



## 9.4.1 CONTAINERS

The purpose of the container requirements is to ensure that the containers and management practices used at the facility are adequate to minimize the potential releases of hazardous constituents to the environment.

### KEY QUESTIONS

Are containers, if stacked more than two high, secured by racks or other structural supports to prevent tipping or falling during an earthquake or fire?

Are containers compatible with wastes being stored?

If drums are ruptured during a fire or earthquake, will incompatible wastes from ruptured drums become mixed? What storage area design features prevent mixing of incompatible waste?

What is the proposed minimum allowable width of aisle space?

What facility details require seismic analysis and what analysis was performed on each detail? What are the qualifications of the person making the analysis?

What specific engineering or other certifications were submitted? Was sufficient supporting documentation submitted with each to fully justify the certifications made?

Do the engineer's certifications contain disclaimers that negate the usefulness and intent of the certifications?

If containers are used for hazardous waste treatment, what fire, explosion, accelerated corrosion, or other problems may result from the proposed treatment and what safety features are being implemented to prevent such occurrences?

What container release incidents have occurred in the past at this facility? What was the cause of the release(s)?

### REQUIRED OUTPUTS

### APPLICABLE REGULATIONS AND STATUTES

State Laws and Regulations:

Cal. Code of Regs., Tit. 22

CHAPTER 20: THE HAZARDOUS WASTE PERMIT PROGRAM  
Article 2: Permit Application  
66270.14 Contents of Part B: General Requirements  
66270.15 Specific Part B Information Requirements for Containers.

CHAPTER 10: HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL  
Article 2: Definitions

CHAPTER 14: STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE  
TRANSFER, TREATMENT, STORAGE, AND DISPOSAL FACILITIES

Article 2:	General Facility Standards
66264.15	Requirements
66264.16	Personnel Training
66264.17	General Requirements for ignitable, Reactive, or incompatible Wastes
66264.25	Seismic and Precipitation Design Standards
Article 3:	Preparedness and Prevention
66264.31	Design and Operation of Facility
66264.33	Testing and Maintenance of Equipment
Article 4:	Contingency Plan and Emergency Procedures
66264.56	Emergency Procedures
Article 5:	Manifest System, Record Keeping, and Reporting
66264.77	Additional Reports
Article 7:	Closure and Post Closure
66264.111	Closure Performance Standard
66264.114	Disposal or Decontamination of Equipment, Structures and Soils
Chapter 14, Article 9	Use and Management of Containers
66264.170	Applicability of container requirements
66264.171	Use and Management of Containers
66264.172	Compatibility of Waste with Containers
66264.173	Management of Containers
66264.174	Inspections
66264.175	Containment
66264.176	Special Requirements for Ignitable or Reactive Waste
66264.177	Special Requirements for Incompatible Wastes
66264.178	Closure

#### Federal Laws and Regulations:

Department of Transportation - 49 CFR 172, 173, 178, and 179.

#### Other Laws and Regulations:

### POLICIES

#### DTSC Policies:

Containers more than 25 inches in height may not be stacked more than two high without supplemental support to prevent the tipping or falling of the containers during an earthquake or fire.

All container labels must be visible for inspection without having to move or rotate the container. These criteria usually mean that containers (normally drums) should be arranged four drums to a pallet, with each drum rotated such that its label will be visible from an aisle space next to where the drum will be stored. Aisles meeting the minimum aisle width criteria noted below should be on both sides of the palletized containers. While it is preferable not to stack containers, if containers are stacked, every container must sit directly on a pallet, with palletized containers not stacked more than two high.

The minimum allowable width of aisle space between rows of containers is the greater of: (1) sufficient width to allow the unobstructed movement of the facility's hand-operated firefighting equipment, plus

operator(s); (2) sufficient width to allow the unobstructed movement of the facility's container handling equipment which would be used to remove a leaking container from the most remote container storage location; or (3) 30 inches. "Sufficient width" is determined by an on-site demonstration using actual facility equipment that would be used for firefighting and container removal.

For facilities having long rows of containers, it is not expected that each container need be accessed directly by container handling equipment without having to move other containers that may be in the way. If some containers must be moved to access remote containers, the moved containers may not be stored outside the permitted area, even on a temporary basis. If necessary, the permit should limit the maximum number of containers stored to provide adequate temporary storage or moving area within the permitted area. If there is a question about whether there is sufficient room to manipulate containers to reach remote storage areas, the permit writer must have the facility demonstrate the proposed manipulation technique using the facility's actual container handling equipment.

#### EPA Policies:

Empty containers, January 23, 1987-letter from U. S. EPA to Wade Cornwell regarding the federal definition of an empty container.

#### Other Policies:

### INSTRUCTIONS TO APPLICANTS

Examples to be Given to Applicants:

### CEQA CONSIDERATIONS

### PUBLIC PARTICIPATION CONSIDERATION

If a facility has a history of past container releases, the facility could have a greater public outrage problem than ones that do not. These concerns will need to be addressed in the public participation effort.

### LEGAL CONSIDERATIONS

### INTERAGENCY AGREEMENTS & MOUS

### COORDINATION WITH OTHERS

Other DTSC Units:

Environmental/Legislative/Industry Groups:

Other Agencies:

Special Requests:

### STEP-BY-STEP PROCEDURES

Flow Charts:

Checklists:

## TECHNICAL REFERENCES

Facilities storing hazardous waste in containers, U.S. EPA, 1982.

## EXAMPLES OF COMPLETED WORK PRODUCTS

## TIMELINE AND PLANNING

Permit Processing Chart:

Workload Standards:

Statutory & Other Deadlines:

WP File Name: 2/CH0941\_P.MAN

WP File Name for Checklist: 5/CK0941\_P.MAN

List of Examples:

List of Appendices:

List of References:

Facilities storing hazardous waste in containers, U.S. EPA, 1982.