models may be appropriate where data are available on the time of appearance of individual tumors, and particularly when survival is poor due to competing toxicity.

(6) Human cancer potency shall be derived from data on human or animal cancer potency. Potency shall be expressed in reciprocal milligrams of chemical per kilogram of bodyweight per day. Interspecies conversion of animal cancer potency to human cancer potency shall be determined by multiplying by a surface area scaling factor equivalent to the ratio of human to animal bodyweight, taken to the one-third power. This is equivalent to a scaling factor of 14 when extrapolating from mouse data, and a scaling factor of 6.5 when extrapolating from rat data.

(7) When available data are of such quality that physiologic, pharmacokinetic and metabolic considerations can be taken into account with confidence, they may be used in the risk assessment for inter-species, inter-dose, and inter-route extrapolations.

(8) When the cancer risk applies to the general population, human body weight of 70 kilograms shall be assumed. When the cancer risk applies to a certain subpopulation, the following assumptions shall be made, as appropriate:

| <i>Subpopulation</i> | <i>Kilograms of Body Weight</i> |
|---------------------------------|---------------------------------|
| Man (18+ years of age) | 70 |
| Woman (18+ years of age) | 58 |
| Woman with conceptus | 58 |
| Adolescent (11-18 years of age) | 40 |
| Child (2-10 years of age) | 20 |
| Infant (0-2 years of age) | 10 |

(b) For chemicals assessed in accordance with this section, the risk level which represents no significant risk shall be one which is calculated to

result in one excess case of cancer in an exposed population of 100,000, assuming lifetime exposure at the level in question, except where sound considerations of public health support an alternative level, as, for example:

(1) where chemicals in food are produced by cooking necessary to render the food palatable or to avoid microbiological contamination; or

(2) where chlorine disinfection in compliance with all applicable state and federal safety standards is necessary to comply with sanitation requirements; or

(3) where a clean-up and resulting discharge is ordered and supervised by an appropriate governmental agency or court of competent jurisdiction.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. Amendment of subsection (b) filed 10-17-88 as an emergency; operative 10-27-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-24-89.
5. New section, as amended 10-27-88, refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
6. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).
7. Amendment of subdivision (b) filed 6-25-90; operative 7-25-90 (Register 90, No. 34).

§ 22-12705. Specific Regulatory Levels Posing No Significant Risk.

(a) Daily exposure to a chemical at a level which does not exceed the level set forth in subsections (b), (c) and (d) for such chemical shall be deemed to pose no significant risk within the meaning of Health and Safety Code section 25249.10 (c).

(b) Levels of exposure deemed to pose no significant risk may be determined by the lead agency based on a risk assessment conducted by the lead agency pursuant to the guidelines set forth in Section 12703, or a risk assessment reviewed by the lead agency and determined to be consistent with the guidelines set forth in Section 12703.

(1) The following levels based on risk assessments conducted or reviewed by the lead agency shall be deemed to pose no significant risk:

| <i>(b) Chemical Name</i> | <i>Level (micrograms/day)</i> |
|--------------------------------------|-------------------------------|
| Acrylonitrile | 0.7 |
| Aldrin | 0.04 |
| Arsenic | 0.06 (inhalation) |
| Asbestos | 100 fibers inhaled/day* |
| | |
| Benzene | 7 |
| Benzidine | 0.001 |
| Bis(2-chloroethyl)ether | 0.3 |
| Bis(chloromethyl)ether | 0.02 |
| Butylated hydroxyanisole | 4000 |
| | |
| Cadmium | 0.05 (inhalation) |
| Carbon tetrachloride | 5 |
| Chromium (hexavalent compounds) | 0.001 (inhalation) |
| | |
| DDT, DDE and DDD (in combination) | 2 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.1 |
| para-Dichlorobenzene | 20 |
| 3,3'-Dichlorobenzidine | 0.6 |
| Dichloromethane (Methylene chloride) | 200 (inhalation) |
| Dieldrin | 0.04 |
| 1,4-Dioxane | 30 |

| Chemical Name | Level (micrograms/day) |
|---|-----------------------------------|
| Epichlorohydrin | 9 |
| Ethylene dibromide | 0.2 (ingestion) 3 (inhalation) |
| Ethylene dichloride | 10 |
| Ethylene oxide | 2 |
| Hexachlorobenzene | 0.4 |
| Hexachlorodibenzodioxin | 0.0002 |
| Hexachlorocyclohexane (technical grade) | 0.2 |
| N-Nitroso-n-dibutylamine | 0.06 |
| N-Nitrosodiethylamine | 0.02 |
| N-Nitrosodimethylamine | 0.04 |
| N-Nitrosodiphenylamine | 80 |
| N-Nitrosodi-n-propylamine | 0.1 |
| N-Nitroso-N-ethylurea | 0.03 |
| N-Nitroso-N-methylurea | 0.006 |
| Polybrominated biphenyls | 0.02 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 0.000005 |
| Toxaphene | 0.6 |
| Trichloroethylene | 50 (ingestion) 80 (inhalation) |
| 2,4,6-Trichlorophenol | 10 |
| Urethane | 0.7 |
| Vinyl chloride | 3 |

| Chemical Name | Level (micrograms/day) |
|---|-----------------------------------|
| Beryllium oxide | 0.1 |
| Beryllium sulfate | 0.0002 |
| Bromodichloromethane | 5 |
| 1,3-Butadiene | 0.4 |
| Chlordane | 0.5 |
| Chloroform | 20 (ingestion) 40 (inhalation) |
| Coke oven emissions | 0.3 |
| DDVP (Dichlorvos) | 2 |
| Dichloromethane (Methylene chloride) | 50 |
| Di(2-ethylhexyl)phthalate | 80 |
| 2,4-Dinitrotoluene | 2 |
| Folpet | 200 |
| Formaldehyde (gas) | 40 |
| Furmecyclox | 20 |
| Heptachlor | 0.2 |
| Heptachlor epoxide | 0.08 |
| Hexachlorocyclohexane | |
| alpha isomer | 0.3 |
| beta isomer | 0.5 |
| gamma isomer | 0.6 |
| Hydrazine | 0.04 |
| Hydrazine sulfate | 0.2 |
| 4,4'-Methylene bis (N,N-dimethyl)benzeneamine | 20 |
| Nickel refinery dust | 0.8 |
| Nickel subsulfide | 0.4 |
| N-Nitrosodiethanolamine | 0.3 |
| N-Nitrosomethylethylamine | 0.03 |
| N-Nitrosopyrrolidine | 0.3 |
| Pentachlorophenol | 40 |
| Polychlorinated biphenyls (PCBs) | 0.09 |
| Tetrachloroethylene | 14 |

*Fibers equal to or greater than 5 micrometers in length and 0.3 micrometers in width, with a length to width ratio of greater than or equal to 3:1 as measured by phase contrast microscopy.

(2) Whenever the lead agency proposes to formally adopt, pursuant to this subsection, a level which shall be deemed to pose no significant risk of cancer, assuming daily exposure at that level, the lead agency shall provide to each member of the Scientific Advisory Panel notice of the proposed action, a copy of the proposed level, and a copy of the initial statement of reasons supporting the proposal. The close of the public comment period for any such proposal shall be scheduled by the lead agency so as to permit the Scientific Advisory Panel the opportunity to review such proposal and provide comment to the lead agency. Any such comment by the Scientific Advisory Panel shall become a part of the formal rulemaking file. Nothing in this subsection shall be construed to prevent members of the Scientific Advisory Panel from providing comments individually on any such proposal, or to require the Scientific Advisory Panel to submit any comment.

(c) Unless a specific regulatory level for a chemical known to the state to cause cancer has been established in subsection (b), levels of exposure deemed to pose no significant risk may be determined by the lead agency based on state or federal risk assessments.

(1) Any interested party may request the lead agency to reevaluate a level established in this subsection based on scientific considerations that indicate the need for the lead agency to develop its own risk assessment or to conduct a detailed review of the risk assessment used to derive the level in question. Such request shall be made in writing, and shall include a description of the scientific considerations that indicate the need for the lead agency to develop its own risk assessment or to conduct a detailed review of the risk assessment used to derive the level in question. The lead agency may establish a level for the chemical in question in subsection (b) as it deems necessary.

(2) The following levels based on state or federal risk assessments shall be deemed to pose no significant risk:

| Chemical Name | Level (micrograms/day) |
|-----------------|------------------------|
| Acetaldehyde | 90 (inhalation) |
| Acrylamide | 0.2 |
| Allyl chloride | 30 |
| Aniline | 100 |
| Azobenzene | 6 |
| Benzo[a]pyrene | 0.06 |
| Benzyl chloride | 4 |

(d) Unless a specific regulatory level has been established for a chemical known to the state to cause cancer in subsection (b) or (c), levels of exposure deemed to pose no significant risk may be determined by the lead agency using an expedited method consistent with the procedures specified in Section 12703.

(1) Any interested party may request the lead agency to reevaluate a level established in this subsection and to consider the adoption, in subsection (c), of a level based on a state or federal risk assessment. Such request shall be made in writing, and shall include a copy of the state or federal risk assessment which the interested party wishes the lead agency to consider as the basis for a level in subsection (c). The lead agency may establish a level in subsection (c) for the chemical in question based on a state or federal risk assessment as it deems necessary.

(2) Any interested party may request the lead agency to reevaluate a level established in this subsection based on scientific considerations that indicate the need for a conventional risk assessment. Such request shall be made in writing, and shall include a description of the scientific considerations that indicate the need for a conventional risk assessment. The lead agency may conduct a conventional risk assessment for the chemical in question, and establish a level in subsection (b) as it deems necessary.

(3) The following levels of exposure based on risk assessments conducted by the lead agency using an expedited method consistent with the procedures specified in Section 12703 shall be deemed to pose no significant risk:

| Chemical Name | Level (micrograms/day) |
|--|------------------------|
| A-alpha-C | |
| (2-Amino-9H-pyridol[2,3-b]indole | 2 |
| Acetamide | 10 |
| 2-Acetylaminofluorene | 0.2 |
| Actinomycin D | 0.00008 |
| AF-2;[2-(2-furyl)-3(5-nitro-2-furyl)] acrylamide | 3 |
| 2-Aminoanthraquinone | 20 |

| <i>Chemical Name</i> | <i>Level (micrograms/day)</i> | <i>Chemical Name</i> | <i>Level (micrograms/day)</i> |
|--|-------------------------------|--|-------------------------------|
| o-Aminoazotoluene | 0.2 | HC Blue 1 | 10 |
| 4-Aminobiphenyl (4-aminodiphenyl) | 0.03 | Hexachloroethane | 20 |
| 3-Amino-9-ethylcarbazole hydrochloride | 9 | Hydrazobenzene (1,2-Diphenylhydrazine) | 0.8 |
| 1-Amino-2-methylantraquinone | 5 | | |
| 2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole | 0.04 | IQ (2-Amino-3-methylimidazo [4,5-f]quinoline) | 0.5 |
| Amitrole | 0.7 | | |
| o-Anisidine | 5 | Lasiocarpine | 0.09 |
| o-Anisidine hydrochloride | 7 | Lead acetate | 3 |
| Aramite | 20 | Lead subacetate | 20 |
| Auramine | 0.8 | | |
| Azaserine | 0.06 | Me-A-alpha-C (2-Amino-3-methyl-9H-pyrido[2,3-b]indole) | 0.6 |
| Azathioprine | 0.4 | Melphalan | 0.005 |
| | | 3-Methylcholanthrene | 0.03 |
| Benzyl violet 4B | 30 | 4,4'-Methylene bis(2-chloroaniline) | 0.5 |
| beta-Butyrolactone | 0.7 | 4,4'-Methylene bis(2-methylaniline) | 0.8 |
| | | 4,4'-Methylenedianiline | 0.4 |
| Captafol | 5 | 4,4'-Methylenedianiline dihydrochloride | 0.6 |
| Captan | 300 | Methyl methane sulfonate | 7 |
| Chlorambucil | 0.002 | 2-Methyl-1-nitroanthraquinone (of uncertain purity) | 0.2 |
| Chlordecone (Kepone) | 0.04 | N-Methyl-N'-nitro-N-nitrosoguanidine | 0.08 |
| Chlorendic acid | 8 | Methylthiouracil | 2 |
| Chlorinated paraffins (Average chain length, C12; approximately 60 percent chlorine by weight) | 8 | Michler's ketone | 0.8 |
| Chlorodibromomethane | 7 | Mirex | 0.04 |
| Chloromethyl methyl ether (technical grade) | 0.3 | Mitomycin C | 0.00009 |
| 3-Chloro-2-methylpropene | 5 | Monocrotaline | 0.07 |
| 4-Chloro-ortho-phenylenediamine | 40 | | |
| Chlorothalonil | 200 | 2-Naphthylamine | 0.4 |
| p-Chloro-o-toluidine | 3 | Nitrilotriacetic acid | 100 |
| Chlorozotocin | 0.003 | Nitrilotriacetic acid, trisodium salt monohydrate | 70 |
| C. I. Basic Red 9 monohydrochloride | 3 | 5-Nitroacenaphthene | 6 |
| Cinnamyl anthranilate | 200 | 5-Nitro-o-anisidine | 10 |
| p-Cresidine | 5 | Nitrofen (technical grade) | 9 |
| Cupferron | 3 | Nitrofurazone | 0.5 |
| Cyclophosphamide (anhydrous) | 1 | 1-[5-Nitrofururylidine]-amino]-2-imidazolidinone | 0.4 |
| Cyclophosphamide (hydrated) | 1 | N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide | 0.5 |
| | | p-Nitrosodiphenylamine | 30 |
| D&C Red No. 9 | 100 | N-Nitroso-N-methylurethane | 0.006 |
| Dacarbazine | 0.01 | N-Nitrosomorpholine | 0.1 |
| Daminozide | 40 | N-Nitrosornicotine | 0.5 |
| Dantron (Chryszin; 1,8-Dihydroxyanthraquinone) | 9 | N-Nitrosopiperidine | 0.07 |
| 2,4-Diaminoanisole | 30 | | |
| 2,4-Diaminoanisole sulfate | 50 | Phenacetin | 300 |
| 4,4'-Diaminodiphenyl ether (4,4'-Oxydianiline) | 5 | Phenazopyridine | 4 |
| 2,4-Diaminotoluene | 0.2 | Phenazopyridine hydrochloride | 5 |
| Dibenz[a,h]anthracene | 0.2 | Phenesterin | 0.005 |
| 1,1-Dichloroethane | 100 | Phenobarbital | 2 |
| Diethylstilbestrol | 0.002 | Phenoxybenzamine | 0.2 |
| Diglycidyl resorcinol ether (DGRE) | 0.4 | Phenoxybenzamine hydrochloride | 0.3 |
| Dihydrosafrole | 20 | o-Phenylphenate, sodium | 200 |
| 4-Dimethylaminoazobenzene | 0.2 | Ponceau MC (D&C Red No. 5) | 200 |
| trans-2[Dimethylamino]methyliminol]-5-[2-(5-nitro-2-furyl)vinyl]-1,3,4-oxadiazole | 2 | Ponceau 3R (FD&C Red No. 1) | 40 |
| 7,12-Dimethylbenz(a)anthracene | 0.003 | Potassium bromate | 1 |
| Dimethylcarbamyl chloride | 0.05 | Procarbazine | 0.05 |
| 1,2-Dimethylhydrazine | 0.001 | Procarbazine hydrochloride | 0.06 |
| Dimethylvinylchloride | 20 | 1,3-Propane sultone | 0.3 |
| Direct Black 38 (technical grade) | 0.09 | beta-Propiolactone | 0.05 |
| Direct Blue 6 (technical grade) | 0.09 | Propylthiouracil | 0.7 |
| Direct Brown 95 (technical grade) | 0.1 | | |
| Disperse Blue 1 | 200 | Reserpine | 0.06 |
| | | | |
| Estradiol 17B | 0.02 | Safrole | 3 |
| Ethyl-4,4'-dichlorobenzilate (chlorobenzilate) | 7 | Sterigmatocystin | 0.02 |
| Ethylene thiourea | 20 | Streptozotocin | 0.006 |
| Ethyleneimine | 0.01 | Styrene oxide | 4 |
| | | Sulfallate | 4 |
| 2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole | 0.3 | | |
| | | 1,1,2,2-Tetrachloroethane | 3 |
| Glu-P-1 (2-Amino-6-methyldipyrido [1,2-a:3'-2'-d]imidazole) | 0.1 | Thiocetamide | 0.1 |
| Glu-P-2 (2-Aminodipyrido[1,2-a:3', 2'-d]imidazole) | 0.5 | 4,4'-Thiodianiline | 0.05 |
| Gyromitrin (Acetaldehyde methylformylhydrazone) | 0.07 | Thiourea | 10 |
| | | Toluene diisocyanate | 20 |
| | | o-Toluidine | 4 |
| | | o-Toluidine hydrochloride | 5 |
| | | Tris(1-aziridinyl)phosphine sulfide (Thiotepa) | 0.06 |
| | | Tris(2,3-dibromopropyl)phosphate | 0.3 |
| | | Trp-P-1 (Tryptophan-P-1) | 0.03 |

| <i>Chemical Name</i> | <i>Level (micrograms/day)</i> |
|---|-------------------------------|
| Trp-P-2 (Tryptophan-P-2) | 0.2 |
| Vinyl trichloride (1,1,2-Trichloroethane) | 10 |

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).
6. New subsection (b) filed 12-1-89; operative 12-31-89 (Register 89, No. 49).
7. Amendment of subsection (b) filed 5-16-90; operative 6-15-90 (Register 90, No. 25).
8. Amendment of subsection (b) filed 5-24-90; operative 6-23-90 (Register 90, No. 25).
9. Editorial correction of printing error in subsection (b) submitted to OAL for printing only 10-9-90 (Register 91, No. 3).
10. Amendment of subsection (b) adding Benzene filed 11-26-90; operative 12-26-90 (Register 91, No. 3).
11. Amendment of subsection (b) adding Arsenic, Butylated hydroxyanisole, Cadmium, and Chromium filed 9-16-92; operative 10-16-92 (Register 92, No. 38).
12. Amendment of subsection (b) adding Hexachlorodibenzodioxin and 2,3,7,8-Tetrachlorodibenzo-p-dioxin filed 9-16-92; operative 10-16-92 (Register 92, No. 38).
13. Amendment of subsection (b) adding dichloromethane, trichloroethylene and vinyl chloride filed 9-24-92; operative 10-26-92 (Register 92, No. 39).
14. Amendment of subsection (a), new subsections (b)-(b)(1), renumbering of subsection (c) to (b)(2) and amendment, new subsections (c)-(d)(3) filed 10-9-92; operative 11-9-92 (Register 92, No. 41).

§ 22-12707. Routes of Exposure.

(a) Where scientifically valid absorption studies conducted according to generally accepted standards demonstrate that absorption of a chemical through a specific route of exposure can be reasonably anticipated to present no significant risk of cancer at levels of exposure not in excess of current regulatory levels, the lead agency may identify the chemical as presenting no significant risk by that route of exposure. Any exposure, discharge or release of a chemical so identified shall be deemed to present no significant risk to the extent that it results in exposure to humans by the identified route, and does not exceed the level established in any other applicable federal or state standard, regulation, guideline, action level, license, permit, condition, requirement or order.

(b) The following chemicals present no significant risk of cancer by the route of ingestion:

- (1) Asbestos
- (2) Beryllium and beryllium compounds
- (3) Cadmium and cadmium compounds
- (4) Chromium (hexavalent compounds)
- (5) Nickel and nickel compounds

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.

3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New subsection (b)(4) filed 10-17-88 as an emergency; operative 10-27-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-24-89.
5. New section, as amended 10-27-88, refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 9). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
6. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).
7. New subsection (b)(5) filed 8-30-90; operative 9-29-90 (Register 90, No. 42).

§ 22-12709. Exposure to Trace Elements.

(a) Except where a specific regulatory level is established in Section 12705, exposure to a trace element listed in (b) shall be deemed to pose no significant cancer risk so long as the reasonably anticipated level of exposure to the chemical does not exceed the level set forth in (b).

(b)

| <i>Element</i> | <i>No Significant Risk Level in micrograms per day</i> |
|---------------------|--|
| Arsenic (inorganic) | 10 (except inhalation) |
| Beryllium | 0.1 |

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).
6. Amendment of Arsenic and repealer of Cadmium filed 9-16-92; operative 10-16-92 (Register 92, No. 38).

§ 22-12711. Levels Based on State or Federal Standards.

(a) Except as otherwise provided in section 12705, 12707, 12709, or 12713, levels of exposure deemed to pose no significant risk may be determined as follows:

(1) Where a state or federal agency has developed a regulatory level for a chemical known to the state to cause cancer which is calculated to result in not more than one excess case of cancer in an exposed population of 100,000, such level shall constitute the no significant risk level.

(2) For drinking water, the following levels shall be deemed to pose no significant risk:

(A) Drinking water maximum contaminant levels adopted by the Department of Health Services for chemicals known to the state to cause cancer;

(B) Drinking water action levels for chemicals known to the state to cause cancer for which maximum contaminant levels have not been adopted;

(C) Specific numeric levels of concentration for chemicals known to the state to cause cancer which are permitted to be discharged or released into sources of drinking water by a Regional Water Quality Control Board in a water quality control plan or in waste discharge requirements, when such levels are based on considerations of minimizing carcinogenic risks associated with such discharge or release.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.

2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. Amendment filed 10-17-88 as an emergency; operative 10-27-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-24-89.
5. Amendment filed 12-21-88 as an emergency; operative 1-1-89 (Register 89, No. 1). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 5-1-89.
6. New section, as amended 10-27-88 and 1-1-89, refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
7. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).
8. Amendment of subsection (a) filed 12-1-89; operative 12-31-89 (Register 89, No. 49).
9. Amendment of subsection (a) filed 5-16-90; operative 6-15-90 (Register 90, No. 25).
10. Amendment of subsection (a)(2) filed 5-24-90; operative 6-23-90 (Register 90, No. 25).
11. Editorial correction of printing error in subsection (a)(2) submitted to OAL for printing only 10-9-90 (Register 91, No. 3).
12. Amendment of subsection (a)(2) deleting Benzene filed 11-26-90; operative 12-26-90 (Register 91, No. 3).
13. Amendment of subsection (a)(2) filed 11-26-90; operative 12-26-90 (Register 91, No. 3).
14. Amendment of subsection (a)(2) repealing Chromium filed 9-16-92; operative 10-16-92 (Register 92, No. 38).
15. Amendment of subsection (a)(2) repealing Tetrachlorodibenzo-p-dioxin filed 9-16-92; operative 10-16-92 (Register 92, No. 38).
16. Amendment of subsection (a)(2) adding Benzyl chloride and Bromodichloromethane filed 9-16-92; operative 10-16-92 (Register 92, No. 38).
17. Amendment of subsection (a)(2) deleting trichloroethylene and vinyl chloride filed 9-24-92; operative 10-26-92 (Register 92, No. 39).
18. Repealer of subsection (a)(2) and renumbering of following subsection filed 10-9-92; operative 11-9-92 (Register 92, No. 41).

§ 22-12713. Exposure to Food, Drugs, Cosmetics and Medical Devices.

(a) The Health and Welfare Agency has determined, based on the recommendation of the Scientific Advisory Panel, that exposure to a listed chemical in a food, drug, cosmetic or medical device which is in compliance with state and federal administrative standards applicable to the product in question poses no significant risk as described in this section. As quantitative risk assessments are performed or identified for listed chemicals and specific regulatory levels are established in Section 12705, those specific levels will supersede the provisions of this section.

(b) For purposes of this section:

(1) "Food" shall have the same meaning as set forth in subsection (f) of Section 321 of Title 21 of the United States Code (21 USC Section 321 (f)).

(2) "Cosmetic" shall have the same meaning as set forth in subsection (i) of Section 321 of Title 21 of the United States Code (21 USC Section 321 (i)).

(3) "Drug" shall have the same meaning as set forth in subsection (g) of Section 321 of Title 21 of the United States Code (21 USC Section 321 (g)).

(4) "Medical device" shall have the same meaning as set forth in subsection (h) of Section 321 of Title 21 of the United States Code (21 USC Section 321 (h)).

(5) "Administrative standards" means all legal requirements that relate to safety utilized by the state or federal agencies responsible for administering state or federal statutes, including regulations, product approvals or licenses, enforcement action levels, and related requirements.

(c) Except as otherwise provided in Section 12705, exposure to a chemical known to the state to cause cancer and present in a food, drug, medical device, or cosmetic (including constituents and contaminants)

shall be deemed to pose no significant risk within the meaning of Health and Safety Code Section 25249.10(c), provided that:

(1) the chemical is a food additive within the meaning of Section 321 of Title 21 of the United States Code, including any food packaging material, approved for use at a specified level by the federal Food and Drug Administration pursuant to Section 348 of Title 21 of the United States Code, or the California Department of Health Services, and is in compliance with all applicable administrative standards.

(2) the chemical is a food substance identified by the federal Food and Drug Administration or the California Department of Health Services to be generally recognized, among experts qualified by scientific training and experience to evaluate its safety, as having been adequately shown through scientific procedures (or in the case of a substance used in food prior to January 1, 1958, through either scientific procedures or experience based on common use in food) to be safe under the conditions of its intended use, and is in compliance with all applicable administrative standards.

(3) the chemical is a food substance used in accordance with a sanction or approval granted prior to January 1, 1958 pursuant to the federal Food, Drug and Cosmetic Act, the Poultry Products Inspection Act (21 U.S.C. 451, et seq.), or the Meat Inspection Act of March 4, 1907 (34 Stat. 1260), as amended and extended (21 U.S.C. 71, et seq.), or the California Food and Agricultural Code and is in compliance with all applicable administrative standards.

(4) the chemical is a color additive within the meaning of Section 321 of Title 21 of the United States Code approved for use at a specified level by the federal Food and Drug Administration, or the California Department of Health Services, and is in compliance with all applicable administrative standards.

(5) the chemical is a substance which is required in the production of food or which cannot be avoided by good manufacturing practice, and for which a specific tolerance level has been established by the federal Food and Drug Administration, or the California Department of Health Services, and is in compliance with all applicable administrative standards.

(6) the chemical is a pesticide chemical within the meaning of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C., Sections 135-135k) which is used in the production, storage, or transportation of agricultural commodities within the meaning of Section 321 of Title 21 of the United States Code and for which a specific tolerance level has been established and is in compliance with all applicable administrative standards.

(7) the chemical is an animal drug within the meaning of Section 321 of Title 21 of the United States Code approved for use at a specified level by the federal Food and Drug Administration, or the California Department of Health Services, and is in compliance with all applicable administrative standards.

(8) the chemical is a drug within the meaning of Section 321 of Title 21 of the United States Code, including a drug generally recognized, among experts qualified by scientific training and experience to evaluate the safety and effectiveness of drugs, as safe and effective for use under the conditions prescribed, recommended, or suggested in the labeling thereof, and is in compliance with all applicable administrative standards.

(d) If a chemical known to the state to cause cancer in a food, drug, medical device, or cosmetic (including constituents and contaminants) is not subject to a specific regulatory level set forth in Section 12705, or paragraphs (1) through (8) of subsection (c) of this section, an exposure to such chemical shall be deemed to pose no significant risk within the meaning of Health and Safety Code Section 25249.10(c), provided that the exposure is in compliance with all applicable administrative standards.

(e) This section shall not apply to any drug the labeling of which contains a statement that the drug is carcinogenic.

(f) Subsections (c) and (d) of this section are intended to establish safe levels of exposure to chemicals present in foods, drugs, medical devices,

or cosmetics, and are based on assumptions about the level and type of exposures occurring in these media.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30). This section provides interim standards pursuant to the policy of the Health and Welfare Agency and the recommendation of the Scientific Advisory Panel.

§ 22-12721. Level of Exposure to Carcinogens.

(a) For the purposes of the Act, "level in question" means the chemical concentration of a listed chemical for the exposure in question. The exposure in question includes the exposure for which the person in the course of doing business is responsible, and does not include exposure to a listed chemical from any other source or product.

(b) For purposes of the Act, "lifetime exposure" means the reasonably anticipated rate of exposure for an individual to a given medium of exposure measured over a lifetime of seventy years.

(c) For purposes of Health and Safety Code Section 25249.10(c), the level of exposure to a listed carcinogen, assuming lifetime exposure at the level in question, shall be determined by multiplying the level in question (stated in terms of a concentration of a chemical in a given medium) times the reasonably anticipated rate of exposure for an individual to the given medium of exposure measured over a lifetime of seventy years.

(d) The following assumptions shall be used to calculate the reasonably anticipated rate of exposure to a listed carcinogen, unless more specific and scientifically appropriate data are available:

(1) For an exposure reasonably expected to affect the general population in any geographic area:

(A) The exposed individual ingests two liters of drinking water per day.

(B) The exposed individual inhales twenty cubic meters of air per day.

(C) The exposed individual has a lifespan of seventy years.

(2) For an exposure reasonably anticipated to affect a certain subpopulation of the general population in any geographic area, specific data (if available) relating to that subpopulation shall be used to determine the level of exposure.

(A) In the absence of more specific and scientifically appropriate data, the following assumptions should be made as appropriate:

| Subpopulation | Water liters/day | Air cubic meters/day |
|---------------------------------|---------------------|-------------------------|
| Man (18 + years of age) | 2 | 20 |
| Woman (18 + years of age) | 2 | 20 |
| Woman with conceptus | 2 | 20 |
| Adolescent (10-18 years of age) | 2 | 20 |
| Child (2-10 years of age) | 2 | 15 |
| Infant (0-2 years of age) | 1 | 4 |

(B) For an exposure reasonably expected to affect the conceptus (embryo or fetus), the gestation period for the exposed conceptus is nine months.

(3) For workplace exposures, the exposed worker inhales ten cubic meters of workplace air per eight-hour day, forty hours per week, fifty weeks per year over a forty-year period. The exposed individual from the general population who occasionally enters a workplace inhales 1.25 cubic meters of workplace air for one hour per month for a seventy-year lifetime.

(4) For exposures to consumer products, lifetime exposure shall be calculated using the average rate of intake or exposure for average users of the consumer product, and not on a per capita basis for the general population. The average rate of intake or exposure shall be based on data for use of a general category or categories of consumer products, such as the United States Department of Agriculture Home Economic Research Report, Foods Commonly Eaten by Individuals: Amount Per Day and Per Eating Occasion, where such data are available.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).

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§ 22-12801. General.

(a) The determination of whether a level of exposure to a chemical known to the state to cause reproductive toxicity has no observable effect for purposes of Health and Safety Code Section 25249.10(c) shall be based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for the listing of a chemical as known to the state to cause reproductive toxicity. Nothing in this article shall preclude a person from using evidence, standards, assessment methodologies, principles, assumptions or levels not described in this article to establish that a level of exposure has no observable effect at one thousand (1,000) times the level in question.

(b) A level of exposure to a listed chemical shall be deemed to have no observable effect, assuming exposure at one thousand times that level, provided that the level is determined:

(1) By means of an assessment that meets the standards described in section 12803 to determine the maximum dose level having no observable effect, and dividing that level by one thousand (1,000) to arrive at the maximum allowable dose level; or

(2) By application of a specific regulatory level for the chemical in question as provided in Section 12805.

(c) For purposes of this article, "NOEL" shall mean that no observable effect level, which is the maximum dose level at which a chemical has no observable reproductive effect.

(d) The chemicals specifically contained in this article do not include all listed reproductive toxicants for which there is a level of exposure which has no observable effect assuming exposure at one thousand times the level in question. The fact that a chemical does not specifically appear in this article does not mean that it has an observable effect at any level.

(e) This article establishes exposure levels solely for purposes of Health and Safety Code Section 25249.10(c). Nothing in this article shall be construed to establish exposure levels for other regulatory purposes.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).

§ 22-12803. Assessment.

(a) A quantitative risk assessment which conforms to this section shall be deemed to determine the level of exposure to a listed chemical which has no observable effect, assuming exposure at one thousand times the level in question. The assessment shall be based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for listing the chemical as known to the state to cause reproductive toxicity. In the absence of principles or assumptions scientifically more appropriate, based upon the available data, the following default principles and assumptions shall apply in any such assessment:

(1) Only studies producing the reproductive effect which provides the basis for the determination that a chemical is known to the state to cause reproductive toxicity shall be utilized for the determination of the NOEL. Where multiple reproductive effects provide the basis for the determination that a chemical is known to the state to cause reproductive toxicity, the reproductive effect for which studies produce the lowest NOEL shall be utilized for the determination of the NOEL. The NOEL shall be the

highest dose level which results in no observable reproductive effect, expressed in milligrams of chemical per kilogram of bodyweight per day.

(2) The quality and suitability of available epidemiologic data shall be appraised to determine whether the study is appropriate as the basis of an assessment considering such factors as the selection of the exposed and reference groups, the reliable ascertainment of exposure, and completeness of follow-up. Biases and confounding factors shall be identified and quantified.

(3) Animal bioassay studies for assessment shall meet generally accepted scientific principles, including the thoroughness of experimental protocol, the degree to which dosing resembles the expected manner of human exposure, the temporal exposure pattern, the duration of study, the purity of test material, the number and size of exposed groups, and the route of exposure and the extent of occurrence of effects.

(4) The NOEL shall be based on the most sensitive study deemed to be of sufficient quality.

(5) The results obtained for the most sensitive study deemed to be of sufficient quality shall be applicable to all routes of exposure for which the results are relevant.

(6) When available data are of such quality that anatomic, physiologic, pharmacokinetic and metabolic considerations can be taken into account with confidence, they may be used in the assessment.

(7) When data do not allow the determination of a NOEL, the lowest observable effect level (LOEL) shall be divided by 10 to establish a NOEL for purposes of assessment.

(b) The NOEL shall be converted to a milligram per day dose level by multiplying the assumed human body weight by the NOEL. When the applicable reproductive effect is upon the male, human body weight of 70 kilograms shall be assumed. When the applicable reproductive effect is upon the female or conceptus, human body weight of 58 kilograms shall be assumed.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).

§ 22-12805. Specific Regulatory Levels: Reproductive Toxicants.

(a) Exposure to a chemical at a level which does not exceed the level set forth in subsection (b) for such chemical has no observable effect assuming exposure at one thousand (1,000) times that level.

| (b) Chemical Name | Level (Micrograms/day) |
|-------------------|------------------------|
| Ethylene Oxide | 20.0 |
| Lead | 0.5 |
| Toluene | 7000 |

(c) Unless a specific level is otherwise provided in this section, an assessment by an agency of the state or federal government that is the substantial equivalent of the assessment described in subdivision (a) of Section 12803, and establishes a maximum allowable daily dose level in the manner provided in paragraph (b)(1) of Section 12801, shall constitute the allowable daily dose level having no observable effect within the meaning of Health and Safety Code Section 25249.10(c).

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.
5. Certificate of Compliance transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).
6. Amendment of subsection (b) filed 4-9-92; operative 5-11-92 (Register 92, No. 15).

§ 22-12821. Level of Exposure to Reproductive Toxicants.

(a) For purposes of the Act, "level in question" means the chemical concentration of a listed chemical for the exposure in question. The exposure in question includes the exposure for which the person in the course of doing business is responsible, and does not include exposure to a listed chemical from any other source or product.

(b) For purposes of Health and Safety Code Section 25249.10(c), the level of exposure to a listed reproductive toxicant shall be determined by multiplying the level in question (stated in terms of a concentration of a chemical in a given medium) times the reasonably anticipated rate of exposure for an individual to a given medium. The reasonably anticipated rate of exposure shall be based on the pattern and duration of exposure that is relevant to the reproductive effect which provided the basis for the determination that a chemical is known to the state to cause reproductive toxicity. (For example, an exposure of short duration is appropriate for a teratogenic chemical, whereas a chronic or protracted exposure is appropriate for one that retards fetal growth.)

(c) The following assumptions shall be used to calculate the reasonably anticipated rate of exposure to a listed reproductive toxicant, unless more specific and scientifically appropriate data are available:

(1) The assumptions set forth in subdivision (d) of Section 12721 shall be used to calculate the reasonably anticipated rate of exposure to a listed reproductive toxicant, unless more specific and scientifically appropriate data are available.

(2) For exposures to consumer products, the level of exposure shall be calculated using the reasonably anticipated rate of intake or exposure for average users of the consumer product, and not on a per capita basis for the general population. The rate of intake or exposure shall be based on data for use of a general category or categories of consumer products, such as the United States Department of Agriculture Home Economic Research Report, Foods Commonly Eaten by Individuals: Amount Per Day and Per Eating Occasion, where such data are available.

(3) Where a maternal exposure to a listed reproductive toxicant has an effect on the conceptus (embryo or fetus), the level of exposure shall be based on the reasonably anticipated rate of exposure for the mother during the nine-month gestation period.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6, 25249.9, 25249.10 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section refiled 10-17-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.

5. Certificate of Compliance including amendment transmitted to OAL 6-9-89 and filed 7-10-89 (Register 89, No. 30).

§ 22-12901. Methods of Detection.

(a) For purposes of Section 25249.11, subdivision (c), of the Health and Safety Code, the term "any detectable amount" means a level detected using a method of analysis referred to in this section. For purposes of this section, "method of analysis" refers to the method of detection or detection and calculation for a listed chemical in a specific medium, including, but not limited to, water, air, food, or soil, and shall include methods and procedures concerning the number of samples and the frequency and site of sampling that are specific for the listed chemical in question.

(b) Where the California Department of Health Services, the California Department of Food and Agriculture, the Air Resources Board, a local air pollution control district, the State Water Resources Control Board, or a Regional Water Quality Control Board has adopted or employs a method of analysis for a listed chemical in a specific medium, such method shall be the method of analysis for that chemical in that medium. Where more than one method of analysis has been so adopted or is so employed, each may be utilized as the method of analysis.

(c) Where no state or local agency identified in subdivision (b) has adopted or employs a method of analysis, a method of analysis for a listed chemical in a specific medium adopted or employed by a federal agency shall be the method of analysis for that chemical in that medium. When more than one method of analysis has been so adopted or is so employed, each may be utilized as the method of analysis.

(d) Where no regulatory agency identified in subdivision (b), or (c) has adopted or employs a method of analysis, a method of analysis for a listed chemical in a specific medium which is generally accepted by the scientific community, as evidenced by its publication in compilations by professional and scientific associations or societies, such as the Association of Official Analytical Chemists, or in peer-reviewed technical journals published by such associations or societies, such method shall be the method of analysis for that chemical in that medium. When more than one method of analysis is generally accepted, each may be utilized as the method of analysis.

(e) Where no method of analysis as described in subsections (b) or (c) has been adopted or is employed, or is generally accepted by the scientific community as described in subsection (d), and a scientifically valid method of analysis has been developed for a listed chemical in a specific medium, such method shall be the method of analysis for that chemical in that medium. Where more than one method of analysis has been developed for a chemical in a specific medium, each may be utilized as the method of analysis.

(f) In performing an analysis to determine the concentration of a chemical known to the state to cause cancer or reproductive toxicity in a given medium, generally accepted standards and practice for sampling, collection, storage, preparation, chemical analysis, statistical analysis of data, interpretation of results and modeling shall be observed.

(g) For purposes of Health and Safety Code Sections 25249.5 and 25249.6, no discharge, release or exposure occurs unless a listed chemical is detectable as provided in this section.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Sections 25249.5, 25249.6 and 25249.11, Health and Safety Code.

HISTORY

1. New section filed 2-24-88 as an emergency; operative 2-27-88 (Register 88, No. 11). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-27-88.
2. New section refiled 6-27-88 as an emergency; operative 6-27-88 (Register 88, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-25-88.
3. New section with amendment of subsections (a) and (b), renumbering and amendment of subsections (c) and (d) to subsections (e) and (f), and new subsections (c), (d) and (g) refiled 10-21-88 as an emergency; operative 10-25-88 (Register 88, No. 44). A Certification of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 2-22-89.
4. New section, as amended 10-25-88, refiled 2-21-89 as an emergency; operative 2-22-89 (Register 89, No. 10). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 6-22-89.

- 5. New section refiled 6-19-89 as an emergency; operative 6-22-89 (Register 89, No. 27). A Certificate of Compliance must be transmitted to OAL within 120 days or emergency language will be repealed on 10-20-89.
- 6. Certificate of Compliance as to 6-19-89 order transmitted to OAL 10-20-89 and filed 11-20-89 (Register 89, No. 48).

§ 22-12902. Formally Required to Be Labeled or Identified As Causing Cancer or Reproductive Toxicity.

(a) In accordance with Section 25249.8(b), Health and Safety Code, a chemical is known to the state to cause cancer or reproductive toxicity within the meaning of the Act, and shall be listed pursuant to Section 25249.8(a), Health and Safety Code, if the lead agency determines that an agency of the state or federal government has formally required the chemical to be labeled or identified as causing cancer or reproductive toxicity. In making such determination, the lead agency shall act in accordance with this section.

(b) The following definitions shall apply to this section:

(1) "lead agency" is defined pursuant to Section 12301(c) of this title.

(2) "agency of the state or federal government" means the United States Congress or the California State Legislature acting through legislation, any agency, department, office, officer, division, bureau, board, or commission of California state government (excluding political subdivisions thereof) or of the United States government, which has the statutory or regulatory authority to require a person or entity outside of that agency to label or identify a chemical as causing cancer or reproductive toxicity.

(3) "has formally required" means that a mandatory instruction, order, condition, or similar command, has been issued in accordance with established policies and procedures of an agency of the state or federal government, to a person or legal entity outside of the agency. The action of such agency may be directed at one or more persons or legal entities and may include formal requirements of general application.

(4) "labeled" means that a warning message about the carcinogenicity or reproductive toxicity of a chemical is printed, stamped, written, or in any other manner placed upon the container in which the chemical is present or its outer or inner packaging including any material inserted with, attached to, or otherwise accompanying such chemical.

(5) "identified" means that a required message about the carcinogenicity or reproductive toxicity of the chemical is to be disclosed in any manner to a person or legal entity other than the person or legal entity who is required to make such disclosure.

(6) "as causing cancer or reproductive toxicity" means:

(A) For chemicals that cause cancer, the required label or identification uses any words or phrases intended to communicate a risk of cancer or tumors.

(B) For chemicals that cause reproductive toxicity, the required label or identification uses any words or phrases intended to communicate a risk of reproductive harm to men or women or both, or a risk of birth defects or other developmental harm.

(c) Any person may petition the lead agency to consider listing a chemical pursuant to this section. The petition shall be considered only if the petition contains sufficient information to support a determination by the lead agency that substantial evidence exists to support a finding that the chemical meets the requirements of this section.

(d) Any determination by the lead agency under this section may be rescinded or modified in light of additional evidence received by the lead agency establishing that the listing does not satisfy the definitions set forth in this section. Any such action to rescind or modify shall be done pursuant to this section.

NOTE: Authority cited: Section 25249.12, Health and Safety Code. Reference: Section 25249.8, Health and Safety Code.

HISTORY

New section filed 3-1-90; operative 3-31-90 (Register 90, No. 11).

§ 22-14000. Chemicals Required by State or Federal Law to Have Been Tested for Potential to Cause Cancer or Reproductive Toxicity, but Which Have Not Been Adequately Tested As Required.

(a) The Safe Drinking Water and Toxic Enforcement Act of 1986 requires the Governor to publish a list of chemicals formally required by state or federal agencies to have testing for carcinogenicity or reproductive toxicity, but that the state's qualified experts have not found to have been adequately tested as required [Health and Safety Code 25249.8(c)].

Readers should note a chemical that already has been designated as known to the state to cause cancer or reproductive toxicity is not included in the following listing as requiring additional testing for that particular toxicological endpoint. However, the "data gap" may continue to exist, for purposes of the state or federal agency's requirements. Additional information on the requirements for testing may be obtained from the specific agency identified below.

(b) Chemicals required to be tested by the California Department of Pesticide Regulation.

The Birth Defect Prevention Act of 1984 (SB 950) mandates that the California Department of Pesticide Regulation (CDPR) review chronic toxicology studies supporting the registration of pesticidal active ingredients. Missing or unacceptable studies are identified as data gaps. The studies are conducted to fulfill generic data requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), which is administered by the U.S. Environmental Protection Agency. The studies are reviewed by CDPR according to guidelines and standards promulgated under FIFRA. Thus, older studies may not meet current guidelines.

The existence of a data gap for a compound does not indicate a total lack of information on the carcinogenicity or reproductive toxicity of the compound. In some cases, information exists in the open scientific literature, but SB 950 requires specific additional information. A data gap does not necessarily indicate that an oncogenic or reproductive hazard exists. For the purposes of this list, a data gap is still considered to be present until the study is reviewed and found to be acceptable.

Following is a listing of SB 950 data gaps for oncogenicity, reproduction, and teratology studies for the first 200 pesticidal active ingredients. This list will change as data gaps are filled by additional data or replacement studies.

For purposes of this section, "onc mouse" means oncogenicity in mice, "onc rat" means oncogenicity in rats, "repro" means reproduction, "tera rodent" means teratogenicity in rodents, "tera rabbit" means teratogenicity in rabbits.

| <i>Chemical</i> | <i>Testing Needed</i> |
|----------------------------------|---|
| Acrolein | onc rat, onc mouse, repro |
| Alkyl (50%C14, 40%C12, 10%C16) | |
| dimethylbenzyl ammonium chloride | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Amitrole | repro |
| Bendiocarb | onc rat, repro, tera rodent |
| Bentazon, sodium salt | repro |
| ortho-Benzyl-para-chlorophenol | onc rat, onc mouse, repro, tera rabbit |
| Boric acid | onc rat, repro |
| Bromacil | onc rat, repro |
| Bromoxynil octanoate | onc rat |
| Carbaryl | onc rat, onc mouse |
| Carboxin | onc rat, repro |
| Chloroneb | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Chloropicrin | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Chlorthal-dimethyl | onc rat, onc mouse, repro, tera rabbit |
| Coumaphos | onc mouse, repro |
| Creosote | tera rodent, tera rabbit |

| <i>Chemical</i> | <i>Testing Needed</i> |
|--|---|
| Cryolite | onc rat, onc mouse, repro, tera rabbit |
| Cyanuric acid, monosodium salt | tera rabbit |
| 2,4-D | onc mouse |
| 2,4-D, Dimethylamine salt | onc mouse |
| DDVP | repro |
| DEET | onc rat |
| Diazinon | repro |
| Dicamba | onc rat, onc mouse, repro, tera rabbit |
| Dichlobenil | repro rabbit |
| para-Dichlorobenzene | tera rodent |
| Diclofop methyl | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Didecyl dimethyl ammonium chloride | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Diethyl-ethyl | repro, tera rodent |
| Dimethoate | repro |
| Diphacinone | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Diphenylamine | onc rat, onc mouse, repro, tera rodent |
| Dipropyl isocinchomeronate | onc rat, onc mouse, repro, tera rodent |
| Diquat dibromide | onc mouse, repro, tera rabbit |
| Diuron | onc mouse, repro |
| Endothall, mono (N,N-dimethyl-alkylamine) salt | onc mouse, repro |
| Ethalfuralin | repro |
| Ethephon | repro, |
| Ethofumesate | tera rodent |
| Fenarimol | tera rabbit |
| Fenthion | onc mouse |
| Ferbam | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Formaldehyde | repro, tera rodent, tera rabbit |
| Glyphosate, isopropylamine salt | onc rat, repro |
| Imazalil | onc mouse, repro |
| Iprodione | onc rat, onc mouse, repro |
| Lindane | repro |
| Lithium hypochlorite | onc rat, onc mouse, repro, tera rabbit |
| Maleic hydrazide, potassium salt | onc rat |
| Maneb | tera rodent |
| Mefluidide, diethanolamine salt | tera rodent |
| Metaldehyde | onc rat, onc mouse, repro |
| Metam-sodium | onc rat, onc mouse, repro |
| Methyl bromide | onc rat, onc mouse, repro |
| Methyl parathion | onc rat, onc mouse, tera rabbit |
| Methylenebis (thiocyanate) | repro |
| Metribuzin | onc rat |
| Mevinphos | onc rat |
| MSMA | onc mouse, repro |
| Naphthalene | onc rat, onc mouse, repro, tera rodent |
| Norflurazon | repro |
| Octylbicycloheptene dicarboximide | onc rat, onc mouse, repro, tera rodent |
| Oryzalin | repro |
| Oxamyl | onc rat, repro |
| Oxyfluorfen | repro, tera rodent |
| Oxythioquinox | onc rat |
| Paraquat dichloride | tera rabbit |
| PCNB | onc rat, repro |
| PCP | repro, tera rabbit |
| Pendimethalin | repro |
| Petroleum distillates, aromatic | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Phenothrin | onc rat, repro |
| ortho-Phenylphenol | onc mouse, repro, tera rabbit |
| Phosmet | onc rat, repro, tera rodent, tera rabbit |
| Piperonyl butoxide, technical | onc mouse, tera rodent |

| <i>Chemical</i> | <i>Testing Needed</i> |
|-----------------------------------|---|
| Prometryn | onc rat, repro |
| Propetamphos | repro |
| Propoxur | onc mouse |
| Propyzamide | repro |
| Pyrethrins | onc rat, onc mouse, tera rodent, tera rabbit |
| Resmethrin | onc mouse, repro |
| Rotenone | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Simazine | repro |
| Sulfuryl fluoride | onc rat, onc mouse |
| Tetrachlorvinphos | onc rat, repro |
| Tetramethrin | onc mouse |
| Thiabendazole, hypophosphite salt | onc rat, tera rodent |
| Thiophanate-methyl | onc rat, onc mouse, repro, tera rodent |
| Thiram | onc rat, onc mouse, repro, tera rabbit |
| Triadimefon | onc rat |
| S,S,S-Tributylphosphorotrithioate | onc rat, repro |
| Tributyltin benzoate | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Tributyltin oxide | onc rat, onc mouse, repro, tera rodent, tera rabbit |
| Trichlorophon | repro, tera rabbit |
| Trichloro-S-triazinetriene | tera rabbit |
| Triforine | onc rat, onc mouse, repro, tera rabbit |
| Vinclozolin | onc rat, onc mouse, repro |

(c) Chemicals required to be tested by the United States Environmental Protection Agency, Office of Toxic Substances.

Under Section 4(a) of the Toxic Substances Control Act, testing of a chemical is required when that chemical may present an unreasonable risk, or is produced in substantial quantities and enters the environment in substantial quantities, or may have significant or substantial human exposure.

For purposes of this section, "tera" means teratogenicity, "rtox" means reproductive toxicity, "onc" means oncogenicity, "inhl" means inhalation, and "oral" means oral administration.

| <i>Chemical</i> | <i>Testing Needed</i> |
|------------------------------------|--|
| Acrylic acid | tera inhl, rtox oral |
| Commercial hexane | onc inhl, tera inhl, rtox inhl |
| Cyclohexane | onc inhl, rtox oral, tera inhl |
| Hydroquinone | tera oral, rtox oral |
| Isopropanol | onc inhl, rtox oral, tera oral |
| Mesityl oxide | rtox inhl |
| Methyl ethyl ketoxime | onc inhl, onc oral, tera oral, rtox oral |
| Methyl tert-butyl ether | onc inhl |
| Tributyl phosphate | onc oral, tera oral, rtox oral |
| 1,2,4-Trichlorobenzene | onc oral |
| Triethylene glycol monobutyl ether | tera oral |

(d) Chemicals required to be tested by the United States Environmental Protection Agency, Office of Pesticide Programs

The U.S. Environmental Protection Agency (EPA) is responsible for the regulation of pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). FIFRA requires EPA to register pesticides based on data adequate to demonstrate that they will not result in unreasonable adverse effects to people or the environment when used in accordance with their EPA-approved labels.

In 1988, FIFRA was amended to strengthen EPA's pesticide regulatory authority and responsibilities to reregister pesticides registered prior to 1984 to ensure they meet today's stringent scientific and regulatory standards. Reregistration requires registrants to develop up-to-date data bases for each pesticide active ingredient. As part of the reregistration process, modifications may be made to registrations, labels or tolerances to ensure they are protective of human health and the environment. Also,

reregistration reviews will identify any pesticides where regulatory action may be necessary to deal with unreasonable risks. EPA has been directed to accelerate the reregistration process so that the entire process is completed by 1997. The 1988 amendments set out a five-phase schedule to accomplish this task with deadlines applying to both pesticide registrants and the EPA. These amendments are requiring a substantial number of new studies to be conducted and old studies to be reformatted for EPA review to ensure they are adequate. EPA may, in the future, request additional data or information to further evaluate any concerns over the safety of pesticide products.

The chemicals listed below are those for which data are unavailable or inadequate to characterize oncogenicity, teratogenicity, or reproductive effects potential. For purposes of this section, "onc" means oncogenicity, "tera" means teratogenicity, and "repro" means reproductive toxicity.

| <i>Chemical</i> | <i>Data Requirements</i> | <i>Chemical</i> | <i>Data Requirements</i> |
|--------------------------|--------------------------|---------------------------|--------------------------|
| Acrolein | onc, repro | Endosulfan | onc |
| ADBAC | onc | EPTC | onc |
| Allethrin | onc, repro, tera | Ethoprop | onc, repro, tera |
| Aluminum phosphide | tera | Ethoxyquin | tera |
| Anilazine | onc | Fenamiphos | tera |
| Asulam | onc | Fenitrothion | onc |
| Atrazine | onc | Fensulfothion | onc, repro, tera |
| Azinphos-methyl | onc | Fenthion | onc, repro |
| Benfluralin (Fenfin) | onc | Fluometuron | onc, repro, tera |
| Bis(tributyltin)oxide | onc, repro, tera | Fonofos | onc, tera |
| Boric acid/Boron | tera | Formaldehyde | repro, tera |
| Bromacil and salts | onc, repro | Formetanate hydrochloride | onc, repro, tera |
| Brominated salicynilide | onc, tera | Glyphosate | onc |
| Butoxypropylene glycol | tera | Heptachlor | tera |
| Butralin | onc, tera | Hexazinone | onc, repro |
| Cacodylic acid | onc | MAMA (methanearsenate) | onc |
| CAMA (methanearsenate) | onc | Magnesium phosphide | tera |
| Carbaryl | onc, tera | Malathion | onc, repro |
| Carboxin | onc, repro, tera | Maleic hydrazide | onc |
| Chloroneb | onc, repro, tera | Maneb | repro, tera |
| Chloroprotham | onc | MCPA | tera |
| Chlorpyrifos | repro | MCPB | tera |
| Chlorothalonil | repro, tera | Merphos | onc, repro, tera |
| Chlorsulfuron | tera | Metaldehyde | onc, repro, tera |
| Chromated arsenicals | repro, tera | Methiocarb | repro |
| Coal tar/creosote | tera | Methoxychlor | onc, repro, tera |
| Coumaphos | repro | Methyl bromide | onc, tera |
| Cryolite | onc, repro | Methyl isothiocyanate | repro |
| 2,4-D | onc, tera | Methyl parathion | onc, tera |
| 2,4-DB | onc, tera | Metiram | repro, tera |
| 2,4-DP | tera | Metribuzin | tera |
| Daminozide | tera | Mevinphos | onc, repro, tera |
| DAMA (methanearsenate) | onc | MGK 264 | onc |
| DCPA | onc | Molinate | onc |
| DEET | onc | MSMA | onc |
| DEF | onc, repro | Nabam | onc, repro, tera |
| Diazinon | repro | Naphthalene | onc, tera |
| Dichlobenil | onc, repro, tera | b-Naphthoxyacetic acid | tera |
| Dichlorvos | repro, tera | Naptalam | onc, tera |
| Difenzoquat | onc, tera | Nitrapyrin | onc, tera |
| Dimethoate | onc | OAMA | onc |
| Dinoseb | onc | Orthophenylphenol | repro |
| Diphenyl isocinchomerate | onc, repro, tera | Oxamyl | onc, repro |
| Diquat dibromide | onc | Oxydemeton methyl | onc |
| Diuron | onc | Parathion | onc |
| Dodine | onc, repro, tera | Pebulate | repro, tera |
| DSMA (methanearsenate) | onc | Pendimethalin | onc, tera |
| | | Phenmedipham | onc, tera |
| | | Phosalone | onc, repro, tera |
| | | Phosmet | onc |
| | | Picloram | onc, repro, tera |
| | | Prometryn | onc, repro, tera |
| | | Pronamide | onc, repro, tera |
| | | Propachlor | onc, repro, tera |
| | | Propanil | onc |
| | | Propoxur | repro |
| | | Pyrethrin | onc |
| | | Resmethrin | onc |

| <i>Chemical</i> | <i>Data Requirements</i> |
|---------------------------|--------------------------|
| Simazine | tera |
| Sodium omadine | repro, tera |
| Strychnine alkaloid | onc, repro, tera |
| Strychnine sulfate | onc, repro, tera |
| 1080/Strychnine | onc, repro, tera |
| Sulfotepp | tera |
| Sumithrin | tera |
| TCMTB | onc, repro |
| Terbacil | onc |
| Thiram | onc, repro, tera |
| Temephos | onc, tera |
| Tetrachlorvinphos | onc |
| Triphenyltin hydroxide | tera |
| Trichlorfon | onc, tera |
| Trimethacarb | onc, repro |
| Vendex (Fenbutalin oxide) | repro |
| Vernolate | onc, repro, terad |

Revised: January 1, 1993 .

HISTORY

1. New section submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 89, No. 17).
2. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 90, No. 2).
3. Amendment submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 91, No. 17).
4. Editorial correction of subsection (d) (Register 91, No. 31).
5. Editorial correction of printing error (Register 91, No. 43).
6. Editorial correction instituting inadvertently omitted amendment. Submitted to OAL for printing only pursuant to Government Code section 11343.8 (Register 93, No. 20).

3. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66232. Vessel.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. Repealer and new section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66234. Wastewater Treatment Unit.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. New section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66236. Water Reactive.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY

1. Amendment filed 9-27-84; effective thirtieth day thereafter (Register 84, No. 41).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66238. Water Bulk Shipment.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. New section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66240. Well.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. Repealer and new section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.1. Purpose, Scope, and Applicability.

(a) This chapter provides definitions of terms, general standards, and overview information applicable to this division.

(b) In this chapter:

(1) Section 66260.2 sets forth the rules that the Department will use in making information it receives available to the public and sets forth the requirements that generators, transporters, or owners or operators of treatment, storage, or disposal facilities must follow to assert claims of business confidentiality with respect to information that is submitted to the Department under this division.

(2) Section 66260.3 establishes rules of grammatical construction for this division.

(3) Section 66260.4 establishes a rule restricting local enforcement actions relating to the management of hazardous waste.

(4) Section 66260.5 sets forth processing times for specified Departmental actions.

(5) Section 66260.10 defines terms which are used in this division.

(6) Section 66260.11 lists references used in this division and a source for these documents.

(7) Section 66260.12 lists acronyms and abbreviations used in this division.

(8) Section 66260.21 establishes requirements and procedures for obtaining waivers to use alternative test methods or analytical methods for classifying non-RCRA hazardous waste and for obtaining the Department's concurrence for using alternative methods allowed by the USEPA Administrator per 40 CFR Section 260.21 for the analysis of RCRA hazardous waste.

(9) Section 66260.200 establishes procedures for obtaining the Department's concurrence on classification of a waste as hazardous or non-hazardous.

(10) Section 66260.210 establishes procedures and requirements for obtaining waivers from regulation for non-RCRA hazardous waste and non-RCRA regulated activities.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Section 25159.5, Health and Safety Code and 40 CFR Section 260.1.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.2. Availability of Information; Confidentiality of Information.

(a) Any information provided to the Department pursuant to this division will be made available to the public to the extent and in the manner authorized by section 3007(b) of RCRA and the California Public Records Act (Government Code section 6250 et seq.), and EPA regulations set forth in 40 CFR Part 2, as applicable.

(b) Any person who submits information to the Department pursuant to this division may assert a claim of business confidentiality covering part or all of that information by following the procedures set forth in Title 40 CFR 2.203(b). However, if no such claim accompanies the information when it is received by the Department, it may be made available to the public without further notice to the person submitting it.

(c) Information covered by such a claim will be disclosed by the Department only to the extent, and by means of the procedures, set forth in Part 2, Subpart B, of 40 CFR except that information required by section 66262.53(a) which is submitted in notification of intent to export a hazardous waste pursuant to section 66262.53(a) will be provided to the U.S. Department of State and the appropriate authorities in a receiving country regardless of any claims of confidentiality.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Section 25159.5, Health and Safety Code and 40 CFR Section 260.2.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.3. Use of Number.

As used in this division:

- (a) Words in the singular include the plural; and
- (b) Words in the plural include the singular.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Section 25159.5, Health and Safety Code and 40 CFR Section 260.3.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.4. Local Agency Regulation of Hazardous Waste Facilities.

No local agency shall enforce any requirement, other than those in this division, which would impede interstate or intrastate transportation or disposal of hazardous waste or which would impede use of facilities for regional multi-county management of hazardous waste.

NOTE: Authority cited: Sections 208 and 25150, Health and Safety Code. Reference: Section 25150, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.5. Processing Times Based on Actual Performance.

The Department's time periods for processing applications for specific Departmental actions based on actual performance for the two years immediately preceding proposal of this regulation are as follows:

(a) Hazardous waste hauler registration (section 66263.11):

- (1) Median time: 60 days
- (2) Minimum time: 1 day
- (3) Maximum time: 180 days

(b) waste classification concurrence (section 66260.200) and Special waste classification (section 66261.124):

- (1) Median time: 11 months
- (2) Minimum time: 2 days
- (3) Maximum time: 39 months

(c) Variances (section 66260.210):

(1) Median time: 60 days

(2) Minimum time: 1 day

(3) Maximum time: 1200 days.

NOTE: Authority cited: Section 15376, Government Code; and Sections 208 and 25150, Health and Safety Code. Reference: Section 15376, Government Code; and Sections 25141, 25143 and 25163, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§ 22-66260.10. Definitions.

When used in this division, the following terms have the meanings given below:

"Aboveground tank" means a device meeting the definition of "tank" in section 66260.10 and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.

"Accidental occurrence" means an accident, including continuous or repeated exposure to conditions, which results in bodily injury, property damage or environmental degradation neither expected nor intended from the standpoint of the insured.

"Accumulated speculatively" means that a material is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that, during the calendar year (commencing on January 1), the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under section 66261.4(c) are not to be included in making the calculation. (Materials that are already defined as wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation for recycling, however.

"Active life" or "Operating life" of a facility means the period from the initial receipt of hazardous waste at the facility until the Department receives certification of final closure.

"Active portion" means that portion of a facility where transfer, treatment, storage or disposal operations are being or have been conducted after November 19, 1980 and which is not a closed portion.

"Activity" means any activity that is subject to regulation under this division.

"Acute aquatic 96-hour LC₅₀" means the concentration of a substance or mixture of substances in water, in milligrams per liter, which produces death within 96 hours in half of a group of at least 10 test fish.

"Acute dermal LD₅₀" means the dose of a substance or mixture of substances, in milligrams per kilogram of test animal body weight, which, when applied continuously to the bare skin for 24 hours, produces death within 14 days in half of a group of 10 or more rabbits.

"Acute inhalation LC_{LO}" means the lowest concentration of a substance or mixture of substances in air, other than acute inhalation LD₅₀ in parts per million by volume if the substance or mixture of substances is a gas or vapor, reported to have caused death in humans or animals.

"Acute inhalation LC₅₀" means the concentration of a substance or mixture of substances in air, in parts per million by volume if the substance or mixture of substances is a gas or vapor, which when inhaled continuously for 8 hours by a group of 10 or more laboratory white rats, each weighing between 200 and 300 grams, produces death in half the group within 14 days.

"Acute LD_{LO}" means the lowest dose, other than an acute LD₅₀ of a substance or mixture of substances, in milligrams per kilogram body

weight introduced orally or dermally over any given period of time in one or more divided portions and reported to have caused death in humans or animals.

"Acute oral LD₅₀" means the dose of a substance or mixture of substances, in milligrams per kilogram of test animal body weight, which, when administered orally as a single dose, produces death within 14 days in half of a group of 10 or more laboratory white rats which have fasted for 24 hours immediately prior to administration of the dose, and which weigh between 200 and 300 grams each.

"Acute toxicity" Means the ability of a substance or mixture of substances to cause injury, illness or damage to humans, animals or other living organisms by a single exposure of a duration measured in seconds, minutes, hours or days or, in the case of oral ingestion, by a single dose.

"Acute hazardous waste" see "Acutely hazardous waste."

"Acutely hazardous waste" or "Acute hazardous waste" means any hazardous waste classified as an acutely hazardous waste in article 4 of chapter 11 of this division.

"Administrator" see "USEPA Administrator."

"Affected medium" means any medium (e.g., ground water, surface water or the unsaturated zone) that has been affected by a release from a regulated unit.

For the purposes of chapters 14 and 15, "Air stripping operation" is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

"Ancillary equipment" means any device including, but not limited to, such devices as piping, fittings, flanges, valves and pumps, that is used to distribute, meter or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal offsite.

"Applicant" means a person who applies to the Department or to the USEPA for a permit, registration, certification or permission to take specified action, pursuant to the provisions of this division.

"Application" means (a) the USEPA standard national forms for applying for a permit (Form EPA 8700-23, Revised 1/90) and the information required by the Department under sections 66270.14 through 66270.29 (contents of Part B of the application); or (b) the forms approved by the Department for applying for registration as a hazardous waste hauler. These forms are:

Form DTSC 187, revised 2/92: Hazardous Waste Hauler Application

Form DTSC 8025, revised 2/92: Application for Vehicle/container inspection

Form DTSC 8038, revised 2/93: Certificate of insurance

Form DHS 8430, revised 3/89: Disclosure Statement

"Aquifer" means a geologic formation, group of formations or part of a formation capable of yielding a significant amount of ground water to wells or springs.

"Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.

"Authorized representative" means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent or person of equivalent responsibility.

"Background monitoring point" means a well, device or location specified in the facility permit at which monitoring for background water, soil, air or soil-vapor quality is conducted.

"Bioaccumulative toxic substance" means a toxic substance that concentrates in living organisms through direct assimilation or food chain accumulation.

"Bodily Injury" means (a) any injury that causes physical pain, illness or any impairment of physical condition; or (b) for the purposes of chap.

3. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66232. Vessel.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. Repealer and new section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66234. Wastewater Treatment Unit.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. New section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66236. Water Reactive.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY

1. Amendment filed 9-27-84; effective thirtieth day thereafter (Register 84, No. 41).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66238. Water Bulk Shipment.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. New section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66240. Well.

NOTE: Authority cited: Section 208, Health and Safety Code. Reference: Sections 25159 and 25159.5, Health and Safety Code.

HISTORY

1. Repealer and new section filed 1-3-85; effective thirtieth day thereafter (Register 85, No. 2).
2. Repealer filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.1. Purpose, Scope, and Applicability.

(a) This chapter provides definitions of terms, general standards, and overview information applicable to this division.

(b) In this chapter:

(1) Section 66260.2 sets forth the rules that the Department will use in making information it receives available to the public and sets forth the requirements that generators, transporters, or owners or operators of treatment, storage, or disposal facilities must follow to assert claims of business confidentiality with respect to information that is submitted to the Department under this division.

(2) Section 66260.3 establishes rules of grammatical construction for this division.

(3) Section 66260.4 establishes a rule restricting local enforcement actions relating to the management of hazardous waste.

(4) Section 66260.5 sets forth processing times for specified Departmental actions.

(5) Section 66260.10 defines terms which are used in this division.

(6) Section 66260.11 lists references used in this division and a source for these documents.

(7) Section 66260.12 lists acronyms and abbreviations used in this division.

(8) Section 66260.21 establishes requirements and procedures for obtaining waivers to use alternative test methods or analytical methods for classifying non-RCRA hazardous waste and for obtaining the Department's concurrence for using alternative methods allowed by the USEPA Administrator per 40 CFR Section 260.21 for the analysis of RCRA hazardous waste.

(9) Section 66260.200 establishes procedures for obtaining the Department's concurrence on classification of a waste as hazardous or non-hazardous.

(10) Section 66260.210 establishes procedures and requirements for obtaining waivers from regulation for non-RCRA hazardous waste and non-RCRA regulated activities.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Section 25159.5, Health and Safety Code and 40 CFR Section 260.1.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.2. Availability of Information; Confidentiality of Information.

(a) Any information provided to the Department pursuant to this division will be made available to the public to the extent and in the manner authorized by section 3007(b) of RCRA and the California Public Records Act (Government Code section 6250 et seq.), and EPA regulations set forth in 40 CFR Part 2, as applicable.

(b) Any person who submits information to the Department pursuant to this division may assert a claim of business confidentiality covering part or all of that information by following the procedures set forth in Title 40 CFR 2.203(b). However, if no such claim accompanies the information when it is received by the Department, it may be made available to the public without further notice to the person submitting it.

(c) Information covered by such a claim will be disclosed by the Department only to the extent, and by means of the procedures, set forth in Part 2, Subpart B, of 40 CFR except that information required by section 66262.53(a) which is submitted in notification of intent to export a hazardous waste pursuant to section 66262.53(a) will be provided to the U.S. Department of State and the appropriate authorities in a receiving country regardless of any claims of confidentiality.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Section 25159.5, Health and Safety Code and 40 CFR Section 260.2.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.3. Use of Number.

As used in this division:

- (a) Words in the singular include the plural; and
- (b) Words in the plural include the singular.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Section 25159.5, Health and Safety Code and 40 CFR Section 260.3.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.4. Local Agency Regulation of Hazardous Waste Facilities.

No local agency shall enforce any requirement, other than those in this division, which would impede interstate or intrastate transportation or disposal of hazardous waste or which would impede use of facilities for regional multi-county management of hazardous waste.

NOTE: Authority cited: Sections 208 and 25150, Health and Safety Code. Reference: Section 25150, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.5. Processing Times Based on Actual Performance.

The Department's time periods for processing applications for specific Departmental actions based on actual performance for the two years immediately preceding proposal of this regulation are as follows:

(a) Hazardous waste hauler registration (section 66263.11):

- (1) Median time: 60 days
- (2) Minimum time: 1 day
- (3) Maximum time: 180 days

(b) waste classification concurrence (section 66260.200) and Special waste classification (section 66261.124):

- (1) Median time: 11 months
- (2) Minimum time: 2 days
- (3) Maximum time: 39 months

(c) Variances (section 66260.210):

(1) Median time: 60 days

(2) Minimum time: 1 day

(3) Maximum time: 1200 days.

NOTE: Authority cited: Section 15376, Government Code; and Sections 208 and 25150, Health and Safety Code. Reference: Section 15376, Government Code; and Sections 25141, 25143 and 25163, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§ 22-66260.10. Definitions.

When used in this division, the following terms have the meanings given below:

"Aboveground tank" means a device meeting the definition of "tank" in section 66260.10 and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.

"Accidental occurrence" means an accident, including continuous or repeated exposure to conditions, which results in bodily injury, property damage or environmental degradation neither expected nor intended from the standpoint of the insured.

"Accumulated speculatively" means that a material is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that, during the calendar year (commencing on January 1), the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under section 66261.4(c) are not to be included in making the calculation. (Materials that are already defined as wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation for recycling, however.

"Active life" or "Operating life" of a facility means the period from the initial receipt of hazardous waste at the facility until the Department receives certification of final closure.

"Active portion" means that portion of a facility where transfer, treatment, storage or disposal operations are being or have been conducted after November 19, 1980 and which is not a closed portion.

"Activity" means any activity that is subject to regulation under this division.

"Acute aquatic 96-hour LC₅₀" means the concentration of a substance or mixture of substances in water, in milligrams per liter, which produces death within 96 hours in half of a group of at least 10 test fish.

"Acute dermal LD₅₀" means the dose of a substance or mixture of substances, in milligrams per kilogram of test animal body weight, which, when applied continuously to the bare skin for 24 hours, produces death within 14 days in half of a group of 10 or more rabbits.

"Acute inhalation LC₅₀" means the lowest concentration of a substance or mixture of substances in air, other than acute inhalation LD₅₀ in parts per million by volume if the substance or mixture of substances is a gas or vapor, reported to have caused death in humans or animals.

"Acute inhalation LC₅₀" means the concentration of a substance or mixture of substances in air, in parts per million by volume if the substance or mixture of substances is a gas or vapor, which when inhaled continuously for 8 hours by a group of 10 or more laboratory white rats, each weighing between 200 and 300 grams, produces death in half the group within 14 days.

"Acute LD₅₀" means the lowest dose, other than an acute LD₅₀ of a substance or mixture of substances, in milligrams per kilogram body

weight introduced orally or dermally over any given period of time in one or more divided portions and reported to have caused death in humans or animals.

"Acute oral LD₅₀" means the dose of a substance or mixture of substances, in milligrams per kilogram of test animal body weight, which, when administered orally as a single dose, produces death within 14 days in half of a group of 10 or more laboratory white rats which have fasted for 24 hours immediately prior to administration of the dose, and which weigh between 200 and 300 grams each.

"Acute toxicity" Means the ability of a substance or mixture of substances to cause injury, illness or damage to humans, animals or other living organisms by a single exposure of a duration measured in seconds, minutes, hours or days or, in the case of oral ingestion, by a single dose.

"Acute hazardous waste" see "Acutely hazardous waste."

"Acutely hazardous waste" or "Acute hazardous waste" means any hazardous waste classified as an acutely hazardous waste in article 4 of chapter 11 of this division.

"Administrator" see "USEPA Administrator."

"Affected medium" means any medium (e.g., ground water, surface water or the unsaturated zone) that has been affected by a release from a regulated unit.

For the purposes of chapters 14 and 15, "Air stripping operation" is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

"Ancillary equipment" means any device including, but not limited to, such devices as piping, fittings, flanges, valves and pumps, that is used to distribute, meter or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal offsite.

"Applicant" means a person who applies to the Department or to the USEPA for a permit, registration, certification or permission to take specified action, pursuant to the provisions of this division.

"Application" means (a) the USEPA standard national forms for applying for a permit (Form EPA 8700-23, Revised 1/90) and the information required by the Department under sections 66270.14 through 66270.29 (contents of Part B of the application); or (b) the forms approved by the Department for applying for registration as a hazardous waste hauler. These forms are:

Form DTSC 187, revised 2/92: Hazardous Waste Hauler Application

Form DTSC 8025, revised 2/92: Application for Vehicle/container inspection

Form DTSC 8038, revised 2/93: Certificate of insurance

Form DHS 8430, revised 3/89: Disclosure Statement

"Aquifer" means a geologic formation, group of formations or part of a formation capable of yielding a significant amount of ground water to wells or springs.

"Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.

"Authorized representative" means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent or person of equivalent responsibility.

"Background monitoring point" means a well, device or location specified in the facility permit at which monitoring for background water, soil, air or soil-vapor quality is conducted.

"Bioaccumulative toxic substance" means a toxic substance that concentrates in living organisms through direct assimilation or food chain accumulation.

"Bodily injury" means (a) any injury that causes physical pain, illness or any impairment of physical condition; or (b) for the purposes of ch

ter 13 of this division, "bodily injury" means injury to the body, sickness or disease to any person, including death resulting from any of these.

"Boiler" means an enclosed device using controlled flame combustion and having the following characteristics:

(a)(1) the unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids or heated gases; and

(2) the unit's combustion chamber and primary energy recovery section(s) must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s) (such as waterfalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section(s) are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; and

(3) while in operation, the unit must maintain a thermal energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

(4) the unit must export and utilize at least 75 percent of the recovered energy, calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps); or

(b) the unit is one which the USEPA Regional Administrator has determined, on a case-by-case basis, to be a boiler, after considering the standards in 40 CFR section 260.32.

"Border zone property" means any property designated as border zone property pursuant to Health and Safety Code section 25229 which is within 2,000 feet of a significant disposal of hazardous waste, and the wastes so located are a significant existing or potential hazard to present or future public health or safety on the land in question.

For the purposes of chapters 14 and 15, "Bottoms receiver" means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

"Buffer zone" means an area of land which surrounds a hazardous waste facility and on which certain land uses and activities are restricted to protect the public health and safety and the environment from existing or potential hazards caused by the migration of hazardous waste.

"Bulking" means the process of consolidating various quantities of the same type of waste by placing them into a single, larger container.

"Business" means the conduct of an activity and is not limited to a commercial or proprietary activity.

"Business concern" means any sole proprietorship, corporation, association, firm, partnership, trust or other form of commercial organization.

"By-product" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

"Cargo tank" means any tank permanently attached to, or a structural part of, a vehicle; or any bulk liquid or compressed gas packaging that is not permanently attached to a vehicle and by reason of its size, construction or method of attachment is filled or emptied without removal from the vehicle. The term does not include tanks that furnish fuel for propulsion of motor vehicle, or auxiliary equipment on which they are installed or any packaging fabricated to cylinder specifications.

"Certification" means a statement of professional opinion based upon knowledge and belief.

"Chemical toilet" means any portable or permanently installed sanitation apparatus or system which utilizes a tank for toilet waste retention and into which a chemical toilet additive is added.

"Chemical toilet additive" means any chemical substance, biological agent, other material or formulation thereof, which is employed for the primary purpose of controlling waste decomposition and odors in a chemical toilet holding tank or any tank in which chemical toilet wastes are held, collected or transported. The term "chemical toilet additive" includes, but is not limited to, a chemical substance, biological agent or other material which is a deodorant, bactericide, bacteriostat, microbiocide, chemical reactant, surfactant or enzymatic agent.

"Chemical toilet waste" means the waste in or from a chemical toilet.

"Chronic toxicity" means the ability of a substance or mixture of substances to cause injury, illness or damage to humans, animals or other living organisms by prolonged or repeated exposure or consumption over a period of days, weeks, months or years.

"Class I Violation" means:

(a) a deviation from the requirements specified in Chapter 6.5 of Division 20 of the Health and Safety Code, or regulations, permit or interim status document conditions, standards, or requirements adopted pursuant to that chapter, that represents a significant threat to human health or safety or the environment, because of (1) the volume of the waste; (2) the relative hazard of the waste; or (3) the proximity of the population at risk, or that is significant enough that it could result in a failure to accomplish the following:

(A) Assure that hazardous wastes are destined for and delivered to an authorized hazardous waste facility;

(B) Prevent releases of hazardous waste or constituents to the environment during the active or post closure period of facility operation;

(C) Assure early detection of such releases;

(D) Assure adequate financial resources in the case of releases; or

(E) Assure adequate financial resources to pay for facility closure;

(F) Perform emergency clean-up operation or other corrective action for releases; or

(b) The deviation is a Class II violation which is a chronic violation or committed by a recalcitrant violator.

"Class II Violation" means a deviation from the requirements specified in Chapter 6.5 of Division 20 of the Health and Safety Code, or regulations, permit or interim status document conditions standards, or requirements adopted pursuant to that chapter, that is not a Class I violation.

"Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements and for which the Department has released the owner and operator from the financial assurance requirements for closure under section 66264.143(j) or section 66265.143(i).

For the purposes of chapters 14 and 15, "Closed-vent system" means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

"Closure" means the act of closing a hazardous waste management facility or hazardous waste management unit to pursuant the requirements of chapters 14 and 15 of this division.

"Closure period" means the period during which a unit at a hazardous waste management facility is being closed according to an approved closure plan.

"Closure plan" means the plan for closure prepared in accordance with section 66264.112 or section 66265.112.

"Commence" means to receive the first delivery of waste.

"Component" means any constituent part of a unit or any group of constituent parts of a unit which are assembled to perform a specific function (e.g., a tank or ancillary equipment of a tank system, a pump seal, pump, kiln liner, kiln thermocouple).

"Concentration limit" means the value for a constituent specified in the water quality protection standard or environmental protection standard

including, but not limited to, values for concentration, temperature, pH, conductivity and resistivity.

For the purposes of chapters 14 and 15, "Condenser" means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

"Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.

For the purposes of chapters 14 and 15, "Connector" means flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

"Consignee" means the ultimate treatment, storage or disposal facility in a receiving country to which the hazardous waste will be sent.

"Constituents of concern" means any waste constituents, reaction products and hazardous constituents that are reasonably expected to be in or derived from waste contained in a regulated unit.

"Container" means, except for purposes of the annual inspections and the issuance of the certificates of compliance required by chapters 12 and 13 of this division, any device that is open or closed, and portable in which a material can be stored, handled, treated, transported, recycled or disposed of. For purpose of the annual inspection and the issuance of the certificates of compliance required by chapters 12 and 13 of this division, "container" means any portable tank as defined in section 1160.3(j) of title 13 of the California Code of Regulations or any covered or uncovered receptacle to be used for transporting hazardous waste and having a capacity greater than 110 U.S. gallons (416.4 liters).

"Contingency plan" means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

For the purposes of chapters 14 and 15, "Continuous recorder" means a data-recording device recording an instantaneous data value at least once every 15 minutes.

"Control chart" means a graphical method for evaluating whether a process is or is not in a state of statistical control.

For the purposes of chapters 14 and 15, "Control device" means an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale (e.g., a primary condenser on a solvent recovery unit) is not a control device.

For the purposes of chapters 14 and 15, "Control device shutdown" means the cessation of operation of a control device for any purpose.

"Corrosion expert" means a person who, by reason of that person's knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

"Corrosive" means the ability to cause destruction of living tissue or steel surfaces by chemical action.

"Covered container" means any container which is equipped with a cover or other device that will prevent the escape of a liquid or solid substance when closed.

"Current assets" means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

"Current closure cost estimate" means the most recent of the estimates prepared in accordance with section 66264.142 or section 66265.142.

"Current liabilities" means obligations for which liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

"Current plugging and abandonment cost estimate" means the most recent of estimates prepared in accordance with 40 CFR section 144.62(a), (b) and (c) incorporated by reference in section 66260.11 of this chapter.

"Current postclosure cost estimate" means the most recent of the estimates prepared in accordance with section 66264.144 or section 66265.144.

"Day" means a calendar day. Periods of time are calculated by excluding the first day and including the last. Except, if the last day is a Saturday, Sunday or other holiday specified in Government Code section 6700 it is also excluded.

"Decontaminate" means to make free of wastes that are hazardous pursuant to the criteria in chapter 11 of this division.

"Department" means the State Department of Health Services.

"Designated facility" means a hazardous waste transfer, treatment, storage, or disposal facility which has received a permit (or a facility with interim status) in accordance with the requirements of chapters 20 and 21 of this division, a permit from a State authorized in accordance with part 271 of title 40 CFR, or that is regulated under chapter 16 of this division, or has received a permit, a grant of interim status, or a variance to operate without a permit or grant of interim status from the Department, or is otherwise authorized by law to receive specific hazardous wastes, and that has been designated on the manifest by the generator pursuant to section 66262.20.

"Dike" means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids or other materials.

"Director" means the State Department of Health Services Director, or an authorized representative.

"Discharge" or "hazardous waste discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous waste into or on any land or water.

"Disclosure statement," as defined by Health and Safety Code section 25112.5, means either of the following:

(a) a statement submitted to the Department by an applicant, signed by the applicant under penalty of perjury, which includes all of the following information:

(1) the full name, business address, social security number and driver's license number of all of the following:

(A) the applicant;
(B) any officers, directors or partners, if the applicant is a business concern;

(C) all persons or any officers, partners, or any directors if there are no officers, of business concerns holding more than five percent of the equity in, or debt liability of the applicant, except that if the debt liability is held by a lending institution, the applicant shall only supply the name and address of the lending institution;

(2) the following persons listed on the disclosure statement shall submit properly completed fingerprint cards:

(A) the sole proprietor; the partners; other persons listed in subsection (a)(1)(C) of this definition and any officers or directors of the applicant company as required by the Department;

(B) fingerprint cards submitted for any persons required by subsection (a)(2) of this definition shall be submitted once. Fingerprint cards shall be completed and submitted for any additional person only if there is a change in the person serving in a position for which fingerprint cards are required to be submitted pursuant to subsection (a)(2) of this definition.

The Department shall use the information required by subsection (a)(2) of this definition to positively identify the applicant.

(3) the full name and business address of any company which generates, transports, treats, stores, recycles, disposes of or handles hazardous

waste and hazardous materials in which the applicant holds at least a five percent debt liability or equity interest;

(4) a description of any local, state, or federal licenses, permits, or registrations for the generation, transportation, treatment, storage, recycling, disposal or handling of hazardous waste or hazardous materials applied for, or possessed by the applicant, or by the applicant under any previous name or names, in the three years preceding the filing of the statement, or, if the applicant is a business concern, by the officers, directors or departments of the business concern, including the name and address or the issuing agency;

(5) a listing and explanation of any final administrative orders or license revocations or suspensions issued or initiated by any local, state or federal authority, in the three years immediately preceding the filing of the statement, or any civil or criminal prosecutions filed in the three years immediately preceding, or pending at the time of, the filing of the statement, with any remedial actions or resolutions if applicable, relating to the generation, transportation, treatment, storage, recycling, disposal or handling of hazardous waste or hazardous materials received by the applicant, or by the applicant under any previous name or names, or, if the applicant is a business concern, by any officer, director or partner of the business concern;

(6) a listing of any agencies outside of the state which regulate, or had regulated, the applicant's (or the applicant's under any previous name or names) generation, transportation, treatment, storage, recycling, disposal or handling of hazardous waste or hazardous materials in the three years preceding the filing of the disclosure statement;

(7) a listing and explanation of any federal or state conviction, judgment, or settlement, in the three years immediately preceding the filing of the statement, with any remedial actions or resolutions if applicable, relating to the generation, transportation, treatment, storage, recycling, disposal or handling of hazardous waste or hazardous materials by the applicant, or by the applicant under any previous name or names, or if the applicant is a business concern, by any officer, director or partner of the business concern;

(8) a listing of all owners, officers, directors, trustees and partners of the applicant who have owned, or been an officer, director, trustee or partner of, any company which generated, transported, treated, stored, recycled, disposed of, or handled hazardous wastes or hazardous materials and which was the subject of any of the actions described in subsections (a)(5) and (a)(7) of this definition for the three years preceding the filing of the statement.

(b) In lieu of the statement specified in subdivision (a) of this definition, a corporation, the stock of which is listed on a national securities exchange and registered under the Securities Exchange Act of 1934, as amended (title 15 U.S.C. section 78a et seq.), or a subsidiary of such a corporation, may submit to the Department copies of all periodic reports, including, but not limited to, those reports required by Section 78m of title 15 of the United States Code and Part 229 (commencing with Section 229.10) of chapter II of title 17 of the Code of Federal Regulations which the corporation or subsidiary has filed with the Securities and Exchange Commission in the three years immediately preceding the submittal, if the corporation or subsidiary thereof has held a hazardous waste facility permit or operated a hazardous waste facility under interim status pursuant to Health and Safety Code section 25200 or 25200.5 since January 1, 1984.

"Disposal" means:

(a) the discharge, deposit, injection, dumping, spilling, leaking or placing of any waste or hazardous waste into or on any land or water so that such waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters;

(b) the abandonment of any waste.

"Disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

"Disposal site" means the location where any final deposition of hazardous waste occurs.

For the purposes of chapters 14 and 15, "Distillate receiver" means a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

For the purposes of chapters 14 and 15, "Distillation operation" means an operation, either batch or continuous, separating one or more feed stream(s) into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

For the purposes of chapters 14 and 15, "Double block and bleed system" means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

"Draft permit" means a document prepared under section 66271.5 or 40 CFR section 124.6 indicating the Department's tentative decision to issue or deny, modify, revoke and reissue, terminate or reissue a permit. A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in section 66271.4, are types of draft permits. A denial of a request for modification, revocation and reissuance, or termination, as discussed in section 66271.4 or 40 CFR section 124.5 is not a "draft permit." A proposed permit is not a draft permit.

"Elementary neutralization unit" means a device which:

(a) is used for neutralizing wastes which are hazardous wastes only because they exhibit the corrosivity characteristic defined in section 66261.22, or are listed in article 4 of chapter 11 of this division only for this reason; and,

(b) meets the definition of tank, tank system, container, transport vehicle or vessel in this section.

"Emergency permit" means a permit issued in accordance with section 66270.61.

"End-user" means (a) any person who receives a hazardous waste from an unaffiliated third party and who intends to, or does, use or reuse that waste as:

(1) an ingredient in an industrial process to make a product, provided that distinct components of the material are not recovered as separate end products; or

(2) a substitute for a raw material in a process that uses raw materials as principal feedstocks; or

(3) a substitute for a commercial product in a particular function or application.

(b) "End-user" does not include:

(1) a person who receives a RCRA hazardous waste;

(2) a person who receives a hazardous waste from an unaffiliated third party and who intends to, or does, process that waste to recover usable products or regenerate that waste;

(3) a person managing a material that is not a waste pursuant to Health and Safety Code section 25143.2.

"EPA Acknowledgment of Consent" means the cable sent to the USEPA from the U.S. Embassy in a receiving country that acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment.

"EPA hazardous waste number" means the number assigned to each hazardous waste listed in article 4 of chapter 11 of this division and to each characteristic identified in article 3 of chapter 11 of this division as an EPA hazardous waste number.

For the purposes of chapters 14 and 15, "Equipment" means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange, and any control devices or systems required by these regulations.

"Equivalent method" means any testing or analytical method approved by the USEPA Administrator under 40 CFR sections 260.20 and 260.21 or by the Department under section 66260.21 of this division.

"Existing component" see "Existing tank system."

"Existing facility" see "Existing hazardous waste management facility."

"Existing hazardous waste facility" see "Existing hazardous waste management facility."

"Existing hazardous waste management (HWM) facility," "Existing hazardous waste facility," or "existing facility" means a facility which was in operation or for which construction commenced on or before November 19, 1980 and for which a Part A permit application has been submitted to the Department or the USEPA. A facility has commenced construction if:

(a) the owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction; and either

(b)(1) a continuous onsite, physical construction program has begun; or

(2) the owner or operator has entered into contractual obligations, which cannot be cancelled or modified without substantial loss, for physical construction of the facility to be completed within a reasonable time.

"Existing portion" means:

(a) that land surface area of an existing facility, included in the original RCRA Part A permit application, on which wastes have been placed prior to February 2, 1985;

(b) for facilities that were not required to submit a RCRA permit application, that land surface area of an existing facility on which wastes have been placed prior to February 2, 1985.

"Existing tank system" or "existing component" means a tank system or component that is used for the transfer, storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986 for tanks containing RCRA hazardous wastes, unless the owner/operator is a conditionally exempt small quantity generator as defined in 40 CFR section 261.5 or a 100 to 1,000 kg per month generator as defined in 40 CFR section 265.201. A tank system becomes an existing tank system on July 1, 1991 if the tanks contain only non-RCRA hazardous wastes, or if the tanks contain RCRA hazardous wastes and the generator is a conditionally exempt small quantity generator as defined in 40 CFR section 261.5 or a 100 to 1,000 kg per month generator as defined in 40 CFR section 265.201. Installation will be considered to have commenced if the owner or operator has obtained all Federal, State and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either a continuous onsite physical construction or installation program has begun, or the owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the site or installation of the tank system to be completed within a reasonable time.

"Extremely hazardous material" means a substance or combination of substances which, if human exposure should occur, may likely result in death, disabling personal injury or serious illness caused by the substance or combination of substances because of its quantity, concentration or chemical characteristics.

"Extremely hazardous waste" means any hazardous waste or mixture of hazardous wastes which, if human exposure should occur, may likely result in death, disabling personal injury or serious illness caused by the hazardous waste or mixture of hazardous wastes because of its quantity, concentration or chemical characteristics.

"Facility" see "Hazardous waste facility."

"Facility mailing list" means the mailing list for a facility maintained by the Department in accordance with section 66271.9(c)(1)(D).

"Facility personnel" see "Personnel."

"Federal agency" means any department, agency or other instrumentality of the Federal Government, any independent agency or establish-

ment of the Federal Government including any Government corporation, and the Government Printing Office.

"Federal, State and local approvals or permits necessary to begin physical construction" means permits and approvals required under Federal, State or local hazardous waste control statutes, regulations or ordinances.

"Final closure" means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under chapters 14 and 15 of this division are no longer conducted at the facility unless subject to the provisions in section 66262.34.

"Fine powder" means a metal in dry, solid form having a particle size smaller than 100 micrometers (0.004 inches) in diameter.

For the purposes of chapters 14 and 15, "First attempt at repair" means to take rapid action to maintain compliance with Section 66265.31, for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

"Fixed Treatment Unit" means any equipment which performs a treatment as defined in this section and which is permanently stationed, or which is periodically assembled for use, at a single facility for the purpose of performing treatment, regardless of the period or frequency of treatment.

For the purposes of chapters 14 and 15, "Flame zone" means the portion of the combustion chamber in a boiler occupied by the flame envelope.

For the purposes of chapters 14 and 15, "Flow indicator" means a device that indicates whether gas flow is present in a vent stream.

"Food-chain crops" means tobacco, crops grown for human consumption and crops grown for feed for animals whose products are consumed by humans.

For the purposes of chapters 14 and 15, "Fractionation operation" means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some portion of one of the components.

"Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure. Free liquids are determined by using the paint filter test (EPA Method No. 9095), as modified in section 66264.314(b) of this division.

"Freeboard" means the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

"Functionally equivalent component" means a component which performs the same function or measurement and which meets or exceeds the performance specifications of another component.

"Generator" or "Producer" means any person, by site, whose act or process produces hazardous waste identified or listed in chapter 11 of this division or whose act first causes a hazardous waste to become subject to regulation.

"Groundwater" means water below the land surface in a zone of saturation.

"Halogenated organic compounds" or "HOCs" means those compounds having a carbon-halogen bond which are listed under Appendix III or Appendix III-A to chapter 18 of this division.

"Handling" means the transporting or transferring from one place to another, or pumping, processing, storing or packaging of hazardous waste, but does not include the handling of any substance before it becomes a waste.

"Hauler" means a transporter.

"Hazardous Constituent" means:

(a) a constituent identified in Appendix VIII to chapter 11 of this division; or

(b) any other element, chemical compound, or mixture of compounds which is a component of a hazardous waste or leachate and which has a

physical or chemical property that causes the waste or leachate to be identified as a hazardous waste.

"Hazardous material" as defined in Health and Safety Code Section 25501 as applied in Chapter 6.95 of Division 20 of the Health and Safety Code.

"Hazardous waste" means a hazardous waste as defined in section 66261.3 of this division. "Hazardous waste" includes extremely hazardous waste, acutely hazardous waste, RCRA hazardous waste, non-RCRA hazardous waste and special waste.

"Hazardous waste constituent" means a constituent that caused the USEPA Administrator to list the hazardous waste in 40 CFR Part 261, Subpart D, or a constituent listed in Table 1 of 40 CFR section 261.24.

"Hazardous waste discharge" see "discharge."

"Hazardous waste facility," "hazardous waste management facility," "HW facility," or "facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for the treatment, transfer, storage, resource recovery, disposal or recycling of hazardous waste. A hazardous waste facility may consist of one or more treatment, transfer, storage, resource recovery, disposal or recycling operational units or combinations of these units.

"Hazardous waste facility permit" or "permit" means an authorization, license or equivalent control document issued by the USEPA or the Department to implement the requirements of RCRA and this division. "Permit" includes permit by rule pursuant to section 66270.60, and emergency permit pursuant to section 66270.61. "Permit" does not include interim status (article 7 of chapter 20), or any permit which has not yet been the subject of final USEPA or Department action, such as a draft permit or a proposed permit.

"Hazardous waste management" see "Management."

"Hazardous waste management facility" see "Hazardous waste facility."

"Hazardous waste management unit" is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, a waste transfer area, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

For the purposes of chapters 14 and 15, "Hazardous waste management unit shutdown" means a work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit for less than 24 hours is not a hazardous waste management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous waste management unit shutdowns.

"Hazardous waste property" means (a) land which is either of the following:

(1) any hazardous waste facility or portion thereof, required to be permitted pursuant to this division, which has a permit for disposal from the Department or has submitted an application for such a permit;

(2) a portion of any land designated as a hazardous waste property pursuant to Health and Safety Code section 25229 where a significant disposal of hazardous waste has occurred on, under or into the land resulting in a significant existing or potential hazard to present or future public health or safety.

(b) "Hazardous waste property" does not mean residential land that has never received waste chemicals from an industrial, commercial, agricultural, research or business activity.

"Highway" means a way, or place, of whatever nature open to the use of the public for purposes of vehicular travel. Highway includes street.

"HOCs" see "Halogenated organic compound."

For the purposes of chapters 14 and 15, "Hot well" means a container for collecting condensate as in a stream condenser serving a vacuum-jet or stream-jet ejector.

"Household" means a single detached residence or a single unit of a multiple residence unit and all appurtenant structures.

"Household hazardous waste" means any hazardous waste generated incidental to owning and/or maintaining a place of residence. Household hazardous waste does not include any waste generated in the course of operating a business at a residence.

"HWM facility" see "Hazardous waste facility."

"ID Number" see "Identification number."

"Identification Number" or "ID Number" means the number applied for by and assigned to all handlers of hazardous waste. A State ID number will be issued to handlers of non-RCRA hazardous waste (HW) and/or under 100 KG per calendar month of a RCRA HW. The State ID number will have a prefix of three letters followed by nine numbers. A federal ID number (EPA ID number) will be issued to handlers of 100 KG or more per calendar month of a RCRA HW and/or more than 1 KG per calendar month of acute HW, and any amount of non-RCRA HW. The federal ID number will have a prefix of three letters followed by nine numbers. Federal facilities will have a prefix of two letters followed by ten numbers.

"Ignitable" means capable of being set afire, or of bursting into flame spontaneously or by interaction with another substance or material.

"Impoundment" see "Surface impoundment."

For the purposes of chapters 14 and 15, "In gas/vapor service" means that the piece of equipment contains or contacts a hazardous waste stream that is in the gaseous state at the operating conditions.

For the purposes of chapters 14 and 15, "In heavy liquid service" means that the piece of equipment is not in either gas/vapor service or in light liquid service.

For the purposes of chapters 14 and 15, "In light liquid service" means that the place of equipment contains or contacts a waste stream where the vapor pressure of one or more of the components in the stream is greater than 0.3 kilopascals (kPa) at 20 degrees C, the total concentration of the pure components having a vapor pressure greater than 0.3 Kpa at 20 degrees C is equal to or greater than 20 percent by weight, and the fluid is a liquid at the operating conditions.

"In situ sampling systems" means non-extractive samplers or in-line samplers.

"In operation" refers to a facility which is transferring, treating, storing or disposing of hazardous waste.

For the purposes of chapters 14 and 15, "In vacuum service" means that equipment is operating at an internal pressure that is at least 5 kPa below ambient pressure.

"Inactive portion" means that portion of a facility which is not operated after November 19, 1980.

"Incinerator" means any enclosed device using controlled flame combustion that neither meets the criteria for classification as a boiler nor is listed as an industrial furnace.

"Incompatible waste" means a hazardous waste which is unsuitable for:

(a) placement in a particular device or facility because it may cause corrosion or decay of containment materials (e.g., container inner liners or tank walls); or

(b) commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases or flammable fumes or gases. (See Appendix V to chapter 15 of this division for examples.)

"Independent sample" means an individual sample that has not been affected by previous sampling efforts.

"Independently audited" refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

"Individual generation site" means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

"Industrial furnace" means any of the following enclosed devices that are integral components of manufacturing processes and that use controlled flame devices to accomplish recovery of materials or energy:

- (a) cement kilns;
- (b) lime kilns;
- (c) aggregate kilns;
- (d) phosphate kilns;
- (e) coke ovens;
- (f) blast furnaces;
- (g) smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machines, roasters and foundry furnaces);
- (h) titanium dioxide chloride process oxidation reactors;
- (i) methane reforming furnaces;
- (j) pulping liquor recovery furnaces;
- (k) combustion devices used in the recovery of sulfur values from spent sulfuric acid;

(l) such other devices as the USEPA Administrator may, after notice and comment, add to the list of "industrial furnaces" in 40 CFR section 260.10 on the basis of one or more of the following factors:

- (1) the design and use of the device primarily to accomplish recovery of material products;
- (2) the use of the device to burn or reduce raw materials to make a material product;
- (3) the use of the device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;
- (4) the use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;
- (5) the use of the device in common industrial practice to produce a material product; and
- (6) other factors, as appropriate.

"Injection well" means any bored, drilled, or driven shaft, dug pit, or hole in the ground whose depth is greater than its largest surface dimension and any associated subsurface apertances, including, but not limited to, the casing.

"Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

"Inorganic solid debris" means, for the purposes of chapter 18, nonfriable inorganic solids that are incapable of passing through a 9.5 mm standard sieve that require cutting, or crushing and grinding in mechanical sizing equipment prior to stabilization, limited to the following inorganic or metal materials:

- (a) metal slags (either dross or scoria);
- (b) glassified slag;
- (c) glass;
- (d) concrete (excluding cementitious or pozzolanic stabilized hazardous wastes);
- (e) masonry and refractory bricks;
- (f) metal cans, containers, drums or tanks;
- (g) metal nuts, bolts, pipes, pumps, valves, appliances or industrial equipment;
- (h) bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

"Installation inspector" means a person who, by reason of, that person's knowledge of the physical sciences and the principles of engineer-

ing, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

"Interim status" means the authorization granted by the Department or the USEPA which allows a facility to continue to operate pending review and decision of the facility's permit application.

"International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.

"Land disposal" means placement in or on the land and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave or placement in a concrete vault or bunker intended for disposal purposes.

"Land disposal method" means:

(a) disposal of hazardous wastes on or into the land, including, but not limited to, landfill, surface impoundment, waste piles, deep-well injection, land spreading and co-burial with municipal garbage;

(b) treatment of hazardous wastes on or in the land, such as neutralization and evaporation ponds and land farming, where the treatment residues are hazardous wastes and are not removed for subsequent processing or disposal within one year;

(c) storage of hazardous wastes on or in the land, such as waste piles and surface impoundments, other than neutralization and evaporation ponds, for longer than one year.

"Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine or a cave.

"Landfill cell" means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

"Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface so that hazardous constituents are degraded, transformed or immobilized within the treatment zone. Such facilities are disposal facilities if the waste will remain after closure.

"Leachate" means any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

"Leak-detection system" means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must employ operational controls (e.g., daily visual inspections for releases into the secondary containment system of aboveground tanks) or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

"Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

"Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

"License" includes, but is not limited to any permit, registration or certification issued by any local, State, or Federal agency for the generation, transportation, treatment, storage, recycling, disposal or handling of hazardous waste.

"Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents or leachate.

"Load" means the amount of waste transported by one truck, one railroad car or one barge to a hazardous waste facility.

"Major facility" means any facility or activity classified as such by the USEPA Regional Administrator in conjunction with the Department.

For the purposes of chapters 14 and 15, "Malfunction" means any sudden failure of a control device or a hazardous waste management unit or failure of a hazardous waste management unit to operate in a normal or usual manner, so that organic emissions are increased.

"Management" or "hazardous waste management" means the handling, storage, transportation, processing, treatment, recovery, recycling, transfer and disposal of hazardous waste.

"Manifest" means the shipping document DHS 8022A, or the equivalent document required by the state to which the waste will be shipped, which is originated and signed by the generator in accordance with the instructions included in the appendix to chapter 12 of this division.

"Manifest document number" means the unique number assigned to the manifest by the Department for recording and reporting purposes.

"Maximum credible earthquake" means the maximum earthquake which rationally appears capable of occurring under the presently known tectonic framework and all known geologic and seismologic facts. The following factors and standards shall be applied in determining the maximum credible earthquake:

- (a) the seismic history of the vicinity and the geologic province;
- (b) the length of the significant fault or faults which can affect the site within a radius of 100 kilometers;
- (c) the type(s) of faults involved;
- (d) the tectonic and/or structural history;
- (e) the tectonic and/or structural pattern or regional setting (geologic framework);
- (f) the time factor (known or expected frequency of occurrence) shall not be a parameter.

"Mining overburden returned to the mine site" means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

"Miscellaneous unit" means a hazardous waste management unit where hazardous waste is transferred, treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under article 5.5 commencing with section 25159.10 of chapter 6.5 of division 20 of the Health and Safety Code, or unit eligible for a research, development and demonstration permit under section 66270.65.

"Monitoring parameter" means one of the set of parameters specified in the facility permit for which monitoring is conducted. Monitoring parameters shall include physical parameters, waste constituents, reaction products, and hazardous constituents, that provide a reliable indication of a release from a regulated unit.

"Monitoring point" means a well, device or location specified in the facility permit at which the water quality or environmental protection standard applies and at which monitoring is conducted.

"Movement" means that hazardous waste transported to a facility in an individual vehicle.

"National Pollutant Discharge Elimination System" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 318, 402, and 405 of the Federal Water Pollution Control Act (33 U.S.C. sections 1317, 1328, 1342 and 1345). The term includes an approved program.

"Natural resources" includes, but is not limited to, disposal site capacity and substances which are hazardous waste, or which are in hazardous waste, the reuse of which is technologically and economically feasible.

"Net working capital" means current assets minus current liabilities.

"Net worth" means total assets minus total liabilities and is equivalent to owner's equity.

"New facility" see "New hazardous waste management facility."

"New hazardous waste facility" see "New hazardous waste management facility."

"New hazardous waste management facility," "new hazardous waste facility," or "new facility" means a facility which began operation, or for which construction commenced after November 19, 1980.

"New tank component" see "New tank system."

"New tank system" or "new tank component" means a tank system or component that will be used for the transfer, storage or treatment of hazardous waste and for which installation (as defined under "Existing tank system" in this section) has commenced after the dates indicated below; except, however, for purposes of sections 66264.193(g)(2) and 66265.193(g)(2), a new tank system is one for which construction commences after the dates indicated below: (See also "existing tank system.")

(a) July 14, 1986, for tanks containing RCRA hazardous wastes, unless the owner/operator is a conditionally exempt small quantity generator as defined in 40 CFR section 261.5, or a 100 to 1,000 kg per month generator as defined in 40 CFR section 265.201;

(b) July 1, 1991 for:

- (1) tanks containing only non-RCRA hazardous wastes, and
- (2) tanks containing RCRA hazardous wastes, if the owner/operator is a conditionally exempt small quantity generator or a 100 to 1,000 kg per month generator.

"Non-RCRA hazardous waste" means all hazardous waste regulated in the State, other than RCRA hazardous waste as defined in this section. A hazardous waste is presumed to be a RCRA hazardous waste, unless it is determined pursuant to section 66261.101 that the hazardous waste is a non-RCRA hazardous waste.

"Nonsudden accidental occurrence" means an unforeseen and unexpected accident which takes place over time, involves continuous or repeated exposure and results in bodily injury, property damage or environmental degradation.

"Nonwastewaters" means, for the purposes of chapter 18 of this division, wastes that do not meet the criteria for wastewaters found in the definition of "wastewaters" in this section.

"Offsite" means any site which is not onsite.

"Offsite facility" means a hazardous waste facility that is not an onsite facility.

"Onground tank" means a device meeting the definition of "tank" in this section that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

"Onsite" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a crossroads intersection, and access is by crossing as opposed to going along, the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way which that person controls and to which the public does not have access, is also considered onsite property.

"Onsite facility" or "Onsite hazardous waste facility" means a facility:

(a) at which a hazardous waste is generated and which is owned by, leased to, or under the control of, the generator of the waste; and

(b) which is located on the same or geographically contiguous property, on which the waste is produced, which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way which the person controls and to which the public does not have access, is also considered an onsite facility.

"Onsite hazardous waste facility" see "Onsite facility."

"Open burning" means the combustion of any material without the following characteristics:

- (a) control of combustion air to maintain adequate temperature for efficient combustion;

(b) containment of the combustion–reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and

(c) control of emission of the gaseous combustion products. (See also “incineration” and “thermal treatment.”)

For the purposes of chapters 14 and 15, “Open–ended valve or line” means any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

“Operator” means the person responsible for the overall operation of a facility.

“Operating life” see “Active life.”

“Owner” means the person who owns a facility or part of a facility.

“Owner or operator” means the owner or operator of any facility or activity subject to regulation under chapter 6.5 commencing with section 25100, division 20, Health and Safety Code.

“P–value” means the smallest significance level for which the null hypothesis would be rejected based on the data that was actually observed.

“Parent corporation” means a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a “subsidiary” of the parent corporation.

“Part A of Permit Application” or “Part A” means an application to the Department or the USEPA for a permit to operate a hazardous waste facility. The application is described in section 66270.13.

“Part B of Permit Application” or “Part B” means the operation plan described in sections 66270.14 through 66270.23 for a hazardous waste facility.

“Partial closure” means the closure of a hazardous waste management unit in accordance with the applicable closure requirements of chapters 14 and 15 of this division at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile or other hazardous waste management unit, while other units of the same facility continue to operate or will be placed in operation in the future.

“PCBs” see “Polychlorinated biphenyls.”

“Permit” see “Hazardous waste facility permit.”

“Permit–by–rule” means a provision of these regulations stating that a facility or activity is deemed to have a permit if it meets the requirements of the provision.

“Permitted facility” means a facility that has received a hazardous waste facility permit from the Department or the USEPA in accordance with section 25200 of the Health and Safety Code or RCRA.

“Persistent toxic substance” means a toxic substance that resists natural degradation or detoxification.

“Person” means an individual, trust, firm, joint stock company, business concern, corporation, including, but not limited to, a government corporation, partnership and association. “Person” also includes any city, county, district, commission, the State or any department, agency or political subdivision thereof, any interstate body, and the Federal Government or any department or agency thereof to the extent permitted by law.

“Personnel” or “facility personnel” means all persons who work, at, or oversee the operations of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of this division.

“Physical parameter” means any measurable physical characteristic of a substance including, but not limited to, temperature, electrical conductivity, pH and specific gravity.

“Physical construction” means excavation, movement of earth, erection of forms or structures, or similar activity to prepare a facility to accept hazardous waste.

“Pile” or “waste pile” means any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage.

“Point of compliance” means a vertical surface located at the hydraulically downgradient limit, of a regulated unit, that extends through the uppermost aquifer.

“Point source” means any discernible, confined and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

“Polychlorinated biphenyls” or “PCBs” are halogenated organic compounds defined in accordance with 40 CFR 761.3.

“Postclosure plan” means the plan for postclosure care prepared in accordance with chapter 14 or chapter 15 of this division.

“POTW” see “Publicly owned treatment works.”

For the purposes of chapters 14 and 15, “Pressure release” means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

“Primary Exporter” means any person who is required to originate the manifest for a shipment of hazardous waste in accordance with article 2 of chapter 12 of this division, which specifies a treatment, storage or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.

For the purposes of chapters 14 and 15, “Process heater” means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

For the purposes of chapters 14 and 15, “Process vent” means any open–ended pipe or stack that is vented to the atmosphere either directly, through a vacuum–producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin–film evaporation, solvent extraction, or air or steam stripping operations.

“Processing” means treatment.

“Producer” see “Generator.”

“Property Damage” means (a) an injury to property which deprives its owner of the benefit of the property by taking, withholding, deteriorating or destroying it.

(b) For the purposes of chapter 13, “property damage” means damage to or loss of tangible property.

“Publicly owned treatment works” or “POTW” means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a “State” or “municipality” (as defined by 33 U.S.C. section 1362). This definition includes sewers, pipes or other conveyances only if they convey wastewater to a POTW providing treatment.

“R chart” (Range chart) means a control chart for evaluating the variability within a process in terms of the subgroup range R.

“RCRA hazardous waste” means all waste identified as a hazardous waste in Part 261 (commencing with section 261.1) of subchapter I of chapter 1 of Title 40 of the Code of Federal Regulations and appendices thereto.

“Reactive” means having properties of explosivity or of chemical activity which can be a hazard to human health or the environment.

“Receiving country” means a foreign country to which a hazardous waste is sent for the purpose of treatment, storage or disposal (except short–term storage incidental to transportation).

“Reclaimed” means that a material is processed to recover a usable product, or that it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

“Recyclable material” means a hazardous waste that is capable of being recycled, including, but not limited to, any of the following:

(a) a residue;

(b) a spent material, including, but not limited to, a used or spent stripping or plating solution or etchant;

(c) a material that is contaminated to such an extent that it can no longer be used for the purpose for which it was originally purchased or manufactured;

(d) a byproduct listed in section 66261.31 or section 66261.32;

(e) any retrograde material that has not been used, distributed or reclaimed through treatment by the original manufacturer or owner by the later of the following dates:

(1) one year after the date when the material became a retrograde material;

(2) if the material has been returned to the original manufacturer, one year after the material is returned to the original manufacturer.

"Recycled material" means a material which is used or reused or reclaimed.

"Regional Administrator" or "USEPA Regional Administrator" means the Regional Administrator for the EPA Region in which the facility is located, or that person's designee.

"Registered hazardous waste transporter" means a transporter registered with the Department to transport hazardous wastes.

"Regulated Unit" means:

(a) a permitted hazardous waste facility, which operates or operated:

(1) any surface impoundment, waste pile, land treatment unit or landfill that receives or has received hazardous waste after July 26, 1982; or

(2) any surface impoundment, waste pile, land treatment unit, or landfill that ceased receiving hazardous waste by July 26, 1982 which is required to comply with the requirements of article 6 of chapter 14 of this division pursuant to section 66264.90(a);

(b) an interim status hazardous waste facility which operates or operated:

(1) any surface impoundment, waste pile, land treatment unit, or landfill that receives or has received hazardous waste after November 19, 1980; or

(2) any surface impoundment, waste pile, land treatment unit, or landfill that ceased receiving hazardous waste by November 19, 1980 which is required to comply with the requirements of article 6 of chapter 15 of this division pursuant to section 66265.90(a).

"Release" means:

(a) Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.

(b) "Release" does not include any of the following:

(1) Any release which results in exposure to persons solely within a workplace, with respect to a claim such exposed persons may assert against their employer.

(2) Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel or pipeline pumping station engine.

(3) Release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954 (42 U.S.C. 2011, et seq.), if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 2210 of Title 42 of the United States Code or, for the purposes of section 104 of the federal act (42 U.S.C. 9604) or any other response action, any release of source byproduct, or special nuclear material from any processing site designated under section 7912(a)(1) or 7942(a) of Title 42 of the United States Code, which sections are a part of the Uranium Mill Tailings Radiation Control Act of 1978.

(d) The normal application of fertilizer, plant growth regulants and pesticides.

For the purposes of chapters 14 and 15, "Repaired" means that equipment is adjusted, or otherwise altered, to eliminate a leak.

"Representative sample" means a sample of a universe or whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole.

"Residuals Repository" means a hazardous waste facility or part of a facility that is permitted to accept for land disposal only non-liquid,

treated hazardous waste (as defined in Section 25179.3(1), Health and Safety Code). Non-liquid means non-liquid and containing less than 50 percent moisture by weight as determined in accordance with Section 66265.317 of this Division.

"Resource recovery facility" means an offsite hazardous waste facility whose principal method of hazardous waste management is the handling, recycling, treatment, use or reuse of recyclable material and which meets the requirements in chapter 16 of this division.

"Restricted hazardous waste" means any hazardous waste which is subject to land disposal restriction pursuant to Health and Safety Code section 25179.6 or chapter 18 of this division.

"Retrograde material" means any hazardous material which is not to be used, sold or distributed for use in an originally intended or prescribed manner or for an originally intended or prescribed purpose and which meets any one or more of the following criteria:

(a)(1) has undergone chemical, biochemical, physical or other changes due to the passage of time or the environmental conditions under which it was stored;

(2) has exceeded a specified or recommended shelf life;

(3) is banned by law, regulation, ordinance or decree;

(4) cannot be used for reasons of economics, health or safety or environmental hazard.

(b) "Retrograde material" does not include material listed in section 66261.33 if either of the following conditions is met:

(1) the material is used in a manner constituting disposal and the material is not normally used in a manner constituting disposal;

(2) the material is burned for energy recovery and the material is not normally burned for energy recovery.

"Run-off" means any rainwater, leachate or other liquid that drains over land from any part of a facility.

"Run-on" means any rainwater, leachate or other liquid that drains over land onto any part of a facility.

"Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.

"Schedule of compliance" means a schedule of remedial measures included in a permit or order, including an enforceable sequence of interim requirements (for example, actions, operations or milestone events) leading to compliance with applicable law.

"Scrap metal" means (a) any one or more of the following, except as provided in subsection (b) of this section:

(1) manufactured, solid metal objects and products;

(2) metal workings, including cuttings, trimmings, stampings, grindings, shavings and sandings; or

(3) solid metal residues of metal production.

(b) "Scrap metal" excludes all of the following:

(1) lead-acid storage batteries, waste elemental mercury, and water-reactive metals such as sodium, potassium and lithium;

(2) magnesium borings, trimmings, grindings, shavings and sandings and any other forms capable of producing independent combustion;

(3) beryllium borings, trimmings, grindings, shavings, sandings and any other forms capable of producing adverse health effects or environmental harm in the opinion of the Department;

(4) any metal contaminated with a hazardous waste, such that the contaminated metal exhibits any characteristic of a hazardous waste under article 3 of chapter 11 of this division;

(5) any metal contaminated with an oil that is a hazardous waste and that is free-flowing;

(6) sludges, fine powders, semi-solids and liquid solutions that are hazardous wastes.

"Semitrailer" means a vehicle designed for carrying persons, property or waste, used in conjunction with a motor vehicle, and so constructed that some part of its weight and that of its load rests upon, or is carried by, another vehicle.

For the purposes of chapters 14 and 15, "Sensor" means a device that measures a physical quantity or that change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

For the purposes of chapters 14 and 15, "Separator tank" means a device used for separation of two immiscible liquids.

"Series A Resource Recovery Facility Permit" means a type of hazardous waste facility permit issued by the Department which grants the authority to operate a resource recovery facility that meets the criteria in section 66266.7.

"Series B Resource Recovery Facility Permit" means a type of hazardous waste facility permit issued by the Department which grants the authority to operate a resource recovery facility that meets the criteria in section 66266.8.

"Series C Resource Recovery Facility Permit" means a type of hazardous waste facility permit issued by the Department which grants the authority to operate a resource recovery facility that meets the criteria in section 66266.9.

"Site" means the land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

"Sludge" means any solid, semi-solid or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

"Small quantity commercial source" means a business which generates less than 100 kilograms of household waste, as defined in paragraph (1) of subdivision (b) of Section 261.4 of Title 40 of the Code of Federal Regulations, or which meets the criteria for conditionally exempt small quantity generators specified in Section 261.5 of Title 40 of the Code of Federal Regulations, or, if the hazardous waste is perchlorethylene, a business which generates less than 50 kilograms of hazardous waste per month and meets the criteria set forth in Sections 261.4 or 261.5 of Title 40 of the Code of Federal Regulations.

"Small quantity generator" means a generator who generates less than 1,000 kg of hazardous waste in a calendar month.

"Soil-pore liquid" means the liquid contained in openings between particles of soil in the unsaturated zone.

"Solid Waste Management Unit" means any unit at a hazardous waste facility from which hazardous constituents might migrate, irrespective of whether the units were intended for the management of wastes, including but not limited to: containers, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators and underground injection wells.

"Soluble threshold limit concentration" or "STLC" means the concentration of a solubilized and extractable bioaccumulative or persistent toxic substance which, if equaled or exceeded in a waste or waste extract determined pursuant to Appendix II of chapter 11 of this division renders the waste hazardous.

"Solvent extraction operation" means an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one or more components into the solvent.

"Special waste" means a waste which is a hazardous waste only because it contains an inorganic substance or substances which cause it to pose a chronic toxicity hazard to human health or the environment and which meets all of the criteria and requirements of section 66261.122 and has been classified a special waste pursuant to section 66261.124.

"Spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.

For the purposes of chapters 14 and 15, "Start-up" means the setting in operation of a hazardous waste management unit or control device for any purpose.

"State/EPA Agreement" means an agreement between the Regional Administrator and the Department which coordinates EPA and State activities, responsibilities and programs.

"Steam stripping operation" means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

"STLC" see "Soluble threshold limiting concentration."

"Storage" means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of or stored elsewhere.

"Sudden accidental occurrence" means an unforeseen and unexpected accident which is not continuous or repeated in nature and results in bodily injury, property damage or environmental degradation.

"Substantial business relationship" means the extent of a business relationship necessary under applicable State law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" must arise from a pattern of recent or ongoing business transactions, in addition the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the Department.

"Sump" means any pit or reservoir that meets the definition of tank and those troughs/trenches connected to it that serves to collect hazardous waste for transport to hazardous waste storage, treatment or disposal facilities.

"Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds and lagoons.

"Surge control tank" means a pipe or storage reservoir sufficient in capacity to contain the surging liquid discharge of the process tank to which it is connected.

"Surplus material" means an unused raw material or commercial product obtained by a person who intended to use or sell it, but who no longer needs it, and who transfers ownership of it to another person for use in a manner for which the material or product is commonly used. Surplus material is excess material. Surplus material is neither of the following:

- (a) a retrograde material as defined in this section;
- (b) a recyclable material as defined in this section.

"Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

"Tank" means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

"Tank system" means a hazardous waste transfer, storage or treatment tank and its associated ancillary equipment and containment system.

"Temporary household hazardous waste collection facility" or "THHWCF" means a facility operated by a public agency which:

- (a) is operated in accordance with section 66270.1(c)(1)(F);
- (b) is operated at the same location no more than 12 times per calendar year and no more than once in any calendar month at the same location; and

(c) terminates operation within two days of commencing each session.

"Terminate" means to accept the last delivery of waste.

"Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration,

molten salt, pyrolysis, calcination, wet air oxidation and microwave discharge. (See also "incinerator" and "open burning.")

"The State" means the State of California.

"Thin-film evaporation operation" means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film or liquid on the wall.

"Total threshold limit concentration" or "TTL" means the concentration of a solubilized, extractable and nonextractable bioaccumulative or persistent toxic substance which, if equaled or exceeded in a waste, renders the waste hazardous.

"Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

"Toxic waste" means a hazardous waste designated as a toxic waste by the USEPA Administrator pursuant to 40 CFR section 261.11.

"Trailer" means a vehicle designed for carrying persons, property or waste on its own structure and for being drawn by a motor vehicle and so constructed that no part of its weight rests upon any other vehicle.

"Transfer" means the loading, unloading, pumping or packaging of hazardous waste. Transfer does not include loading, unloading, pumping or packaging of hazardous waste on the site where the hazardous waste was generated.

"Transfer facility" or "transfer station" means any transportation related facility including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste are held and/or transferred during the normal course of transportation.

"Transfer station" see "Transfer facility."

"Transit country" means any foreign country, other than a receiving country, through which a hazardous waste is transported.

"Transport vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.

"Transportable Treatment Unit" means any mobile equipment which performs a "treatment" as defined in this section and which is transported onto a facility to perform treatment and which is not permanently stationed at a single facility.

"Transportation" means the movement of hazardous waste by air, rail, highway or water.

"Transporter" means a person engaged in the offsite transportation of hazardous waste by air, rail, highway or water.

"Treatment" means any method, technique, or process which changes or is designed to change the physical, chemical, or biological character or composition of any hazardous waste or any material contained therein, or removes or reduces its harmful properties or characteristics for any purpose including, but not limited to, energy recovery, material recovery or reduction in volume.

"Treatment zone" means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents and constituents of concern are degraded, transformed or immobilized. A treatment zone may not extend more than five feet below the initial surface and the base of the treatment zone shall be a minimum of five feet above the highest anticipated elevation of underlying groundwater.

"Truck" means a motor vehicle, excluding truck tractor, designed, used or maintained primarily for the transportation of property or waste.

"TTL" see "Total threshold limiting concentration."

"Underground injection" means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also "injection well.")

"Underground source of drinking water" or "USDW" means an aquifer or its portion:

(a)(1) which supplies any public water system; or
(2) which contains a sufficient quantity of ground water to supply a public water system; and

(A) currently supplies drinking water for human consumption; or
(B) contains fewer than 10,000 mg/l total dissolved solids; and
(b) which is not an exempted aquifer.

"Underground tank" means a device meeting the definition of "tank" in this section which is substantially or totally beneath the surface of the ground.

"Unfit-for-use tank system" means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of transferring, storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

"Unsaturated zone," "Vadose zone," or "zone of aeration" means the zone between the land surface and the water table.

"United States" means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa and the commonwealth of the Northern Mariana Islands.

"Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer.

"Used or reused" means that a material is either:

(a) employed as an ingredient, including use as an intermediate, in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

(b) employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

"USEPA Administrator" or "Administrator" means the Administrator of the federal Environmental Protection Agency, or the Administrator's designee.

"USEPA Regional Administrator" see "Regional Administrator."

"Vacuum tank" means a cargo tank which has the capability of being subjected to a vacuum or a pressure for purposes of loading and unloading its contents.

"Vadose zone" see "Unsaturated zone."

"Vapor incinerator" means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

"Variance" means a deviation from a provision of this division and chapter 6.5 of the Health and Safety Code authorized pursuant to section 66260.210 or Health and Safety Code section 25143.

"Vehicle" means, except for purposes of the annual inspections and the issuance of certificates of compliance required by chapters 12 and 13 of this division, a device by which any person or property, including waste, may be propelled, moved or drawn, excepting a device moved exclusively by human power. For purposes of the annual inspections and the issuance of certificates of compliance required by chapters 12 and 13 of this division, "vehicle" means a device by which any person or property, including waste, may be propelled, moved or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.

"Vented" means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by

heating and not caused by tank loading and unloading (working losses) or by natural means such as diurnal temperature changes.

"Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

"Volatile organic compound" means a compound which is a volatile organic compound according to Method No. 8240 in the Environmental Protection Agency Document No. Sw 846 (1982) or any equivalent, alternative method acceptable to the Department.

"Waste" means waste as defined in section 66261.2.

"Waste constituent" means a constituent that is reasonably expected to be in or derived from waste contained in a regulated unit.

"Waste pile" see "Pile."

"Wastewaters" means, for the purposes of chapter 18 of this division, wastes that contain less than one percent by weight total organic carbon (TOC) and less than one percent by weight total suspended solids (TSS), with the following exceptions:

(a) F001, F002, F003, F004, F005 solvent-water mixtures that contain less than one percent by weight TOC or less than 1% by weight total F001, F002, F003, F004, F005 solvent constituents listed in section 66268.41, Table CCWE;

(b) K011, K013, K014 wastewaters (as generated) that contain less than five percent by weight total organic constituents (TOC) and less than one percent by weight total suspended solids (TSS);

(c) K103 and K104 wastewaters contain less than four percent by weight TOC and less than one percent by weight TSS.

"Wastewater treatment unit" means a device which:

(a) is part of a wastewater treatment facility which is subject to regulation under either section 402 (33 U.S.C. section 1317) or 307(b) (33 U.S.C. section 1342) of the Federal Clean Water Act; and

(b) receives and treats or stores an influent wastewater which is a hazardous waste as defined in chapter 11 of this division, or that generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in chapter 11 of this division, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in chapter 11 of this division; and

(c) meets the definition of tank or tank system in this section.

"Water (bulk shipment)" means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

"Water reactive" means having properties of, when contacted by water, reacting violently, generating extreme heat, burning, exploding or rapidly reacting to produce an ignitable, toxic or corrosive mist, vapor or gas.

"Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

"Well injection": (See "underground injection.")

"X-bar chart" means a control chart for evaluating the process level or subgroup differences in terms of the subgroup average.

"Zone of aeration" see "Unsaturated zone."

"Zone of engineering control" means an area under the control of the owner or operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to ground water or surface water.

"Zone of saturation" see "Saturated zone."

NOTE: Authority cited: Sections 25141, 25150, 25158.1, 25159, 25187.7, 25204 and 58012, Health and Safety Code; Section 58012, Governor's Reorganizational Plan # 1 of 1991. Reference: Sections 25110.02, 25110.1, 25110.5, 25111, 25112, 25112.5, 25113, 25114, 25115, 25117, 25117.1, 25117.3, 25117.8, 25117.9, 25117.11, 25118, 25119, 25120, 25121, 25121.5, 25122.7, 25123, 25123.3, 25123.5, 25123.6, 25141, 25159.5, 25187.7, 25204, 25229, 25501 and 58012, Health and Safety Code; and 40 CFR Sections 260.10, 261.1, 264.1031 and 270.2.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

2. Amendment of section filed 8-12-91; operative 9-11-91 (Register 91, No. 50).

3. New definitions "Fixed Treatment Unit" and "Release" and amendment of "Transportable Treatment Unit" filed 10-23-91; operative 1-1-92 (Register 92, No. 12).

4. Amendment of "Hazardous material" filed 8-25-92; operative 8-25-92 pursuant to Government Code section 11346.2(d) (Register 92, No. 35).

5. Addition of definitions and amendment of NOTE filed 12-23-92; operative 1-22-93 (Register 93, No. 2).

6. Addition of definitions and amendment of NOTE filed 4-12-93; operative 4-12-93 (Register 93, No. 16).

7. Change without regulatory effect amending the definition of "Application" filed 6-1-93 pursuant to section 100, title 1, California Code of Regulations (Register 93, No. 23).

8. Amendment adding definitions of "Class I Violation" and "Class II Violation" and amendment of NOTE filed 6-21-93; operative 6-21-93 pursuant to Government Code section 11346.2(d) (Register 93, No. 26).

§ 22-66260.11. References.

(a) When used in this division, the following publications are incorporated by reference:

(1) "ANALYSIS OF Pesticides in Humans and Environmental Samples," EPA-600/8-80-038, U.S. Environmental Protection Agency, June 1980. This reference is available from the National Technical Information Service; United States Department of Commerce; Springfield, VA 22161. (703) 487-4650;

(2) "ASTM Standard Test Methods for Flash Point of Liquids by Set-flash Closed Tester," ASTM Standard D-3278-78, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103;

(3) "ASTM Standard Guide for Investigating and Sampling Soil and Rock," ASTM Standard D-420-87, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

(4) "ASTM Standard Method of Collection and Preparation of Coke Samples for Laboratory Analysis," ASTM Standard D-346-78, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103;

(5) "ASTM Standard Method of Collection of a Gross Sample of Coal," ASTM Standard D-2234-82, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103;

(6) "ASTM Standard Practice for Soil Investigation and Sampling by Auger Boring," ASTM Standard D-1452-80, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103;

(7) "ASTM Standard Practice for Sampling Bituminous Materials," ASTM Standard D-140-88, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103;

(8) "ASTM Standard Test Methods for Flash Point by Pensky-Martens Closed Tester," ASTM Standard D-93-79 or D-93-80. D-93-80 is available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103;

(9) "Fire Protection Guide on Hazardous Materials" (1977) is available from National Fire Protection Association, Battery March Park, Quincy, MA 02269 (800) 344-3555;

(10) "Fire Protection Guide on Hazardous Materials" (1984) is available from National Fire Protection Association, Battery March Park, Quincy, MA 02269 (800) 344-3555;

(11) "Flammable and Combustible Liquids Code" (1981), available from the National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210;

(12) "Geotechnical Branch Training Manual Nos. 4, 5 and 6," published by the United States Bureau of Reclamation, January 1986. These manuals are available from: Bureau of Reclamation Engineering and Research Center, Attention: D-7923.A; P.O. Box 25007; Denver, Colorado 80255;

(13) "Interim Method of the Determination of Asbestos in Bulk Insulation Samples," 40 CFR Part 763, Subpart F, Appendix A, published July 1, 1989. A bound version of 40 CFR is available from the Superintendent of Documents: United States Government Printing Office, Washington, DC 20402, (202) 783-3238;

(14) "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020, U.S. Environmental Protection Agency, 1979. This reference is available from the Superintendent of Documents; United States Government Printing Office; Washington, DC 20402, (202) 783-3238;

(15) "Standard Methods for the Examination of Water and Wastewater," 14th Edition, available from the American Public Health Association, 1015 Eighteenth Street NW, Washington, DC 20036.

(16) "Standard Methods for the Examination of Water and Wastewater," 16th Edition, available from the American Public Health Association, 1015 Eighteenth Street NW, Washington, DC 20036.

(17) "Static Acute Bioassay Procedures for Hazardous Waste Samples," California Department of Fish and Game, Water Pollution Control Laboratory, November 1988. This reference is available from the California Department of Fish and Game, Water Pollution Control Laboratory, 2005 Nimbus Road, Rancho Cordova, CA 95670;

(18) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 [Second Edition, 1982 as amended by Update I (April, 1984), and Update II (April, 1985)];

(19) "Test Methods for Evaluating Solid Waste," EPA Publication SW-846 Third Edition, November 1986 SW-846 available from the Superintendent of Documents; United States Government Printing Office; Washington, DC 20402, (202) 783-3238;

(20) "Title 40, Code of Federal Regulations," (40 CFR), revised as of July 1, 1990. A bound version of 40 CFR is available from the Superintendent of Documents; United States Government Printing Office, Washington, DC 20402, (202) 783-3238.

(21) "Uncontrolled Hazardous Waste Site Ranking System, A User's Manual" (1982), MTR-82W111, is available from the Mitre Corporation, 7525 Colshire Drive McClean, VA 22102-3481, (703) 883-6000.

(22) "ASTM Standard Method for Analysis of Reformed Gas by Gas Chromatography," ASTM Standard D 1946-82, available from American Society for Testing and Materials, 1916 Race street, Philadelphia, PA 19103.

(23) "ASTM Standard Test for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method)," ASTM Standard D 2382-83, available from American Society for Testing and Materials, 1916 Race street, Philadelphia, PA 19103.

(24) "ASTM Standard Practice for General Techniques of Ultraviolet Visible Quantitative Analysis," ASTM Standard E 169-87, available from American Society for Testing and Materials, 1916 Race street, Phil-

adelphia, PA 19103.

(25) "ASTM Standard Practices for General Techniques of Infrared Quantitative Analysis," ASTM Standard E 168-88, available from American Society for Testing and Materials, 1916 Race street, Philadelphia, PA 19103.

(26) "ASTM Standard Practices for Packed Column Gas Chromatography," ASTM Standard E 260-85, available from American Society for Testing and Materials, 1916 Race street, Philadelphia, PA 19103.

(27) "ASTM Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography," ASTM Standard E 2267-88, available from American Society for Testing and Materials, 1916 Race street, Philadelphia, PA 19103.

(28) "ASTM Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isotheriscope," ASTM Standard D 2879-86, available from American Society for Testing and Materials, 1916 Race street, Philadelphia, PA 19103.

(29) APTI Course 415: Control of Gaseous Emissions, EPA Publication EPA-450/2-81-005, December 1981, available from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(b) The references listed in subsection (a) of this section are also available for inspection at the Department of Health Services, Toxic Substances Control Program, Technical Reference Library, 400 P Street, Sacramento, CA 94234-7320.

NOTE: Authority cited: Sections 25141, 25150 and 25159, Health and Safety Code. Reference: Sections 25141, 25159 and 25159.5, Health and Safety Code; 40 CFR Section 260.11.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).
2. New subsections (a)(22)-(29) and amendment of NOTE filed 12-23-92; operative 1-22-93 (Register 93, No. 2).
3. Editorial correction of printing error repositioning subsection (b) (Register 93, No. 26).

§ 22-66260.12. Acronyms and Abbreviations.

As used in this division, the following acronyms and abbreviations have the specified meaning:

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| "ASTM" | means American Society for Testing and Materials; |
| "C" | means hazard code for corrosive waste and the potential hazardous property of being corrosive; |
| "CCR" | means California Code of Regulations; |
| "CEQA" | means the California Environmental Quality Act (Division 13 (commencing with section 21000) of the Public Resources Code); |

[The next page is 775.]

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| "CERCLA" | means Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended. (42 U.S.C. section 9610 et seq.); |
| "CFR" | means Code of Federal Regulations; |
| "CWA" | means Clean Water Act of 1977, as amended (33 U.S.C. section 1251 et seq.); |
| "DOT" | means Department of Transportation, Federal; |
| "EP Toxicity" | means a toxicity characteristic determined pursuant to EPA Method 1310 from SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 2nd or 3rd Edition (Incorporated by reference in section 66260.11 of this Division); |
| "FIA" | means Federal Insurance Administration; |
| "FR" | means Federal Register; |
| "H" | means hazard code for Acute Hazardous Waste; |
| "HSC" | means Health and Safety Code; |
| "HWCA" | means Hazardous Waste Control Act (chapter 6.5 (commencing with section 25100) of division 20 of the Health and Safety Code); |
| "I" | means hazard code for ignitable waste and the potential hazardous property of being ignitable; |
| "Kg" | means the unit of measure, kilogram; |
| "NACE" | means National Association of Corrosion Engineers; |
| "NPDES" | means National Pollutant Discharge Elimination System; |
| "POHC" | means Principal Organic Hazardous Constituent; |
| "POTW" | means Publicly Owned Treatment Works; |
| "R" | means hazard code for reactive waste and the potential hazardous property of being reactive; |
| "RCRA" | means Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. section 6901 et seq.); |
| "SAE" | means Society of Automotive Engineers; |
| "SAE steel" | means a grade or type of steel; |
| "SDWA" | means Safe Drinking Water Act of 1976, as amended (42 U.S.C. section 300 f et seq.); |
| SIC" | means Standard Industrial Classification; |
| "SQG" | means Small Quantity Generator; |
| "STLC" | means Soluble Threshold Limit Concentration; |
| "SW-846" | means "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods"; |
| "SWMU" | means Solid Waste Management Unit; |
| "T" | means hazard code for Toxic Waste with a constituent or constituents listed in Appendix VIII of chapter 11; |
| "TC" | means Toxicity Characteristic; |
| "TCLP" | means Toxicity Characteristics Leaching Procedure; |
| "TTLC" | means Total Threshold Limit Concentration; |
| "TTU" | means Transportable Treatment Unit; |
| "UIC" | means Underground Injection Control; |
| "U.S.C." | means United States Code; |
| "USDW" | means Underground Source of Drinking Water; |
| "USEPA" | means United States Environmental Protection Agency; |
| "WET" | means Waste Extraction Test; |
| "X" | means the potential hazardous property of being toxic by any of the parameters in section 66261.24; |

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25141 and 25159, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.21. Petitions for Equivalent Testing or Analytical Methods.

(a) The Department shall only grant a variance from the provisions of this chapter to allow use of a test method or analytical method alternative to that prescribed in chapter 11 of this division for use in classifying a specific non-RCRA hazardous waste or a RCRA hazardous waste if the proposed testing or analytical method has been added to 40 CFR Parts 261, 264, or 265 per 40 CFR section 260.21. For the variance to be granted, the applicant must show to the satisfaction of the Department that the proposed alternative test method or analytical method is equal or superior to the appropriate corresponding method in chapter 11 of this division, when applied to the specific waste with respect to accuracy, precision, sensitivity and stringency.

(b) An application for a variance pursuant to section 66260.21(a) shall include all of the following:

(1) the name and address of the generator of the waste and where the waste is located;

(2) a complete description of the waste, including its composition and source or process of generation;

(3) a complete description of the proposed alternative test method or analytical method, including all equipment and procedural steps used;

(4) a comparison of results obtained from a statistically significant number of replicate trials with the proposed alternative test method or analytical method with those results obtained from use of the appropriate corresponding method prescribed in chapter 11 of this division when both methods are applied simultaneously to the applicant's waste;

(5) an assessment of any factors which might interfere with or limit the applicability of the proposed test method or analytical method;

(6) a description of the quality control and quality assurance procedures to be followed to ensure the accuracy, precision, sensitivity and stringency of the proposed test method or analytical method.

(c) The Department shall, within 60 days after receipt of an application for a variance pursuant to section 66260.21(a), notify the applicant that the application is complete and accepted for processing by the Department or that the application is incomplete and what further information is required.

(d) The Department shall, within 180 days of receipt of a complete application for a variance pursuant to section 66260.21(a), notify the applicant that the request for a variance is granted or denied.

(e) If the variance requested pursuant to section 66260.21(a) is denied, the Department shall provide to the applicant in writing the reason for the denial.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code and Section 15376, Government Code. Reference: Sections 25141, 25143 and 25159.5, Health and Safety Code and Section 15376, Government Code.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66260.200. Classification of a Waste as Hazardous or Nonhazardous.

(a) A waste shall be classified a hazardous waste if it meets the definition of a hazardous waste in section 66261.3.

(b) No person shall deviate from the provisions of this chapter in the management of a hazardous waste, except as provided for in section 66260.200(f) or section 66260.210.

(c) It shall be the generator's responsibility to determine if the waste is classified as a hazardous waste pursuant to section 66260.200(a). If the generator determines that the waste is hazardous, the waste shall be managed pursuant to the provisions of this division. If the generator determines that the waste is nonhazardous, the generator, except as provided for in section 66260.200(f), may either proceed to manage the waste as nonhazardous or apply to the Department for concurrence with the nonhazardous determination through the notification procedure set forth in section 66260.200(d) before managing the waste as nonhazardous. A generator who incorrectly determines that a hazardous waste is nonhazardous and fails to manage the waste pursuant to the provisions of this division is in violation of the requirements of this division and is subject to enforcement action.

(d) If a person chooses to obtain departmental concurrence with the nonhazardous waste determination, a notification shall be submitted to the Department which includes all information required by section 66260.200(m). Pending concurrence by the Department pursuant to section 66260.200(e), that person shall manage the waste as hazardous waste.

(e) The Department, within 30 days of receipt of a notification pursuant to section 66260.200(d), shall acknowledge in writing receipt of the notification. Within 60 days of receipt of a notification, the Department shall notify the sender of the notification in writing that concurrence with that person's classification of the waste as nonhazardous is approved, disapproved, or that the notification is incomplete or inadequate and what

additional information is needed. Upon receipt of the additional information, the Department, within 60 days of receipt of the additional information, shall notify the sender of the notification in writing that concurrence of that person's classification of the waste as nonhazardous is approved or disapproved. The notification shall be considered disapproved if the sender of the notification fails to provide the additional information within 90 days from the date the information was requested. However, that person may request in writing an extension, up to 90 days, within which the information shall be submitted or the notification shall be considered disapproved.

(f) If a person wishes to classify and manage as nonhazardous a waste which would otherwise be a non-RCRA hazardous waste because it has mitigating physical or chemical characteristics which render it insignificant as a hazard to human health and safety, livestock and wildlife, that person shall apply to the Department for its approval to classify and manage the waste as nonhazardous. The application for approval shall include the information required by section 66260.200(m). The Department, within 30 days of receipt of the application, shall acknowledge in writing receipt of the application. Pending written approval by the Department, the applicant shall manage the waste as hazardous waste. Within 60 days of receipt of an application, the Department shall notify the applicant in writing that the application for classification and management of the waste as nonhazardous is approved, disapproved, or that the application is incomplete or inadequate and what additional information is needed. Upon receipt of the additional information, the Department, within 60 days of receipt of the additional information, shall notify the applicant in writing that the application for classification and management of the waste as nonhazardous is approved or disapproved. The application shall be considered disapproved if the applicant fails to provide the additional information in writing 90 days from the date the information was requested. However, the applicant may request, in writing, an extension up to 90 days, within which the information shall be submitted or the application shall be considered disapproved.

(g) The Department may find that the notification submitted by a person pursuant to section 66260.200(d) or the application submitted pursuant to section 66260.200(f) is incomplete or inadequate for reasons which may include any of the following:

- (1) the application is not complete or there is insufficient information on which to classify the waste; or
- (2) the methods used in testing or analyzing the waste are not those prescribed in chapter 11 of this division, or have not been approved by the Department pursuant to section 66260.21(a) as alternative methods; or
- (3) sampling and sample management were not in accord with Appendix I of chapter 11 and Table 3 of Appendix III of chapter 11; or
- (4) representative samples of the waste are required pursuant to section 66260.200(k) in order that the Department may independently assess the properties of the waste.

(h) If the Department disapproves of a person's determination that a waste is nonhazardous or a person's application to manage as nonhazardous a waste which would otherwise be a non-RCRA hazardous waste, the Department shall give in writing the reason for the disapproval.

(i) If the Department at any time finds that the information submitted or generated for a determination pursuant to section 66260.200(c), a concurrence pursuant to section 66260.200(d) or an approval pursuant to 66260.200(f) was erroneous for any of the following reasons, the Department may notify that person in writing of the deficiencies:

- (1) the results given in the laboratory report or other submitted data demonstrate that the waste is hazardous pursuant to the criteria given in chapter 11 of this division; or
- (2) fraudulently derived information is utilized or included; or
- (3) analysis or testing of the waste performed by the Department or other agencies or information available to the Department demonstrates that the waste is hazardous according to the criteria given in chapter 11 of this division.

(j) A person, upon receipt of such notice under section 66260.200(i), shall immediately cease managing the subject waste as a nonhazardous waste and shall manage the waste as hazardous waste.

That person may submit to the Department an amended notification or application. Within 30 days of receipt of an amended notification or application, the Department shall acknowledge in writing receipt of the amended notification or application. Within 60 days of receipt of an amended notification or application, the Department shall notify the sender of the notification or the applicant in writing that the notification or application is approved, disapproved, or that the notification or application is incomplete or inadequate and what additional information is needed. Upon receipt of the additional information, the Department, within 60 days of receipt of the additional information, shall notify the sender of the notification or the applicant in writing that the notification or application is approved or disapproved. The notification or application shall be considered disapproved if the additional information is not provided within 90 days from the date the information was requested. However, the sender of the notification or the applicant may request in writing an extension, up to 90 days, within which the information shall be submitted or the notification or application shall be considered disapproved.

(k) Not later than 60 days after receipt of an adequate notification or application under section 66260.200(d) or (f), the Department may request representative samples of wastes. The sender of the notification or the applicant shall maintain representative samples for that period of time. The quantity of sample submitted shall be adequate to conduct verification tests. Samples shall be collected, packaged, transported and stored in accordance with the sample management procedures in "Test Methods for Evaluating Solid Waste, Physical and Chemical Methods" (SW-846), Third Edition, incorporated by reference in section 66260.11.

(l) If the waste changes so that the prior notification or application as nonhazardous no longer adequately assesses the waste by the criteria which may render it hazardous, the waste shall be managed as hazardous.

(m) A person seeking Department concurrence with a nonhazardous determination or approval to classify and manage as nonhazardous a waste which would otherwise be a non-RCRA hazardous waste shall supply the following information to the Department:

- (1) name, mailing and billing address, location, contact person and phone number for the generating facility;
- (2) A description of the waste including a physical description, quantities produced per unit time, a detailed description of the generating process and current waste disposal method;
- (3) information on the sampling of the waste including the name and address of the firm sampling the waste, the name(s) of the person(s) sampling the waste, dates and locations of sample collection and a description of the sampling methodology and sample handling and preservation procedures;
- (4) testing laboratory information including the name, address, and certification number of the testing laboratory, the test methods used and references for locating these methods, the name(s) and qualifications of the person(s) testing the waste, the method for preparation of laboratory samples from field samples and information needed to identify each sample;
- (5) laboratory results including results from all tests required by chapter 11 of this division and a listing of the waste's constituents. Results shall include analyses from a minimum of four representative samples as specified in chapter 9 of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd Edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference in section 66260.11 of this chapter);

(6) certification of the veracity of the information submitted, signed and dated by a person who is the responsible manager of the facility.

(n) Notwithstanding the timeframes specified above, the Department shall not notify the applicant of the Department's decision regarding a notification submitted pursuant to subsection (d) of this section or an appli-

cation submitted pursuant to subsection (f) of this section until the California Board of Equalization receives the fee assessed pursuant to Health and Safety Code section 25205.8.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code and Section 15376, Government Code. Reference: Sections 25205.8, 25141 and 25143, Health and Safety Code and Section 15376, Government Code.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).
2. Editorial correction of printing error in subsection (j) (Register 92, No. 49).

§ 22-66260.210. Variances.

(a) The department may grant a variance from one or more of the requirements of this division and chapter 6.5 of division 20 of the Health and Safety Code pursuant to Health and Safety Code section 25143.

(b) The Department shall within 60 calendar days after receipt of an application for a variance inform the applicant in writing that the application is complete and accepted for filing, or that the application is incomplete and what specific information is required for the application to be submitted in a complete form. The Department shall, within 60 days of determining that an application is complete, inform the applicant in writing that variance is granted or denied.

(c) If the variance requested is denied, the Department shall provide to the applicant in writing the reason for the denial.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code and Section 15376, Government Code. Reference: Sections 25141 and 25143, Health and Safety Code and Section 15376, Government Code.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.1. Purpose and Scope.

(a) This chapter identifies those wastes which are subject to regulation as hazardous wastes under this division and which are subject to the notification requirements of Health and Safety Code section 25153.6. In this chapter:

(1) article 1 defines the terms "waste" and "hazardous waste," identifies those wastes which are excluded from regulation under this division, and establishes special management requirements for hazardous waste which is recycled and establishes rules for classifying and managing contaminated containers;

(2) article 2 sets forth the criteria used by the Department to identify characteristics of hazardous waste;

(3) article 3 identifies characteristics of hazardous waste;

(4) article 4 lists particular hazardous wastes;

(5) article 5 identifies categories of hazardous waste including RCRA hazardous waste, non-RCRA hazardous waste, extremely hazardous waste, and special waste, and establishes criteria and management standards for special waste and extremely hazardous waste;

(b)(1) The definition of waste contained in this chapter applies only to wastes that also are hazardous pursuant to this division and chapter 6.5 of division 20 of the Health and Safety Code. It does not apply to materials (such as non-hazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes.

(2) This chapter identifies only some of the materials which are wastes and hazardous wastes for the purposes of Health and Safety Code sections 25185 and 25187.1. A material which is not defined as a waste or identified as a hazardous waste pursuant to this chapter, is still a waste and a hazardous waste for purposes of Health and Safety Code sections 25185 and 25187.1, if the Department has reason to believe that a material may be a waste within the meaning of Health and Safety Code section 25124 and a hazardous waste within the meaning of Health and Safety Code section 25117.

NOTE: Authority cited: Sections 208, 25141, 25150 and 25159, Health and Safety Code. Reference: Sections 25117, 25124, 25141, 25159, 25159.5, 25185 and 25187.1, Health and Safety Code and 40 CFR Section 261.1.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.2. Definition of Waste.

(a) "Waste" means any discarded material of any form (for example, liquid, semi-solid, solid or gaseous) that is not excluded by section 66261.4(a) or section 66261.4(e) or that is not excluded by Health and Safety Code section 25143.2(b) or Health and Safety Code section 25143.2(d).

(b) A discarded material is any material which is any of the following:

- (1) relinquished as explained in subsection (c) of this section; or
- (2) recycled, as explained in subsection (d) of this section; or
- (3) considered inherently waste-like, as explained in paragraph (e) of this section.

(c) A material is a waste if it is relinquished by being any of the following:

- (1) disposed of;
- (2) burned or incinerated;
- (3) accumulated, stored or treated, but not recycled, before or in lieu of, being relinquished by being disposed of, burned or incinerated.

(d) A material is a waste if it is recycled, or accumulated, stored or treated before recycling, by being managed:

- (1) through being used in a manner constituting disposal;

(A) materials noted with an "*" in column 1 of Table I are wastes when they are:

1. applied to or placed on the land in a manner that constitutes disposal; or

2. used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself is a waste);

(B) however, commercial chemical materials listed in section 66261.33, which are discarded commercial chemical products, off-specification species, container residues, or spill residues thereof, and which are applied to the land and application to the land is their ordinary manner of use are non-RCRA hazardous wastes. Commercial chemical products which are "retrograde materials" as defined in section 66260.10 are not wastes until they become "recyclable materials" pursuant to subsection (e) of the definition of "recyclable materials" in section 66260.10;

- (2) through being burned for energy recovery;

(A) materials noted with an "*" in column 2 of Table 1 are wastes when they are:

1. burned to recover energy;

2. used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself is a waste);

(B) however, commercial chemical materials listed in section 66261.33, which are discarded commercial chemical products, off-specification species, container residues, or spill residues thereof, and which are fuels are non-RCRA hazardous wastes. Commercial chemical products which are "retrograde materials" as defined in section 66260.10 are not wastes until they become "recyclable materials" pursuant to subsection (e) of the definition of "recyclable materials" in section 66260.10

(3) through being reclaimed: materials noted with an "*" or "***" in column 3 of Table 1 are wastes when reclaimed;

(4) through being accumulated speculatively: materials noted with an "*" or "***" in column 4 of Table 1 are wastes when accumulated speculatively.

TABLE 1

| Column | Use Constituting Disposal 66261.2(d)(1) (1) | Energy Recovery/Fuel 66261.2(d)(2) (2) | Reclamation 66261.2(d)(3) (3) | Speculative Accumulation 66261.2(d)(4) (4) |
|--|---|--|-------------------------------|--|
| Spent Materials | * | * | * | * |
| Sludges (listed in section 66261.31 or 66261.32) | * | * | * | * |
| Sludges exhibiting a characteristic of hazardous waste | * | * | ** | * |
| By-products (listed in section 66261.31 or 66261.32) | * | * | * | * |
| By-products exhibiting a characteristic of hazardous waste | * | * | ** | * |
| Commercial chemical products (listed in section 66261.33) | * | * | ** | ** |

Note: The terms "spent materials," "sludges," and "by-products" are defined in section 66260.10.

*Except as provided in sections 66261.2(d)(1)(B) and 66261.2(d)(2)(B), a material designated by a single asterisk in Column (1), (2), (3), or (4) is a waste which is not eligible to be classified as a non-RCRA hazardous waste.

**Unless exempt pursuant to Health and Safety Code section 25143.2(d), a material designated with a double asterisk in Column (3) or (4) which is identified as a hazardous waste pursuant to section 66261.3 is a non-RCRA hazardous waste. Commercial chemical products which are "retrograde materials" as defined in section 66260.10 are not wastes until they become "recyclable materials" pursuant to subsection (e) of the definition of "recyclable materials" in section 66260.10.

(e) A material is a waste if it is inherently waste-like when it is recycled. The following materials are wastes when they are recycled; hazardous Waste Nos. F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026 and F028.

(f) A material is a waste if it poses a threat to human health or the environment and meets either, or both, of the following:

(1) it is mislabeled or not adequately labeled, unless the material is correctly labeled or adequately labeled within 10 days after the material is discovered to be mislabeled or inadequately labeled;

(2) it is packaged in deteriorated or damaged containers, unless the material is contained in sound or undamaged containers within 96 hours after the containers are discovered to be deteriorated or damaged.

NOTE: Authority cited: Sections 25141, 25150, and 25159, Health and Safety Code; Section 58012, Governor's Reorganization Plan Number 1 of 1991. Reference: Sections 25120.5, 25121, 25124, 25143.2, 25159 and 25159.5, Health and Safety Code; 40 CFR Section 261.2.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).
2. Amendment of subsection (a) and NOTE filed 4-23-92 as an emergency; operative 4-23-92 (Register 92, No. 18). A Certificate of Compliance must be transmitted to OAL 8-21-92 or emergency language will be repealed by operation of law on the following day.
3. Amendment of subsection (a) refiled 6-22-92 as an emergency; operative 6-22-92 (Register 92, No. 26). A Certificate of Compliance must be transmitted to OAL by 10-20-92 or emergency language will be repealed by operation of law on the following day.

4. Amendment of subsection (a) refiled 10-22-92 as an emergency; operative 10-19-92 (Register 92, No. 43). A Certificate of Compliance must be transmitted to OAL 2-22-93 or emergency language will be repealed by operation of law on the following day.
5. Amendment of subsection (a) refiled 2-16-93 as an emergency; operative 2-16-93 (Register 93, No. 8). A Certificate of Compliance must be transmitted to OAL 6-16-93 or emergency language will be repealed by operation of law on the following day.
6. Amendment of subsection (a) refiled 6-14-93 as an emergency; operative 6-15-93 (Register 93, No. 25). A Certificate of Compliance must be transmitted to OAL by 10-13-93 or emergency language will be repealed by operation of law on the following day.

§ 22-66261.3. Definition of Hazardous Waste.

- (a) A waste, as defined in section 66261.2, is a hazardous waste if:
- (1) it is not excluded from classification as a waste or a hazardous waste under Health and Safety Code section 25143.2(b) or 25143.2(d) or section 66261.4; and
 - (2) it meets any of the following criteria:
 - (A) it exhibits any of the characteristics of hazardous waste identified in article 3 of this chapter;
 - (B) it is listed in article 4 of this chapter and has not been excluded by the USEPA Administrator from 40 CFR Part 261 Subpart D pursuant to 40 CFR sections 260.20 and 260.22;
 - (C) it is listed in or contains a constituent listed in Appendix X to this chapter. However, the waste is not a hazardous waste if:
 1. it is determined that the waste does not meet the criteria of subsection (a)(2)(B) of this section; and
 2. it is determined that the waste does not meet the criteria of subsection (a)(2)(A) of this section by:
 - i. testing the waste according to the methods set forth in article 3 of this chapter, or according to an equivalent method approved by the Department pursuant to section 66260.21; or
 - ii. applying knowledge of the hazardous properties of the waste in light of the materials or the processes used and the characteristics set forth in article 3 of this chapter;
 - (D) it is a mixture of a hazardous waste that is listed in article 4 of this chapter other than a hazardous waste listed with hazard code (T) or (H),

and another waste, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in article 3 of this chapter;

(E) it is a mixture of a waste and one or more hazardous wastes listed in article 4 of this chapter which has not been excluded by the USEPA Administrator from 40 CFR Part 261 Subpart D pursuant to 40 CFR sections 260.20 and 260.22. However, the following mixtures of wastes and hazardous wastes listed in article 4 of this chapter are not hazardous wastes (except by application of subsection (a)(2)(A) or (a)(2)(B) of this section) if the generator can demonstrate that the mixture consists of wastewater, the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater), and:

1. one or more of the following spent solvents listed in section 66261.31 — carbon tetrachloride, tetrachloroethylene, trichloroethylene — provided, that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million; or

2. one or more of the following spent solvents listed in section 66261.31 — methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents — provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 25 parts per million; or

3. heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050); or

4. a discarded commercial chemical product, or chemical intermediate listed in section 66261.33 arising from "de minimis" losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this subsection, "de minimis" losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

5. wastewater resulting from laboratory operations containing toxic (T) wastes listed in article 4 of this chapter, provided that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of facility's wastewater treatment or pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation;

(F) it is not classified as a hazardous waste by application of the criteria in subsections (a)(2)(A) through (a)(2)(E) of this section, but has been classified as a hazardous waste by the Department because it otherwise conforms to the definition of hazardous waste set forth in Health and Safety Code section 25117.

(b) A waste which is not excluded from classification as a waste or hazardous waste under the provisions of section 66261.4(b) or Health and Safety Code section 25143.2(b) or 25143.2(d) becomes a hazardous waste when any of the following events occur:

(1) in the case of a waste listed in article 4 of this chapter, when the waste first meets the listing description set forth in article 4 of this chapter;

(2) in the case of a mixture of waste and one or more hazardous wastes listed in article 4 of this chapter, when the hazardous waste listed in article 4 of this chapter is first added to the waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in article 3 of this chapter.

(c)(1) A hazardous waste will remain a hazardous waste unless and until it meets the criteria of subsection (d) of this section. Except as otherwise provided in subsection (c)(2) of this section, any waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate including precipitation run-off is a hazardous waste. (However, materials that are reclaimed from wastes and that are used beneficially are not wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(c)(2) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332) is not hazardous even though it is generated from the treatment, storage, or disposal of a hazardous waste, unless it exhibits one or more of the characteristics of hazardous waste.

(d) Except as provided in subsection (e) of this section, any waste described in subsection (c) of this section is not a hazardous waste if it meets both of the following criteria:

(1) the waste does not exhibit any of the characteristics of hazardous waste identified in article 3 of this chapter; and

(2) in the case of a waste which is a waste listed in article 4 of this chapter, contains a waste listed under article 4 of this chapter or is derived from a waste listed in article 4 of this chapter (but not including precipitation run off), the waste also has been excluded by the USEPA Administrator from the lists of hazardous wastes in 40 CFR Part 261 Subpart D pursuant to 40 CFR sections 260.20 and 260.22.

NOTE: Authority cited: Sections 208, 25141, 25150 and 25159, Health and Safety Code. Reference: Sections 25117, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.3.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.4. Exclusions.

(a) Materials which are not wastes. The following materials are not wastes for the purpose of this chapter:

(1) industrial wastewater discharges that are point source discharges subject to regulation under section 402 of the federal Clean Water Act, as amended (33 U.S.C. section 1342). This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment;

(2) source, special nuclear or by-product material as defined by the federal Atomic Energy Act of 1954, as amended, (42 U.S.C. section 2011 et seq.);

(3) spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in section 66260.10.

(b) Wastes which are not hazardous wastes. The following wastes are not hazardous wastes:

(1) infectious waste which consists solely of the carcasses of animals, which is not otherwise hazardous, and which is handled, stored and disposed of according to all applicable requirements established by the Department of Food and Agriculture pursuant to provisions of chapter 1, part 1, division 5 (commencing with section 9101) and of chapter 5, part 3, division 9 (commencing with section 19200) of the Food and Agricultural Code;

(2) materials which are exempted or excluded from classification as solid waste or hazardous waste pursuant to 40 CFR section 261.4 if they

do not exhibit a characteristic of a hazardous waste as set forth in article 3 of this chapter;

(c) hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under this division or to the notification requirements of Health and Safety Code section 25153.6 until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials;

(d) samples:

(1) except as provided in subsection (d)(2) of this section, a sample of waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this division or to the notification requirements of Health and Safety Code section 25153.6 when:

(A) the sample is being transported to a laboratory for the purpose of testing; or

(B) the sample is being transported back to the sample collector after testing; or

(C) the sample is being stored for less than 90 days by the sample collector before transport to a laboratory for testing; or

(D) the sample is being stored in a laboratory before testing; or

(E) the sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(F) the sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in subsections (d)(1)(A) and (d)(1)(B) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector shall:

(A) comply with California Highway Patrol (CHP), U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(B) comply with the following requirements if the sample collector determines that CHP, DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

1. assure that the following information accompanies the sample:

a. the sample collector's name, mailing address, and telephone number;

b. the laboratory's name, mailing address, and telephone number;

c. the quantity of the sample;

d. the date of shipment; and

e. a description of the sample.

2. package the sample so that it does not leak, spill, or vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in subsection (d)(1) of this section.

(e) controlled substances:

(1) A conditionally exempt controlled substance, as defined in paragraph (2) of this subsection, which is managed in accordance with the requirements of paragraph (3) of this subsection, is not a waste for purposes of this division or Health and Safety Code, division 20, chapter 6.5.

(2) For the purposes of this division, a conditionally exempt controlled substance is a "controlled substance", as defined in section 11007 of the Health and Safety Code, which meets all of the following conditions:

(A) the controlled substance is a discarded material (as defined in section 66261.2(b)) which is not excluded from the definition of a "waste" (as defined in section 66261.2(a)), except pursuant to the provisions of this subsection;

(B) the controlled substance is solely a non-RCRA hazardous waste, or the controlled substance or its management is exempt or conditionally exempt from, or is not otherwise regulated pursuant to, RCRA;

(C) the controlled substance was seized by a peace officer, as defined in section 830 of the Penal Code, or a person exercising the powers of a peace officer pursuant to section 830.8 of the Penal Code or otherwise authorized to exercise the powers of a peace officer pursuant to applicable federal laws; and

(D) the controlled substance was seized from a site other than a clandestine laboratory, or the controlled substance was seized as a sample from such a laboratory for purposes of testing or use as evidence.

(3) A conditionally exempt controlled substance shall be managed in accordance with the following requirements:

(A) conditionally exempt controlled substances shall be held in containers which are managed in accordance with the requirements of sections 66265.171, 66265.172, 66265.173 and 66265.177;

(B) conditionally exempt controlled substances shall be stored in an area:

1. with ventilation approved by the local fire department, and

2. separate from controlled substances which are not conditionally exempt pursuant to this subsection and other chemicals seized from clandestine laboratories;

(C) transportation of conditionally exempt controlled substances shall be in accordance with the following requirements:

1. conditionally exempt controlled substances shall be transported by employees of a federal, state or local law enforcement agency;

2. during transportation, the conditionally exempt controlled substances shall be accompanied by a shipping paper which, at a minimum, shall provide the following information:

a. a list of the substances being transported;

b. the type and number of containers being used to transport each type of substance;

c. the quantity, by weight or volume, of each type of substance being transported (if known);

d. the state(s) (e.g., solid, powder, liquid, semi-liquid, gas, etc.) of each type of substance being transported;

e. the final destination and interim destination, if any, of the substances;

f. the name and telephone number of an emergency response contact, for use in the event of a spill or other release;

g. the name, address and telephone number of the law enforcement agency from which the shipment originates, the printed name and signature of the peace officer authorizing the shipment, and the date the shipment originates;

h. the name, address, telephone number and signature of the law enforcement agency employee(s) responsible for the custody and security of the substances during transportation; and

i. the name, address and telephone number of the facility which is the final destination of the substances; and

3. in the event of a spill or release of a conditionally exempt controlled substance during transportation, the law enforcement agency employee responsible for the substance during transportation shall take appropriate immediate action to protect human health and the environment (e.g., notify local law enforcement agencies and/or other local emergency response agencies, dike the spill area, etc.). The law enforcement agency employee responsible for the released substance during transportation shall clean up or provide for the clean up of the spilled or released substance, or take such other action as may be required or approved by Federal, State, or local officials to ensure that the release no longer presents a hazard to human health or the environment;

(D) treatment of conditionally exempt controlled substances shall be limited to:

1. incineration in accordance with paragraphs (3)(E) and (3)(F) of this subsection; and

2. the addition of absorbent material to a conditionally exempt controlled substance in a container or the addition of a conditionally exempt controlled substance to absorbent material in a container, in conjunction with incineration pursuant to paragraphs (3)(E) and (3)(F) of this subsection;

(E) only the following substances may be incinerated, subject to the requirements of paragraph (3)(F) of this subsection, as conditionally exempt controlled substances pursuant to this subsection:

1. amobarbital;
2. amphetamine;
3. barbiturates;
4. benzadrine;
5. cocaine;
6. codeine;
7. dilaudid;
8. fentanyl;
9. halcion;
10. hashish and hashish oil;
11. heroin;
12. lysergic acid diethylamide (LSD);
13. marijuana;
14. methadone;
15. morphine;
16. methamphetamine;
17. methaqualone;
18. methylenedioxymetamphetamine (MDMA);
19. hallucinogenic mushrooms;
20. opium;
21. piperdimoclohexane carbonitrile (PCC);
22. phencyclidine (PCP);
23. pentobarbital;
24. percodan;
25. phenobarbital;
26. quaaludes;
27. seconal;
28. steroids;
29. diazepam;
30. any of the salts, isomers, and salts of isomers of the above listed controlled substances;

(F) incineration of conditionally exempt controlled substances pursuant to this subsection shall be subject to the following requirements and limitations:

1. conditionally exempt controlled substances shall be incinerated under the following operating conditions:
 - a. incineration shall be in an airtight device operated under negative air pressure through the combustion zone;
 - b. a feed airlock or an equivalent mechanics shall be used to prevent fugitive emissions;
 - c. the temperature in the combustion zone shall be maintained at or above 1600 degrees Fahrenheit for a minimum residence time of one second;
 - d. when only controlled substances are being incinerated, the controlled substance feed rate shall be between 25 percent and 75 percent of the incinerator's thermal design capacity;
 - e. when controlled substances are being incinerated with other materials, the total feed rate shall be greater than 40 percent, and no more than 100 percent, of the incinerator's thermal design capacity; and
 - f. if the incineration facility is not equipped with emissions control devices (e.g., scrubbers), the controlled substances feed rate shall be limited to 40 pounds per hour; and
2. the incineration facility shall comply with all applicable Federal, State and local regulatory agency requirements;

(G) all law enforcement agency and incinerator facility personnel who handle conditionally exempt controlled substances shall complete health

and safety training equivalent to the training required under Title 8, CCR, section 5194.

(4) Except as provided in paragraphs (3)(D) through (3)(F) of this subsection, conditionally exempt controlled substances shall be treated and disposed of as hazardous waste in accordance with the requirements of this division and Health and Safety Code, division 20, chapter 6.5.

(5) Any controlled substance, as defined in section 11007 of the Health and Safety Code, including any of those substances listed in paragraph (3)(E) of this subsection, which is not a hazardous waste, pursuant to section 66262.11, is not subject to the requirements of this division.

NOTE: Authority cited: Sections 25141, 25150 and 25159, Health and Safety Code; Section 58012, Governor's Reorganization Plan Number 1 of 1991. Reference: Sections 25117, 25124, 25141, 25143, 25159 and 25159.5, Health and Safety Code; 40 CFR Section 261.4.

HISTORY

1. New section with renumbering and amendment of former section 66300(g) to section 66261.4(b)(2) filed 5-24-91; operative 7-1-91 (Register 91, No. 22).
2. Repealer of subsection (b)(2) and renumbering of following subsections and amendments filed 6-28-91 as an emergency; operative 6-28-91 (Register 91, No. 41). A Certificate of Compliance must be transmitted to OAL 10-28-91 or emergency language will be repealed by operation of law on the following day.
3. New subsection (e) filed 4-23-92 as an emergency; operative 4-23-92 (Register 92, No. 18). A Certificate of Compliance must be transmitted to OAL 8-21-92 or emergency language will be repealed by operation of law on the following day.
4. Repealer and new subsection (e) filed 6-22-92 as an emergency; operative 6-22-92 (Register 92, No. 26). A Certificate of Compliance must be transmitted to OAL by 10-20-92 or emergency language will be repealed by operation of law on the following day.
5. Repealer of subsection (b)(2) filed 8-25-92; operative 8-25-92 pursuant to Government Code section 11346.2(d) (Register 92, No. 35).
6. Editorial correction of HISTORY 2. (Register 92, No. 35).
7. Editorial correction of HISTORY 2. (Register 92, No. 42).
8. Repealer and new subsection (e) refiled 10-22-92 as an emergency; operative 10-19-92 (Register 92, No. 43). A Certificate of Compliance must be transmitted to OAL 2-22-93 or emergency language will be repealed by operation of law on the following day.
9. Editorial correction of printing error in subsection (d)(1) (Register 92, No. 49).
10. Repealer and new subsection (e) refiled 2-16-93 as an emergency; operative 2-16-93 (Register 93, No. 8). A Certificate of Compliance must be transmitted to OAL 6-16-93 or emergency language will be repealed by operation of law on the following day.
11. Repealer and new subsection (e) filed 6-14-93 as an emergency; operative 6-15-93 (Register 93, No. 25). A Certificate of Compliance must be transmitted to OAL by 10-13-93 or emergency language will be repealed by operation of law on the following day.

§ 22-66261.6. Requirements for Recyclable Materials.

(a)(1) Recyclable materials are subject to the applicable requirements for generators, transporters and facilities of articles 1 and 2 of chapter 16 of this division, except as specified otherwise for the materials listed in subsections (a)(2), (a)(3), (a)(4), (a)(5), and (a)(6) of this section.

(2) The following recyclable materials are also regulated under the articles (of chapter 16 of this division) specified below, and all applicable provisions in chapters 20 and 21 of this division:

(A) [RESERVED];

(B) recyclable materials that are subject to the requirements for the management of used oil as specified in article 13 (commencing with section 25250), chapter 6.5, division 20 of the Health and Safety Code (including fuels and certain products derived from such materials) are also regulated under the applicable provisions of articles 4 and 6 of chapter 16 of this division;

(C) all other fuels derived from recyclable materials are regulated under article 4 of chapter 16 of this division;

(D) spent lead-acid storage batteries that are being reclaimed are regulated under article 7 of chapter 16 of this division;

(E) recyclable materials that are being used in agriculture are regulated under article 8 of chapter 16 of this division;

(F) waste elemental mercury that is being recycled is regulated under article 9 of chapter 16 of this division.

(3) The following are not subject to regulation under this division, and are not subject to the notification requirements of Health and Safety Code section 25153.6:

(A) materials that can be shown to be recycled by methods identified in subdivisions (b), (c) or (d) of Health and Safety Code section 25143.2; and

(B) scrap metal as defined in section 66260.10;

(C) hazardous wastes that exhibit the characteristic of toxicity specified in section 66261.24(a)(1) and do not exhibit any other characteristic of a hazardous waste specified in article 3 of this chapter (commencing with section 66261.20), are not listed in article 4 of this chapter (commencing with section 66261.30), and that qualify as one of the materials specified in 40 CFR section 261.6(a)(3) (incorporated by reference in section 66260.11).

(4) The following are prohibited as specified:

(A) the use of material (e.g., waste, used oil or other material) which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited;

(B) the use of used oil as a road oil, dust suppressant or weed control agent is prohibited, except as provided otherwise in Health and Safety Code section 25250.5.

(5) The following hazardous waste, when recycled, is exempt from the restrictions concerning the materials used in a manner constituting disposal or used to produce products that are applied to the land, as provided in Section 25143.2(e) of the Health and Safety Code.

(A) Spent catalyst generated from the Fluid Catalytic cracking (FCC) unit in a petroleum refinery when it is recycled at portland cement kilns as the substitute of alumina and silica in the kiln feed. The concentration of the extractable heavy metals in the FCC catalyst shall not exceed the values given in Table I-CCCWE, Section 66268.106(a) except for nickel and vanadium. The total concentration of nickel and vanadium in the FCC catalyst shall not exceed 3,000 mg/kg, combined.

(6) Hazardous wastes that meet all the following criteria are not subject to regulation under this division but, instead, are subject to regulation as specified in 40 CFR section 261.6(a)(2) (incorporated by reference in section 66260.11):

(A) the hazardous waste exhibits the characteristic of a hazardous waste specified in article 3 of this chapter (commencing with section 66261.20);

(B) the hazardous waste does not exhibit any other characteristic of a hazardous waste specified in article 3 of this chapter (commencing with section 66261.20);

(C) the hazardous waste is not listed in article 4 of this chapter (commencing with section 66261.30); and

(D) the hazardous waste qualifies for regulation pursuant to 40 CFR section 261.6(a)(2) (incorporated by reference in section 66260.11).

NOTE: Authority cited: Sections 25143.2(e), 25150, 25159, 25170, 25179.6 and 25250.22, Health and Safety Code; and Section 58012 of the Governor's Re-organization Plan #1 of 1991. Reference: Sections 25143, 25143.2, 25150, 25159, 25159.5, 25163, 25170, 25179.6, 25250.5 and 25250.22, Health and Safety Code; 40 CFR Sections 261.6 and 266.23.

HISTORY

1. New section with renumbering and amendment of former section 66826 to subsection (a)(5), filed 5-24-91; effective 7-1-91 (Register 91, No. 22). A Certificate of Compliance for 5-6-91 order must be transmitted to OAL by 9-3-91 or emergency language will be repealed by operation of law on the following day.
2. Emergency order of 5-6-91 adopting subsection (a)(5) refiled, including further amendments, 9-3-91 as an emergency; operative 9-3-91 (Register 92, No. 17). A Certificate of Compliance must be transmitted to OAL 1-2-92 or emergency language will be repealed by operation of law on the following day.
3. New subsection (a)(5) refiled 4-20-92 as an emergency; operative 4-20-92 (Register 92, No. 21). A Certificate of Compliance must be transmitted to OAL 8-18-92 or emergency language will be repealed by operation of law on the following day.
4. Certificate of Compliance as to 4-20-92 order including amendment of NOTE transmitted to OAL 8-11-92 and filed 9-23-92 (Register 92, No. 39).

§ 22-66261.7. Contaminated containers.

(a) Except as provided in Section 66262.70 and subsections (g), (h), (i), (k), (l), (m), (n), and (o) of this section, any container (as defined in Section 66260.10 of this division), or inner liner removed from a container, which previously held a hazardous material, including but not limited to hazardous waste, and which is empty as defined in subsection (b) or (d) of this section shall be exempt from regulation under this division and Chapter 6.5 of Division 20 of the Health and Safety Code if it will be managed in accordance with subsection (e) of this section. Existing permits which contain specific conditions governing container cleaning operations which conflict with the provisions of these regulations may be amended to be consistent with this regulation by following the Class 2 permit modification procedures set forth in Section 66270.42(b).

(b) A container, or an inner liner removed from a container, which previously held a hazardous material, including hazardous waste, is empty if the container or the inner liner removed from a container has been emptied so that:

(1) If the hazardous material which the container or inner liner held is pourable, no hazardous material can be poured or drained from the container or inner liner when the container or inner liner is held in any orientation (e.g., tilted, inverted, etc.); and

(2) If the hazardous material which the container or inner liner held is not pourable, no hazardous material remains in or on the container or inner liner that can feasibly be removed by physical methods (excluding rinsing) which comply with applicable air pollution control laws and which are commonly employed to remove materials from that container or inner liner. Following material removal, the top, bottom and sidewalls of such a container shall not contain remaining adhered or crusted material resulting from buildup of successive layers of material or a mass of solidified material. A thin uniform layer or dried material or powder is considered acceptable. A person who treats a container or inner liner onsite by employing physical methods to satisfy the standard in this subsection is authorized to perform such treatment for purposes of Health and Safety Code Section 25201.

(c) A person who treats a container or an inner liner removed from a container of five gallons or less in capacity which has been emptied pursuant to subsection (b) of this section is authorized, for purposes of Health and Safety Code Section 25201, to perform such activities if any rinsate or other residue generated by these activities is completely captured and classified in accordance with the provisions of this division and any applicable waste discharge requirements.

(d) A container or an inner liner removed from a container that has held a material listed as an acute hazardous waste in Sections 261.31, 261.32, or 261.33 (e) Title 40 of the Federal Code of Regulations or a waste which is extremely hazardous pursuant to any of the criteria of Sections 66261.110, 66261.113, and Title 22, California Code of Regulations, Division 4.5, Chapter 11, Appendix X is empty if:

(1) The container or inner liner has been triple rinsed using a solvent capable of removing the waste and all pourable residues have been removed from the container or inner liner in accordance with subsection (b)(1) of this section. Triple rinsing activities shall require specific authorization from the Department unless subject to the provisions of Health and Safety Code Section 25143.2(c)(2); or

(2) The container or inner liner is cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal. Alternative methods to rinsing require prior approval by the Department.

(e) In order to retain the exemption under this section, an empty container or an inner liner removed from a container must be managed by one of the following methods:

(1) Except as otherwise provided in Section 42170 of the Public Resources Code, for containers of five gallons or less in capacity, or inner liners removed from containers of five gallons or less in capacity, by disposing of the container or inner liner at an appropriate solid waste facility, provided that the container or inner liner is packaged and transported in

accordance with applicable U.S. Department of Transportation regulations (49 CFR Part 173); or

(2) By reclaiming its scrap value onsite or shipping the container or inner liner to a person who reclaims its scrap value, provided that the container or inner liner is packaged and transported in accordance with applicable U.S. Department of Transportation regulations (49 CFR Part 173); or

(3) By reconditioning or remanufacturing the container or inner liner onsite pursuant to 49 CFR Section 173.28 (c) and (d) (revised at 55 FR 52402 - 52729) for subsequent reuse, or shipping the container or inner liner to a person who reconditions or remanufactures the container or inner liner pursuant to 49 CFR Section 173.28 (c) and (d) (revised at 55 FR 52402 - 52729); or

(4) By shipping the container or inner liner to a supplier or to another intermediate collection location for accumulation prior to managing the container or inner liner pursuant to subsections (e)(1), (e)(2) or (e)(3) of this section, provided that the container or inner liner is packaged and transported in accordance with applicable U.S. Department of Transportation regulations

(f) A container or an inner liner removed from a container larger than five gallons in capacity which is managed pursuant to subsection (e) of this section shall be marked with the date it has been emptied and shall be managed within one year of being emptied.

(g) Any person who generates an empty container or an inner liner larger than five gallons in capacity which previously held a hazardous material shall maintain, and provide upon request, to the Department, the Environmental Protection Agency, or any local agency or official authorized to bring an action as provided in Health and Safety Code Section 25180 the name, street address, mailing address and telephone number of the owner or operator of the facility where the empty container has been shipped. The above information shall be retained onsite for a period of three years.

(h) Uncontaminated containers, where an inner liner has prevented contact of the hazardous material with the inner surface of the container, are not hazardous waste subject to regulation under this division and Chapter 6.5 of Division 20 of the Health and Safety Code.

(i) Containers or inner liners which previously held a hazardous material which are sent back to the supplier for the purpose of being refilled are exempt from regulation under this division and Chapter 6.5 of Division 20 of the Health and Safety Code if all of the following requirements are met:

(1) The container or inner liner was last used to hold a hazardous material acquired from a supplier of hazardous materials;

(2) The container or inner liner is empty pursuant to the standards set forth in Section 261.7 of Title 40 of the Code of Federal Regulations;

(3) The container or inner liner is returned to a supplier of hazardous materials for the purpose of being refilled, provided that the supplier's reuse of the container or inner liner is in compliance with the requirements of Section 173.28 of Title 49 of the Code of Federal Regulations;

(4) The container or inner liner is not treated prior to being returned to the supplier of hazardous materials, except as authorized by this section;

(5) The container is not treated (except as authorized by this section) by the supplier of hazardous materials without obtaining specific authorization from the Department; and

(6) The container or inner liner is refilled by the supplier with hazardous material which is compatible with the hazardous material which the container or inner liner previously held unless the container has been adequately decontaminated.

(j) If the supplier, upon receiving a container or an inner liner pursuant to subsection (i) of this section, is unable to refill the container or inner liner, the supplier shall empty the container or inner liner pursuant to subsections (b) or (d) of this section and manage the container or inner liner pursuant to subsection (e) of this section.

(k) Emptied household hazardous material and pesticide container, or inner liners removed from containers, of five gallon or less in capacity, are exempt from regulation under this division and Chapter 6.5 of Division 20 of the Health and Safety Code if the container or inner liner is emptied by removing all of the contents that can be removed using practices commonly employed to remove materials from that type of container.

(l) A compressed gas cylinder is exempt from regulation under this division and Chapter 6.5 of Division 20 of the Health and Safety Code when the pressure in the container approaches atmospheric pressure.

(m)(1) Provided that they are not a RCRA regulated hazardous waste, as defined in Section 66260.10 of this division, aerosol containers are exempt from regulation under this division and Chapter 6.5 of Division 20 of the Health and Safety Code if the aerosol container was emptied of the contents and propellant to the maximum extent practical under normal use (i.e., the spray mechanism was not defective and thus allowed discharge of the contents and propellant).

(2) Unless otherwise exempt under other provisions of law, aerosol containers which held a material listed as an acute hazardous waste in Sections 261.31, 261.32, or a material identified as an acute hazardous waste in Section 261.33(e), Title 40 of the Code of Federal Regulations, or a waste which is extremely hazardous pursuant to any of the criteria of Sections 66261.110, 66261.113, and Title 22, California Code of Regulations, Division 4.5, Chapter 11, Appendix X are not exempt under this section and shall be managed as hazardous waste in accordance with this division and Chapter 6.5 of Division 20 of the Health and Safety Code (commencing with Section 25100).

(3) For purposes of this section, "aerosol container" means a pressurized, sealed container which contains a product and liquified or compressed gases, and which can dispense that product by the activation of a pressure-sensitive valve.

(n) Containers made of wood, paper, cardboard, fabric, or any other similarly absorptive material are not exempt from regulation under this division or Chapter 6.5 of Division 20 of the Health and Safety Code if the container was in direct contact with and has absorbed the hazardous waste or a hazardous material.

(o) The following items are not containers for purposes of this section and should continue to be managed as specified below:

(1) Used oil filters managed pursuant to Section 66266.130 of this division.

(2) PCB or PCB contaminated electrical equipment, including but not limited to, transformers and capacitors managed pursuant to 40 CFR Section 761.60, or Section 66268.29(b) of this division, so that the Soluble Threshold Limit Concentration (STLC) and the Total Threshold Limit Concentration (TTL) values set forth in Section 66261.24(a)(2) of this division are not exceeded.

(3) Chemotherapy drug intravenous (IV) bags or tubing used for the delivery of chemotherapy agents managed pursuant to Chapter 6.1 of Division 20 of the Health and Safety Code.

(4) Vehicles and vehicle related containers (e.g., roll-off bins, baker tanks, etc.) of the type certified for transportation of hazardous waste, pursuant to Health and Safety Code Section 25169.1.

(p) Any container, or inner liner removed from a container, which previously held a hazardous material, including but not limited to hazardous waste, and which is not empty as defined in subsections (b) or (d) of this section, or otherwise exempt from regulation as a hazardous waste under this division or Chapter 6.5 of Division 20 of the Health and Safety Code (commencing with Section 25100), shall be managed as a hazardous waste in accordance with this division and Chapter 6.5 of Division 20 of the Health and Safety Code (commencing with Section 25100).

NOTE: Authority cited: Sections 208, 25141, 25143.2, 25150 and 58012, Health and Safety Code. References: Sections 208, 25141, 25143.2, 25150, 25159.5 and 58012, Health and Safety Code.

HISTORY

1. Renumbering and amendment of former section 66730 to section 66261.7(a)-(g) and new subsection (h) filed 5-24-91; operative 7-1-91 (Register 91, No. 22). A Certificate of Compliance must be transmitted to OAL by 6-28-91 or emergency language, subsections (a)-(g) will be repealed by operation of law on the following day.
2. New section refiled 6-28-91 as an emergency; operative 6-28-91 (Register 91, No. 41). A Certificate of Compliance must be transmitted to OAL by 10-28-91 or emergency language will be repealed by operation of law on the following day.
3. Amendment of subsections (d)-(f) and NOTE filed 10-28-91 as an emergency; operative 10-28-91 (Register 92, No. 13). A Certificate of Compliance must be transmitted to OAL 2-25-92 or emergency language will be repealed by operation of law on the following day.
4. New section with amendments to subsection (a), (c)(1) and (c)(2), new subsection (g), and subsection relettering refiled 3-12-92 as an emergency; operative 3-12-92 (Register 92, No. 22). A Certificate of Compliance must be transmitted to OAL 7-10-92 or emergency language will be repealed by operation of law on the following day.
5. Certificate of Compliance as to 3-12-92 order including amendment of section transmitted to OAL 4-18-92 and filed 5-29-92 (Register 92, No. 25).

§ 22-66261.10. Criteria for Identifying the Characteristics of Hazardous Waste.

(a) The Department shall identify and define a characteristic of hazardous waste in article 3 of this chapter only upon determining that:

(1) a waste that exhibits the characteristic may:

(A) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(2) the characteristic can be:

(A) measured by an available standardized test method which is reasonably within the capability of generators of waste or private sector laboratories that are certified by the Department pursuant to Chapter 44 of this division and available to serve generators of waste; or

(B) reasonably detected by generators of waste through their knowledge of their waste.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.10.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.20. General.

(a) A waste, as defined in section 66261.2, which is not excluded from regulation as a hazardous waste pursuant to section 66261.4(b), is a hazardous waste if it exhibits any of the characteristics identified in this article.

(b) A waste which is identified as a hazardous waste pursuant to one or more of the characteristics set forth in section 66261.21, 66261.22(a)(1), 66261.22(a)(2), 66261.23 or 66261.24(a)(1) is assigned the EPA Hazardous Waste Number set forth in this article for each characteristic that is applicable to that waste. These numbers shall be used in complying with the notification requirements of Health and Safety Code section 25153.6 and, where applicable, in the recordkeeping and reporting requirements under chapters 12 through 15, 18 and 20 of this division.

(c) Sampling and sample management of wastes and other materials for analysis and testing pursuant to this article shall be in accord with the sampling planning, methodology and equipment, and the sample processing, documentation and custody procedures specified in chapter nine of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11 of this chapter). In addition to the sampling methods in chapter nine of SW-846, the Department will consider samples obtained using any of the other applicable sampling methods specified in Appendix I of this chapter to be representative samples.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.20.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

[The next page is 781.]

§ 22-66261.21. Characteristic of Ignitability.

(a) A waste exhibits the characteristic of ignitability if representative samples of the waste have any of the following properties:

(1) it is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60°C (140°F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80 (incorporated by reference, see section 66260.11), or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78 (incorporated by reference, see section 66260.11), or as determined by an equivalent test method approved by the Department pursuant to section 66260.21;

(2) it is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;

(3) it is an ignitable compressed gas as defined in 49 CFR section 173.300 (as amended September 30, 1982) and as determined by the test methods described in that regulation or equivalent test methods approved by the Department pursuant to section 66260.21;

(4) it is an oxidizer as defined in 49 CFR section 173.151 (as amended May 31, 1979).

(b) A waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.21.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.22. Characteristic of Corrosivity.

(a) A waste exhibits the characteristic of corrosivity if representative samples of the waste have any of the following properties:

(1) it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either the EPA test method for pH or an equivalent test method approved by the Department pursuant to section 66260.21. The EPA test method for pH is specified as Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11);

(2) it is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE Standard TM-01-69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11) or an equivalent test method approved by the Department pursuant to section 66260.21;

(3) it is not aqueous and, when mixed with an equivalent weight of water, produces a solution having a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11) or an equivalent test method approved by the Department pursuant to 66260.21;

(4) it is not a liquid and, when mixed with an equivalent weight of water, produces a liquid that corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE Standard TM-01-69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11) or

an equivalent test method approved by the Department pursuant to 66260.21.

(b) A waste that exhibits the characteristic of corrosivity specified in subsection (a)(1) or (a)(2) of this section has the EPA Hazardous Waste Number of D002.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.22.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.23. Characteristic of Reactivity.

(a) A waste exhibits the characteristic of reactivity if representative samples of the waste have any of the following properties:

(1) it is normally unstable and readily undergoes violent change without detonating;

(2) it reacts violently with water;

(3) it forms potentially explosive mixtures with water;

(4) when mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;

(5) it is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;

(6) it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

(7) it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure;

(8) it is a forbidden explosive as defined in 49 CFR section 173.51 (as amended April 20, 1987), or a Class A explosive as defined in 49 CFR section 173.53 (as amended April 5, 1967) or a Class B explosive as defined in 49 CFR section 173.88 (as amended May 19, 1980).

(b) A waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.23.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.24. Characteristic of Toxicity.

(a) A waste exhibits the characteristic of toxicity if representative samples of the waste have any of the following properties:

(1) when using the Toxicity Characteristic Leaching Procedure (TCLP) in Appendix I of chapter 18 of this division or equivalent methods approved by the Department under the procedures set forth in section 66260.21, the extracts from representative samples of the waste contain any of the contaminants listed in Table I of this section at a concentration equal to or greater than the respective value given in that table unless the waste is excluded from classification as a solid waste or hazardous waste or is exempted from regulation pursuant to 40 CFR section 261.4. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract for the purposes of this section;

(A) a waste that exhibits the characteristic of toxicity pursuant to subsection (a)(1) of this section has the EPA Hazardous Waste Number specified in Table I of this section which corresponds to the toxic contaminant causing it to be hazardous;

(B) Table I - Maximum Concentration of Contaminants for the Toxicity Characteristic:

| EPA Hazardous Waste Number | Contaminant | Chemical Abstracts Service Number | Regulatory Level Mgl |
|----------------------------|------------------------------|-----------------------------------|----------------------|
| D004 | Arsenic | 7440-38-2 | 5.0 |
| D005 | Barium | 7440-39-3 | 100.0 |
| D018 | Benzene | 71-43-2 | 0.5 |
| D006 | Cadmium | 7440-43-9 | 1.0 |
| D019 | Carbon tetrachloride | 56-23-5 | 0.5 |
| D020 | Chlordane | 57-74-9 | 0.03 |
| D021 | Chlorobenzene | 108-90-7 | 100.0 |
| D022 | Chloroform | 67-66-3 | 6.0 |
| D007 | Chromium | 7440-47-3 | 5.0 |
| D023 | o-Cresol | 95-48-7 | 200.0 ¹ |
| D024 | m-Cresol | 108-39-4 | 200.0 ¹ |
| D025 | p-Cresol | 106-44-5 | 200.0 ¹ |
| D026 | Cresol | | 200.0 ¹ |
| D016 | 2,4-D | 94-75-7 | 10.0 |
| D027 | 1,4-Dichlorobenzene | 106-46-7 | 7.5 |
| D028 | 1,2-Dichloroethane | 107-06-2 | 0.5 |
| D029 | 1,1-Dichloroethylene | 75-35-4 | 0.7 |
| D030 | 2,4-Dinitrotoluene | 121-14-2 | 0.13 |
| D012 | Endrin | 72-20-8 | 0.02 |
| D031 | Heptachlor (and its epoxide) | 76-44-8 | 0.008 |
| D032 | Hexachlorobenzene | 118-74-1 | 0.13 |
| D033 | Hexachlorobutadiene | 87-68-3 | 0.5 |
| D034 | Hexachloroethane | 67-72-1 | 3.0 |
| D008 | Lead | 7439-92-1 | 5.0 |
| D013 | Lindane | 58-89-9 | 0.4 |
| D009 | Mercury | 7439-97-6 | 0.2 |
| D014 | Methoxychlor | 72-43-5 | 10.0 |
| D035 | Methyl ethyl ketone | 78-93-3 | 200.0 |
| D036 | Nitrobenzene | 98-95-3 | 2.0 |
| D037 | Pentachlorophenol | 87-86-5 | 100.0 |
| D038 | Pyridine | 110-86-1 | 5.0 ² |
| D010 | Selenium | 7782-49-2 | 1.0 |
| D011 | Silver | 7440-22-4 | 5.0 |
| D039 | Tetrachloroethylene | 127-18-4 | 0.7 |
| D015 | Toxaphene | 8001-35-2 | 0.5 |
| D040 | Trichloroethylene | 79-01-6 | 0.5 |
| D041 | 2,4,5-Trichlorophenol | 95-95-4 | 400.0 |
| D042 | 2,4,6-Trichlorophenol | 88-06-2 | 2.0 |
| D017 | 2,4,5-TP (Silvex) | 93-72-1 | 1.0 |
| D043 | Vinyl chloride | 75-01-4 | 0.2 |

¹ If o-, m- and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

² Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

(2) it contains a substance listed in subsections (a)(2)(A) or (a)(2)(B) of this section at a concentration in milligrams per liter of waste extract, as determined using the Waste Extraction Test (WET) described in Appendix II of this chapter, which equals or exceeds its listed soluble threshold limit concentration or at a concentration in milligrams per kilogram in the waste which equals or exceeds its listed total threshold limit concentration;

(A) Table II - List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values.

| Substance** | STLC mg/l | TTLC Wei-Weight mg/kg |
|---|-----------|-----------------------|
| Antimony and/or antimony compounds | 15 | 500 |
| Arsenic and/or arsenic compounds | 5.0 | 500 |
| Asbestos | | 1.0 (as percent) |
| Barium and/or barium compounds (excluding barite) | 100 | 10,000** |
| Beryllium and/or beryllium compounds | 0.75 | 75 |
| Cadmium and/or cadmium compounds | 1.0 | 100 |
| Chromium (VI) compounds | 5 | 500 |
| Chromium and/or chromium (III) compounds | 5** | 2,500 |
| Cobalt and/or cobalt compounds | 80 | 8,900 |
| Copper and/or copper compounds | 25 | 2,500 |
| Fluoride salts | 180 | 18,000 |
| Lead and/or lead compounds | 5.0 | 1,000 |

| Substance** | STLC mg/l | TTLC Wei-Weight mg/kg |
|--|-----------|-----------------------|
| Mercury and/or mercury compounds | 0.2 | 20 |
| Molybdenum and/or molybdenum compounds | 350 | 3,500 |
| Nickel and/or nickel compounds | 20 | 2,000 |
| Selenium and/or selenium compounds | 1.0 | 100 |
| Silver and/or silver compounds | 5 | 500 |
| Thallium and/or thallium compounds | 7.0 | 700 |
| Vanadium and/or vanadium compounds | 24 | 2,400 |
| Zinc and/or zinc compounds | 250 | 5,000 |

*STLC and TTLC values are calculated on the concentrations of the elements, not the compounds.

**If the soluble chromium, as determined by the TCLP set forth in Appendix I of chapter 18 of this division, is less than 5 mg/l, and the soluble chromium, as determined by the procedures set forth in Appendix II of chapter 11, equals or exceeds 560 mg/l and the waste is not otherwise identified as a RCRA hazardous waste pursuant to section 66261.100, then the waste is a non-RCRA hazardous waste.

*In the case of asbestos and elemental metals, the specified concentration limits apply only if the substances are in a friable, powdered or finely divided state. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

**Excluding barium sulfate.

(B) Table III - List of Organic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values:

| Substance | STLC mg/l | TTLC Wei Weight mg/kg |
|--------------------------------------|-----------|-----------------------|
| Aldrin | 0.14 | 1.4 |
| Chlordane | 0.25 | 2.5 |
| DDT, DDE, DDD | 0.1 | 1.0 |
| 2,4-Dichlorophenoxyacetic acid | 10 | 100 |
| Dieldrin | 0.8 | 8.0 |
| Dioxin (2,3,7,8-TCDD) | 0.001 | 0.01 |
| Endrin | 0.02 | 0.2 |
| Heptachlor | 0.47 | 4.7 |
| Kepone | 2.1 | 21 |
| Lead compounds, organic | — | 13 |
| Lindane | 0.4 | 4.0 |
| Methoxychlor | 10 | 100 |
| Mirex | 2.1 | 21 |
| Pentachlorophenol | 1.7 | 17 |
| Polychlorinated biphenyls (PCBs) | 5.0 | 50 |
| Toxaphene | 0.5 | 5 |
| Trichloroethylene | 204 | 2,040 |
| 2,4,5-Trichlorophenoxypropionic acid | 1.0 | 10 |

(3) it has an acute oral LD₅₀ less than 5,000 milligrams per kilogram;

(4) it has an acute dermal LD₅₀ less than 4,300 milligrams per kilogram;

(5) it has an acute inhalation LC₅₀ less than 10,000 parts per million as a gas or vapor;

(6) it has an acute aquatic 96-hour LC₅₀ less than 500 milligrams per liter when measured in soft water (total hardness 40 to 48 milligrams per liter of calcium carbonate) with fathead minnows (*Pimephales promelas*), rainbow trout (*Salmo gairdneri*) or golden shiners (*Notemigonus crysoleucas*) according to procedures described in Part 800 of the "Standard Methods for the Examination of Water and Wastewater (16th Edition)," American Public Health Association, 1985 and "Static Acute Bioassay Procedures for Hazardous Waste Samples," California Department of Fish and Game, Water Pollution Control Laboratory, revised November 1988 (incorporated by reference, see section 66260.11), or by other test methods or test fish approved by the Department, using test samples prepared or meeting the conditions for testing as prescribed in subdivisions (c) and (d) of Appendix II of this chapter, and solubilized, suspended, dispersed or emulsified by the cited procedures or by other methods approved by the Department;

(7) it contains any of the following substances at a single or combined concentration equal to or exceeding 0.001 percent by weight:

- (A) 2-Acetylaminofluorene (2-AAF);
- (B) Acrylonitrile;
- (C) 4-Aminodiphenyl;
- (D) Benzidine and its salts;
- (E) bis (Chloromethyl) ether (BCME);
- (F) Methyl chloromethyl ether;
- (G) 1,2-Dibromo-3-chloropropane (DBCP);
- (H) 3,3'-Dichlorobenzidine and its salts (DCB);
- (I) 4-Dimethylaminoazobenzene (DAB);
- (J) Ethyleneimine (EL);
- (K) alpha-Naphthylamine (1-NA);
- (L) beta-Naphthylamine (2-NA);
- (M) 4-Nitrobiphenyl (4-NBP);
- (N) N-Nitrosodimethylamine (DMN);
- (O) beta-Propiolactone (BPL);
- (P) Vinyl chloride (VCM);

(8) it has been shown through experience or testing to pose a hazard to human health or environment because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or persistence in the environment.

(b) A waste containing one or more materials which exhibit the characteristic of toxicity because the materials have the property specified in subsection (a)(5) of this section may be classified as nonhazardous pursuant to section 66260.200 if the waste does not exhibit any other characteristic of this article and is not listed in article 4 of this chapter and its head space vapor contains no such toxic materials in concentrations exceeding their respective acute inhalation LC₅₀ or their LC_{LO}. The head space vapor of a waste shall be prepared, and two milliliters of it shall be sampled using a five milliliter gas-tight syringe, according to Method 5020 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 2nd edition, U.S. Environmental Protection Agency, 1982 (incorporated by reference, see section 66260.11). The quantity in milligrams of each material, which exhibits the characteristic of toxicity because it has the property specified in subsection (a)(5) of this section, in the sampling syringe shall be determined by comparison to liquid standard solutions according to the appropriate gas chromatographic procedures in Method 8010, 8015, 8020, 8030 or 8240 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11). The concentration of each material in the head space vapor shall be calculated using the following equation:

$$C_A = \frac{Q_A}{MW} \times \frac{29.8\text{ml}}{\text{mmole}} \times \frac{1}{2 \times 10^{-6}\text{M}^3}$$

where C (in parts per million) is the concentration of material A in head space vapor, Q (in milligrams) is the quantity of material A in sampling syringe and MW (in milligrams per millimole) is the molecular weight of material A. Where an acute inhalation LC₅₀ is not available, an LC₅₀ measured for another time (t) may be converted to an eight-hour value with the following equation:

$$\text{Eight-hour LC}_{50} = (t/8) \times (t\text{-hour LC}_{50}).$$

(c) A waste containing one or more materials which exhibit the characteristic of toxicity because the materials have either of the properties specified in subsection (a)(3) or (a)(4) of this section may be classified as nonhazardous pursuant to section 66260.200 if the waste does not exhibit any other characteristic of this article and is not listed in article 4 of this chapter and the calculated oral LD₅₀ of the waste mixture is greater than 5,000 milligrams per kilogram and the calculated dermal LD₅₀ is greater than 4,300 milligrams per kilogram by the following equation:

$$\text{Calculated oral or dermal LD}_{50} = \frac{100}{\sum_{x=1}^n \frac{\%_x}{T_{Ax}}}$$

where %A_x is the weight percent of each component in the waste mixture and T_{Ax} is the acute oral or dermal LD₅₀ or the acute oral LD_{LO} of each component.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.24.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.30. General.

(a) A waste is a RCRA hazardous waste if it is listed in this article, unless it has been excluded from this list pursuant to 40 CFR sections 260.20 and 260.22 or is categorized as a non-RCRA hazardous waste pursuant to section 66261.101. Wastes shall only be listed in this article if they are listed in 40 CFR Part 261 Subpart D.

(b) The Department will indicate the USEPA Administrator's basis for listing the classes or types of wastes listed in this article by employing one or more of the following Hazard Codes:

- Ignitable Waste (I)
- Corrosive Waste (C)
- Reactive Waste (R)
- Acute Hazardous Waste (H)
- Toxic Waste (T)

Appendix VII of this chapter identifies the constituent which caused the USEPA Administrator to list the waste as a Toxic Waste (T) as included in sections 66261.31 and 66261.32.

(c) Each RCRA hazardous waste listed in this article is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number shall be used in complying with the notification requirements of Health and Safety Code section 25153.6 and certain recordkeeping and reporting requirements under chapters 12 through 15, 18, and 20 of this division.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.30.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.31. Hazardous Wastes from Non-Specific Sources.

The following wastes are listed hazardous wastes from non-specific sources unless they are excluded pursuant to 40 CFR sections 260.20 and 260.22:

| EPA Hazardous Waste No. | Hazardous Waste | Hazard Code | EPA Hazardous Waste No. | Hazardous Waste | Hazard Code |
|-------------------------|--|-------------|-------------------------|---|-------------|
| F001 | the following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures; | (T) | F008 | plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process; | (R,T) |
| F002 | the following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures; | (T) | F009 | spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process; | (R,T) |
| F003 | the following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures; | (I)* | F010 | quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process; | (R,T) |
| F004 | the following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures; | (T) | F011 | spent cyanide solutions from salt bath pot cleaning from metal heat treating operations; | (R,T) |
| F005 | the following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures; | (I,T) | F012 | quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process; | (T) |
| F006 | wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum; | (T) | F019 | wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process; | (T) |
| F007 | spent cyanide plating bath solutions from electroplating operations; | (R,T) | F020 | wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives; (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol.) | (H) |
| | | | F021 | wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives; | (H) |
| | | | F022 | wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions; | (H) |
| | | | F023 | wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols; (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.) | (H) |
| | | | F024 | process wastes, including but not limited to, distillation, residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution; (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in section 66261.31 or 66261.32.) | (T) |

| EPA Hazardous Waste No. | Hazardous Waste | Hazard Code | EPA Hazardous Waste No. | Hazardous Waste | Hazard Code |
|-------------------------|--|-------------|-------------------------|--|-------------|
| F025 | condensed light ends, spent filters and filter aids, and spent dessicant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution; | (T) | K006 | wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated); | (T) |
| F026 | wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions; | (H) | K007 | wastewater treatment sludge from the production of iron blue pigments; | (T) |
| F027 | discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols; (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.) | (H) | K008 | oven residue from the production of chrome oxide green pigments; | (T) |
| F028 | residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027; | (T) | Organic chemicals: | | |
| F039 | leachate resulting from the treatment, storage, or disposal of wastes classified by more than one waste code under article 4 of this chapter, or from a mixture of wastes classified under articles 3 and 4 of this chapter; (Leachate resulting from the management of one or more of the following EPA Hazardous Wastes and no other hazardous wastes retains its hazardous waste code(s): F020, F026, F027, and/or F028.) | (T) | K009 | distillation bottoms from the production of acetaldehyde from ethylene; | (T) |
| | | | K010 | distillation side cuts from the production of acetaldehyde from ethylene; | (T) |
| | | | K011 | bottom stream from the wastewater stripper in the production of acrylonitrile; | (R,T) |
| | | | K013 | bottom stream from the acetonitrile column in the production of acrylonitrile; | (R,T) |
| | | | K014 | bottoms from the acetonitrile purification column in the production of acrylonitrile; | (T) |
| | | | K015 | still bottoms from the distillation of benzyl chloride; | (T) |
| | | | K016 | heavy ends or distillation residues from the production of carbon tetrachloride; | (T) |
| | | | K017 | heavy ends (still bottoms) from the purification column in the production of epichlorohydrin; | (T) |
| | | | K018 | heavy ends from the fractionation column in ethyl chloride production; | (T) |
| | | | K019 | heavy ends from the distillation of ethylene dichloride in ethylene dichloride production; | (T) |
| | | | K020 | heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production; | (T) |
| | | | K021 | aqueous spent antimony catalyst waste from fluoromethanes production; | (T) |
| | | | K022 | distillation bottom tars from the production of phenol/acetone from cumene; | (T) |
| | | | K023 | distillation light ends from the production of phthalic anhydride from naphthalene; | (T) |
| | | | K024 | distillation bottoms from the production of phthalic anhydride from naphthalene; | (T) |
| | | | K093 | distillation light ends from the production of phthalic anhydride from ortho-xylene; | (T) |
| | | | K094 | distillation bottoms from the production of phthalic anhydride from ortho-xylene; | (T) |
| | | | K025 | distillation bottoms from the production of nitrobenzene by the nitration of benzene; | (T) |
| | | | K026 | stripping still tails from the production of methyl ethyl pyridines; | (T) |
| | | | K027 | centrifuge and distillation residues from toluene diisocyanate production; | (R,T) |
| | | | K028 | spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane; | (T) |
| | | | K029 | waste from the product steam stripper in the production of 1,1,1-trichloroethane; | (T) |
| | | | K095 | distillation bottoms from the production of 1,1,1-trichloroethane; | (T) |
| | | | K096 | heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane; | (T) |
| | | | K030 | column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene; | (T) |
| | | | K083 | distillation bottoms from aniline production; | (T) |
| | | | K103 | process residues from aniline extraction from the production of aniline; | (T) |
| | | | K104 | combined wastewater streams generated from nitrobenzene/aniline production; | (T) |
| | | | K085 | distillation or fractionation column bottoms from the production of chlorobenzenes; | (T) |
| | | | K105 | separated aqueous stream from the reactor product washing step in the production of chlorobenzenes; | (T) |

* (I) specifies mixtures containing ignitable constituents.
 (I,T) specifies mixtures containing ignitable and toxic constituents.

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.31.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).
2. Change without regulatory effect correcting entry sequence filed 4-19-93 pursuant to title 1, section 100, California Code of Regulations (Register 93, No. 17).

§ 22-66261.32. Hazardous Wastes from Specific Sources.

The following wastes are listed hazardous wastes from specific sources unless they are excluded pursuant to 40 CFR sections 260.20 and 260.22:

| EPA Hazardous Waste No. | Hazardous Waste | Hazard Code |
|-------------------------|---|-------------|
| Wood preservation: | | |
| K001 | bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol; | (T) |
| Inorganic pigments: | | |
| K002 | wastewater treatment sludge from the production of chrome yellow and orange pigments; | (T) |
| K003 | wastewater treatment sludge from the production of molybdate orange pigments; | (T) |
| K004 | wastewater treatment sludge from the production of zinc yellow pigments; | (T) |
| K005 | wastewater treatment sludge from the production of chrome green pigments; | (T) |

| <i>EPA Hazardous Waste No.</i> | <i>Hazardous Waste</i> | <i>Hazard Code</i> | <i>EPA Hazardous Waste No.</i> | <i>Hazardous Waste</i> | <i>Hazard Code</i> |
|--------------------------------|--|--------------------|--------------------------------|---|--------------------|
| K107 | column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazines; | (C,T) | K038 | wastewater from the washing and stripping of phorate production; | (T) |
| K108 | condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides; | (I,T) | K039 | filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate; | (T) |
| K109 | spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides; | (T) | K040 | wastewater treatment sludge from the production of phorate; | (T) |
| K110 | condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides; | (T) | K041 | wastewater treatment sludge from the production of toxaphene; | (T) |
| K111 | product washwaters from the production of dinitrotoluene via nitration of toluene; | (C,T) | K098 | untreated process wastewater from the production of toxaphene; | (T) |
| K112 | reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene; | (T) | K042 | heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T; | (T) |
| K113 | condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene; | (T) | K043 | 2,6-Dichlorophenol waste from the production of 2,4-D; | (T) |
| K114 | vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene; | (T) | K099 | untreated wastewater from the production of 2,4-D; | (T) |
| K115 | heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene; | (T) | K123 | process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt; | (T) |
| K116 | organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine; | (T) | K124 | reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts; | (C,T) |
| K117 | wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethylene; | (T) | K125 | filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts; | (T) |
| K118 | spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethylene; | (T) | K126 | baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts; | (T) |
| K136 | still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethylene; | (T) | K131 | wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide; | (C,T) |
| Inorganic chemicals: | | | K132 | spent absorbent and wastewater separator solids from the production of methyl bromide; | (T) |
| K071 | brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used; | (T) | Explosives: | | |
| K073 | chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production; | (T) | K044 | wastewater treatment sludges from the manufacturing and processing of explosives; | (R) |
| K106 | wastewater treatment sludge from the mercury cell process in chlorine production; | (T) | K045 | spent carbon from the treatment of wastewater containing explosives; | (R) |
| Pesticides: | | | K046 | wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds; | (T) |
| K031 | by-product salts generated in the production of MSMA and cacodylic acid; | (T) | K047 | pink/red water from TNT operations; | (R) |
| K032 | wastewater treatment sludge from the production of chlordane; | (T) | Petroleum refining: | | |
| K033 | wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane; | (T) | K048 | dissolved air flotation (DAF) float from the petroleum refining industry; | (T) |
| K034 | filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane; | (T) | K049 | slop oil emulsion solids from the petroleum refining industry; | (T) |
| K097 | vacuum stripper discharge from the chlordane chlorinator in the production of chlordane; | (T) | K050 | heat exchanger bundle cleaning sludge from the petroleum refining industry; | (T) |
| K035 | wastewater treatment sludges generated in the production of creosote; | (T) | K051 | API separator sludge from the petroleum refining industry; | (T) |
| K036 | still bottoms from toluene reclamation distillation in the production of disulfoton; | (T) | K052 | tank bottoms (leaded) from the petroleum refining industry; | (T) |
| K037 | wastewater treatment sludges from the production of disulfoton; | (T) | Iron and steel: | | |
| | | | K061 | emission control dust/sludge from the primary production of steel in electric furnaces; | (T) |
| | | | K062 | spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332); | (C,T) |
| | | | Primary copper: | | |
| | | | K064 | acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production; | (T) |

| EPA Hazardous Waste No. | Hazardous Waste | Hazard Code |
|-----------------------------|---|-------------|
| Primary lead: | | |
| K065 | surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities; | (T) |
| Primary zinc: | | |
| K066 | sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production; | (T) |
| Primary aluminum: | | |
| K088 | spent potliners from primary aluminum reduction; | (T) |
| Ferroalloys: | | |
| K090 | emission control dust or sludge from ferrochromium-silicon production; | (T) |
| K091 | emission control dust or sludge from ferrochromium production; | (T) |
| Secondary lead: | | |
| K069 | emission control dust/sludge from secondary lead smelting; | (T) |
| K100 | waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting; | (T) |
| Veterinary pharmaceuticals: | | |
| K084 | wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds; | (T) |
| K101 | distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds; | (T) |
| K102 | residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds; | (T) |
| Ink formulation: | | |
| K086 | solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead; | (T) |

Coking:

- K060 ammonia still lime sludge from coking operations; (T)
 K087 decanter tank tar sludge from coking operations. (T)

NOTE: Authority cited: Sections 208 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.32.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

§ 22-66261.33. Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof.

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded as described in section 66261.2(b):

(a) any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in subsection (e) or (f) of this section. The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of

the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in subsection (e) or (f) of this section. Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in subsection (e) or (f) of this section, such waste will be listed in either section 66261.31 or 66261.32 or will be identified as a hazardous waste by the characteristics set forth in article 3 of this chapter;

(b) any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in subsection (e) or (f) of this section;

(c) any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in subsections (e) or (f) of this section;

(d) any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in subsection (e) or (f) of this section, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in subsection (e) or (f) of this section;

(e) the following commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in subsections (a) through (d) of this section, are Acute Hazardous Wastes (H). The primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity. These wastes and their corresponding EPA hazardous waste numbers are:

| EPA Hazardous Waste No. | Chemical Abstracts No. | Substances |
|-------------------------|------------------------|---|
| P023 | 107-20-0 | Acetaldehyde, chloro- |
| P002 | 591-08-2 | Acetamide, N-(aminothioxomethyl)- |
| P057 | 640-19-7 | Acetamide, 2-fluoro- |
| P058 | 62-74-8 | Acetic acid, fluoro-, sodium salt |
| P002 | 591-08-2 | 1-Acetyl-2-thiourea |
| P003 | 107-02-8 | Acrolein |
| P070 | 116-06-3 | Aldicarb |
| P004 | 309-00-2 | Aldrin |
| P005 | 107-18-6 | Allyl alcohol |
| P006 | 20859-73-8 | Aluminum phosphide (R,T) |
| P007 | 2763-96-4 | 5-(Aminomethyl)-3-isoxazolol |
| P008 | 504-24-5 | 4-Aminopyridine |
| P009 | 131-74-8 | Ammonium picrate (R) |
| P119 | 7803-55-6 | Ammonium vanadate |
| P099 | 506-61-6 | Argentate (1-), bis (cyano-C)-, potassium |
| P010 | 7778-39-4 | Arsenic acid H ₃ AsO ₄ |
| P012 | 1327-53-3 | Arsenic oxide As ₂ O ₃ |
| P011 | 1303-28-2 | Arsenic oxide As ₂ O ₅ |
| P011 | 1303-28-2 | Arsenic pentoxide |
| P012 | 1327-53-3 | Arsenic trioxide |
| P038 | 692-42-2 | Arsine, diethyl |
| P036 | 696-28-6 | Arsonous dichloride, phenyl- |
| P054 | 151-56-4 | Aziridine |
| P067 | 75-55-8 | Azirdine, 2-methyl- |
| P013 | 542-62-1 | Barium cyanide |
| P024 | 106-47-8 | Benzenamine, 4-chloro- |
| P077 | 100-01-6 | Benzenamine, 4-nitro- |
| P028 | 100-44-7 | Benzene, (chloromethyl)- |
| P042 | 51-43-4 | 1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)- |
| P046 | 122-09-8 | Benzeneethanamine, alpha,alpha-dimethyl- |
| P014 | 108-98-5 | Benzenethiol |
| P001 | 181-81-2 | 2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts when present at concentrations greater than 0.3 |

| EPA Hazardous Waste No. | Chemical Abstracts No. | Substances | EPA Hazardous Waste No. | Chemical Abstracts No. | Substances |
|-------------------------------|---------------------------|--|-------------------------------|---------------------------|--|
| P028 | 100-44-7 | Benzyl chloride | P082 | 62-75-9 | Methanamine, N-methyl-N-nitroso- |
| P015 | 7440-41-7 | Beryllium dust | P064 | 624-83-9 | Methane, isocyanato- |
| P017 | 598-31-2 | Bromoacetone | P016 | 542-88-1 | Methane, oxybis(chloro- |
| P018 | 357-57-3 | Brucine | P112 | 509-14-8 | Methane, tetranitro- (R) |
| P045 | 39196-18-4 | 2-Butanone, 3,3-dimethyl-1-(methylthio)-, o-[(methylamino) carbonyl] oxime | P118 | 75-70-7 | Methanethiol, trichloro- |
| P021 | 592-01-8 | Calcium cyanide Ca(CN) | P050 | 115-29-7 | 6,9-Methano-2,4,3-benzodioxathiepen,6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide |
| P022 | 75-15-0 | Carbon disulfide | P059 | 76-44-8 | 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro- |
| P095 | 75-44-5 | Carbonic dichloride | P066 | 16752-77-5 | Methomyl |
| P023 | 107-20-0 | Chloroacetaldehyde | P068 | 60-34-4 | Methyl hydrazine |
| P024 | 106-47-8 | p-Chloroaniline | P064 | 624-83-9 | Methyl isocyanate |
| P026 | 5344-82-1 | 1-(o-Chlorophenyl) thiourea | P069 | 75-86-5 | 2-Methylactonitrile |
| P027 | 542-76-7 | 3-Chloropropionitrile | P071 | 298-00-0 | Methyl parathion |
| P029 | 544-92-3 | Copper cyanide Cu(CN) | P072 | 86-88-4 | alpha-Naphthylthiourea |
| P030 | | Cyanides (soluble cyanide salts), not otherwise specified | P073 | 13463-39-3 | Nickel carbonyl, Ni(CO) ₄ , (T-4)- |
| P031 | 460-19-5 | Cyanogen | P074 | 557-19-7 | Nickel cyanide Ni(CN) ₂ |
| P033 | 506-77-4 | Cyanogen chloride (CN)Cl | P075 | 154-11-5 | Nicotine and salts |
| P034 | 131-89-5 | 2-Cyclohexyl-4,6-dinitrophenol | P076 | 10102-43-9 | Nitric oxide |
| P016 | 542-88-1 | Dichloromethyl ether | P077 | 100-01-6 | p-Nitroaniline |
| P036 | 696-28-6 | Dichlorophenylarsine | P078 | 10102-44-0 | Nitrogen dioxide |
| P037 | 60-57-1 | Dieldrin | P076 | 10102-43-9 | Nitrogen oxide NO |
| P038 | 692-42-2 | Diethylarsine | P078 | 10102-44-0 | Nitrogen oxide NO ₂ |
| P041 | 311-45-5 | Diethyl-p-nitrophenyl phosphate | P081 | 55-63-0 | Nitroglycerine (R) |
| P040 | 297-97-2 | O,O-Diethyl O-pyrazinyl phosphorothioate | P082 | 62-75-9 | N-Nitrosodimethylamine |
| P043 | 55-91-4 | Diisopropyl fluorophosphate (DFP) | P084 | 4549-40-0 | N-Nitrosomethylvinylamine |
| P004 | 309-00-2 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4-, 10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4beta,5alpha,8alpha,8beta)- | P085 | 152-16-9 | Octamethylpyrophosphoramidate |
| P060 | 465-73-6 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4beta,5beta,8beta,8beta)- | P087 | 20816-12-0 | Osmium oxide OsO ₃ , (T-4)- |
| P037 | 60-57-1 | 2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1alpha,2beta,2alpha,3beta,6beta,6alpha,7beta,7alpha)- | P088 | 145-73-3 | Osmium tetroxide |
| P051 | 172-20-8 | 2,7:3,6-Dimethanonaphth[2,3-b] oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1alpha,2beta,2beta,3alpha,6alpha,6beta,7beta,7alpha)-, and metabolites | P089 | 56-38-2 | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid |
| P044 | 60-51-5 | Dimethoate | P034 | 131-89-5 | Parathion |
| P046 | 122-09-8 | alpha, alpha-Dimethylphenethylamine | P048 | 51-28-5 | Phenol, 2-cyclohexyl-4,6-dinitro- |
| P047 | 1534-52-1 | 4,6-Dinitro-o-cresol and salts | P047 | 1534-52-1 | Phenol, 2,4-dinitro- |
| P048 | 51-28-5 | 2,4-Dinitrophenol | P020 | 88-85-7 | Phenol, 2-methyl-4,6-dinitro- and salts |
| P020 | 88-85-7 | Dinoseb | P009 | 131-74-8 | Phenol, 2-(1-methylpropyl)-4,6-dinitro- |
| P085 | 152-16-9 | Diphosphoramidate, octamethyl- | P092 | 62-38-4 | Phenol, 2,4,6-trinitro-, ammonium salt (R) |
| P111 | 107-49-3 | Diphosphoric acid, tetraethyl ester | P093 | 103-85-5 | Phenylmercury acetate |
| P039 | 298-04-4 | Disulfoton | P094 | 298-02-2 | Phenylthiourea |
| P049 | 541-53-7 | Dithiobiuret | P095 | 75-44-5 | Phorate |
| P050 | 115-29-7 | Endosulfan | P096 | 7803-51-2 | Phosgene |
| P088 | 145-73-3 | Endothall | P041 | 311-45-5 | Phosphine |
| P051 | 72-20-8 | Endrin | P049 | 298-04-4 | Phosphoric acid, diethyl 4-nitrophenylester |
| P051 | 72-20-8 | Endrin, and metabolites | P099 | 298-04-4 | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester |
| P042 | 51-43-4 | Epinephrine | P094 | 298-02-2 | Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester |
| P031 | 460-19-5 | Ethanedinitrile | P044 | 60-51-5 | Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester |
| P066 | 16752-77-5 | Ethanimidothioic acid, N-[(methylamino) carbonyl] oxy]-, methyl ester | P043 | 55-91-4 | Phosphorofluoric acid, bis(1-methylethyl) ester |
| P101 | 107-12-0 | Ethyl cyanide | P089 | 56-38-2 | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester |
| P054 | 151-56-4 | Ethyleneimine | P040 | 297-97-2 | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester |
| P097 | 52-85-7 | Famphur | P097 | 52-85-7 | Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester |
| P056 | 7782-41-4 | Fluorine | P071 | 298-00-0 | Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester |
| P057 | 640-19-7 | Fluoroacetamide | P110 | 78-00-2 | Phumbane, tetraethyl- |
| P058 | 62-74-8 | Fluoroacetic acid, sodium salt | P098 | 151-50-8 | Potassium cyanide K(CN) |
| P065 | 628-86-4 | Fulminic acid, mercury (2+) salt (R,T) | P099 | 506-61-6 | Potassium silver cyanide |
| P059 | 76-44-8 | Heptachlor | P070 | 116-06-3 | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime |
| P062 | 757-58-4 | Hexaethyl tetraphosphate | P101 | 107-12-0 | Propanenitrile |
| P116 | 79-19-6 | Hydrazinecarbothioamide | P027 | 542-76-7 | Propanenitrile, 3-chloro- |
| P068 | 60-34-4 | Hydrazine, methyl- | P069 | 75-86-5 | Propanenitrile, 2-hydroxy-2-methyl-1,2,3-Propanetriol, trinitrate (R) |
| P063 | 74-90-8 | Hydrocyanic acid | P081 | 55-63-0 | 2-Propanone, 1-bromo- |
| P063 | 74-90-8 | Hydrogen cyanide | P017 | 598-31-2 | Propargyl alcohol |
| P096 | 7803-51-2 | Hydrogen phosphide | P102 | 107-19-7 | 2-Propenal |
| P060 | 465-73-6 | Isodrin | P003 | 107-02-8 | 2-Propen-1-ol |
| P007 | 2763-96-4 | 3(2H)-Isoxazolone, 5-(aminomethyl)- | P005 | 107-18-6 | 1,2-Propylenimine |
| P092 | 62-38-4 | Mercury, (acetato-O)phenyl- | P067 | 75-55-8 | 2-Propyn-1-ol |
| P065 | 628-86-4 | Mercury fulminate (R,T) | P102 | 107-19-7 | 4-Pyridinamine |
| | | | P008 | 504-24-5 | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S) and salts |
| | | | P075 | 54-11-5 | Selenious acid, dithallium (1+) salt |
| | | | P114 | 12039-52-0 | Selenourea |
| | | | P103 | 630-10-4 | Silver cyanide Ag(CN) |
| | | | P104 | 506-64-9 | |