



HMBP 101

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M-M2

February 26th, 2024



**26th California Unified Program
Annual Training Conference
February 26-29, 2024**



Introductions



Melisa Custer -Los Angeles County Fire



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Nikki Bandak -Santa Fe Springs Fire-Rescue



Slido Question 1



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Key Points

- Emergency Planning and Community Right-to-Know Act
- Statutes and Regulations
- Hazardous Materials
- Hazardous Material Business Plan
- Release Reporting



Emergency Planning and Community Right-to-Know Act (EPCRA)



Bhopal, India

Worst industrial accident to ever occur

- Dec, 2, 1984
- Union Carbide – Pesticide Plant
- Over 500,000 people exposed
- 45 tons of toxic methyl isocyanate gas
- 15,000+ died



Bhopal, India

Dec, 2-3 1984

Cause and After Effects

Cause

- Substandard operating and safety procedures
- Understaffed facility
- Training deficiencies

After Effects

- Creation of the EPCRA

Documentary

- Netflix: *the Railwaymen the untold story of Bhopal 1984*



Emergency Planning & Community Right-to-Know Act (EPCRA)

1986

Goal: To help communities plan for chemical emergencies:

- **Protect**
 - Regulate industry storage and incident reporting
- **Educate**
 - Increase the public's knowledge of the presence and threat of hazardous chemicals
- **Prepare**
 - Establishment of state and local committees to prepare communities and emergency response plans
- **Respond**
 - Help communities prepare to respond in the event of a chemical emergency



Authorized by Title III of the Superfund Amendment and Reauthorization Act (SARA)

Important EPCRA sections

Section 301- 303

- Establishes emergency planning requirements
- Requires notifying authorities of the presence of *Extremely Hazardous Substances*

Section 304

- Requires notifying authorities when chemicals are released

Important EPCRA sections

Section 311- 312

- Requires facilities to report hazardous chemicals that are used and stored

Section 313

- Establishes the Toxic Release Inventory Program

Section 322

- Requires Facilities to submit forms to support any claims of trade secrecy

Government Agencies

FEDERAL

- Environmental Protection Agency (EPA)

CALIFORNIA

- California EPA (Cal EPA)
- California Governor's Office of Emergency Services (Cal OES)
- State Emergency Response Commission (SERC)
- Local Emergency Planning Committee (LEPPC)
- Certified Unified Program Agency (CUPA)



Statutes and Regulations



Slido Question 2



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Federal

United States Code (USC)

- Emergency and Hazardous Chemical Inventory Forms
 - Title 42, Section 11022

Code of Federal Regulations (CFR)

- Hazardous Chemical Reporting: Community Right-to-Know
 - Title 40, Part 370

California

HSC Chapter 6.95,

- Article 1 Section 25500-25519

Code California of Regulation (CCR)

- Title 8, Section 339
- Title 19, Division 2 Chapter 4, Article 4
Section 2620-2734

Health and Safety Code - Division 20

Chapter 6.95: Hazardous Material Release Response Plan and Inventory [25500 – 25546.5]

- Article 1 : [25500-25519]
 - Business Area plan
- Article 2 : [25531-25543.3]
 - Hazardous Materials Management
- Article 3 : [25545]
 - Emergency Planning and Community Right-to-Know Act of 1986
- Article 4 : [2546 -25546.5]
 - California Toxic Release Inventory Program Act 2007



Related Laws

- California Fire Code: Title 24, Part 9, Chapter 27
 - § 2701.5.1 → Hazardous Materials Management Plans (HMMP)
 - § 2701.5.2 → Hazardous Materials Inventory Statement (HMIS)



Hazardous Materials



What is a Hazardous *Material*?

Presents a hazard to human health and safety or the environment

“Hazardous material” is any material that, because of its

- Quality
- Concentration
- Physical or chemical characteristics

Poses a significant present or potential hazard to **human health and safety or to the environment** if released into the workplace or the environment, or material specified in an ordinance.

What is a Hazardous *Substance*?

Likely to cause injury or illness

A substance, material, or mixture which by reason of being

- Explosive or flammable
- Poisonous
- Corrosive or oxidizing
- An irritant or otherwise harmful

is likely to cause injury or illness.

Additional Hazardous Substance definitions:

- 5192(a)(3) → Hazardous Wastes Operations purposes only
- 5194(c) → Hazardous Communications purposes only

Hazardous Substance

- Manufacturer/ Producer is required to prepare a Safety Data Sheet (SDS)
- Listed as a hazardous substance:
 - 10 CFR, Part 30, Appendix B as a radioactive material
 - 49 CFR
 - 8 CCR §339
 - HSC §25115,25117, and 25316 as a hazardous waste

List of Hazardous Materials

- List of Lists: a consolidated list of chemicals subjected to:
 - EPCRA
 - Section 302 & 304 → Extremely Hazardous
 - Section 313 → Toxic Chemicals
 - Substances (EHS) TPQ and RQ
 - CERCLA Hazardous Substances RQ
 - CAA112(r) Regulated Substances (RS) for accidental release prevention

List of Hazardous Materials

Appendix A

NAME	CAS/313 Category Codes	Section 302 (EHS) TPQ	Section 304 EHS RQ	CERCLA RQ	Section 313	RCRA CODE	CAA 112(r) TQ
Abamectin	71751-41-2				313		
Acenaphthene	83-32-9			100			
Acenaphthylene	208-96-8			5,000			
Acephate	30560-19-1				313		
Acetaldehyde	75-07-0			1,000	313	U001	10,000
Acetaldehyde, trichloro-	75-87-6			5,000		U034	
Acetamide	60-35-5			100	313		
Acetic acid	64-19-7			5,000			
Acetic acid, (2,4-dichlorophenoxy)-	94-75-7			100	X	U240	
Acetic acid ethenyl ester	108-05-4	1,000	5,000	5,000	X		15,000
Acetic anhydride	108-24-7			5,000			
Acetone	67-64-1			5,000		U002	
Acetone cyanohydrin	75-86-5	1,000	10	10	X	P069	
Acetone thiosemicarbazide	1752-30-3	1,000/10,000	1,000				
Acetonitrile	75-05-8			5,000	313	U003	
Acetophenone	98-86-2			5,000	313	U004	
2-Acetylaminofluorene	53-96-3			1	313	U005	
Acetyl bromide	506-96-7			5,000			
Acetyl chloride	75-36-5			5,000		U006	

Hazardous Material



Slido Question #3



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Excluded Chemicals

Federal Definitions

- Any *food, food additive, color additive, drug, or cosmetic* regulated by the FDA.
- Any substance present as a *solid* in any manufactured item that the extend *exposure to the substance does not occur under normal condition of use*.
- Any substance to the extent it is used for *personal, family, or household purposes*, or is present in the same form and concentration as a product packaged for distribution and use by the *general public*.
- Any substance to the extent it is used in a *research laboratory/hospital/other medical facility* under the *direct supervision of technically qualified individual*.
- Any substance to the extent it is used in *routine agricultural operations* or is a *fertilizer held for sale by a retailer* to the ultimate customer.

Hazardous Material Classification



Hazardous Materials Classification

Physical Hazards



Health Hazards



Slido #4



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National Fire Protection Association

NFPA 400

- Defines hazardous material as:
 - A chemical or substance that is classified as a physical hazard material or a health hazard material, whether the chemical or substance is in usable or waste condition
- Physical Hazard Material
 - Explosive, Flammable cryogen, Flammable gas, Flammable solid, Ignitable liquid, Organic peroxide, Oxidizer, Oxidizing Cryogen, Pyrophoric, Unstable(reactive), Water-reactive
- Health Hazard Material
 - Toxic
 - Highly Toxic
 - Corrosive

Slido Question #5



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OSHA - Hazard Communication Standard

Physical

Fire Hazards

- Combustible Liquid
- Flammable Liquid
- Flammable Aerosol
- Flammable Gas
- Flammable Solid
- Oxidizer
- Pyrophoric

Reactive Hazards

- Organic Peroxide
- Unstable (reactive)
- Water-reactive

Explosion Hazards

- Compressed Gas
- Explosive

OSHA - Hazard Communication Standard

Health

Systemic Effects

- Carcinogen
- Toxic Agent
- Highly Toxic Agent
- Corrosive
- Irritant
- Sensitizer

Target Organ Effects

- Hepatotoxin
- Nephrotoxin
- Neurotoxin
- Blood/hematopoietic Toxin
- Reproductive Toxin
- Cutaneous Hazard
- Eye Hazard

Global Harmonized System

Classification & Labeling of Chemicals

Includes criteria for classification of

- Health
- Physical
- Environment health

Classification of chemicals by types of hazard and proposes harmonized hazard communication elements.



Global Harmonized System

Classification & labeling of Chemicals



Exploding bomb
(for explosion or reactivity hazards)



Flame
(for fire hazards)



Flame over circle
(for oxidizing hazards)



Gas cylinder
(for gases under pressure)



Corrosion
(for corrosive damage to metals as well as skin, eyes)



Skull and crossbones
(can cause death or toxicity with short exposure to small amounts)



Health hazard
(may cause or suspected of causing serious health effects)



Exclamation mark
(may cause less serious health effects or damage the ozone layer)*



Environment*
(may cause damage to the aquatic environment)

Safety Data Sheet

SDS

- Formerly known as Material Safety Data Sheet (MSDS)
- User-friendly 16 section format is now required
- Includes information
 - Properties of each chemical
 - Physical health
 - Environmental health hazards
 - Protective measures
 - Safety precautions for handling
 - Storing and transporting chemical



Safety Data Sheet

SDS

Section 1-8

- General info about the chemicals
- ID
- Hazard
- Composition
- Safety handling practices
- Emergency control measures

Section 9- 11 &16

Other technical and scientific info such as:

- Physical and chemical properties
- Stability and reactivity
- Toxicology
- Exposure control

Section 12-15

To be consistent with UN GHS but not OSHA enforce

SDS example

SAMPLE SAFETY DATA SHEET

Issuing Date January 5, 2015 Revision Date June 12, 2015 Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name XXXXX Regular-Bleach,

Other means of identification

EPA Registration Number 5813-100

Recommended use of the chemical and restrictions on use

Recommended use Household disinfecting, sanitizing, and laundry bleach

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

The XXXXX Company
1221 Broadway
Oakland, CA 94612

Phone: 1-510-XXX-XXXX

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies, call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

XXXXX Regular-Bleach,

Revision Date June 12, 2015

2. HAZARDS IDENTIFICATION


Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger
Hazard Statements	Causes severe skin burns and eye damage Causes serious eye damage
	
Appearance	Clear, pale yellow
Physical State	Thin liquid
Odor	Bleach

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves, protective clothing, face protection, and eye protection such as safety glasses.

Precautionary Statements - Response

Immediately call a poison center or doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Specific treatment (see supplemental first aid instructions on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents in accordance with all applicable federal, state, and local regulations.

Hazards not otherwise classified (HNOC)

Although not expected, heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease may be aggravated by exposure to high concentrations of vapor or mist.

Product contains a strong oxidizer. Always flush drains before and after use.

XXXXX Regular-Bleach,

Revision Date June 12, 2015

Unknown Toxicity

Not applicable.

Other information

Very toxic to aquatic life with long lasting effects.

Interactions with Other Chemicals

Reacts with other household chemicals such as toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

Chemical Name	CAS-No	Weight %	Trade Secret
Sodium hypochlorite	7681-52-9	5 - 10	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice

Call a poison control center or doctor immediately for treatment advice. Show this safety data sheet to the doctor in attendance.

Eye Contact

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation

Move to fresh air. If breathing is affected, call a doctor.

Ingestion

Have person sip a glassful of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice.

Protection of First-aiders

Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects

Burning of eyes and skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

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SDS example

XXXXX Regular-Bleach,

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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

This product causes burns to eyes, skin, and mucous membranes. Thermal decomposition can release sodium chlorate and irritating gases and vapors.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation. Use personal protective equipment as required. For spills of multiple products, responders should evaluate the MSDSs of the products for incompatibility with sodium hypochlorite. Breathing protection should be worn in enclosed and/or poorly-ventilated areas until hazard assessment is complete.

Other Information

Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions

This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. Do not allow product to enter storm drains, lakes, or streams. See Section 12 for ecological information.

Methods and material for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up

Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

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XXXXX Regular-Bleach,

Revision Date June 12, 2015

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage

Store away from children. Redose cap tightly after each use. Store this product upright in a cool, dry area, away from direct sunlight and heat to avoid deterioration. Do not contaminate food or feed by storage of this product.

Incompatible Products

Toilet bowl cleaners, rust removers, acids, and products containing ammonia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hypochlorite 7681-52-9	None	None	None

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection

If splashes are likely to occur: Wear safety glasses with side shields (or goggles) or face shield.

Skin and Body Protection

Wear rubber or neoprene gloves and protective clothing such as long-sleeved shirt.

Respiratory Protection

If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods. Remove and wash contaminated clothing before re-use. Do not eat, drink, or smoke when using this product.

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XXXXX Regular-Bleach,

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State

Thin liquid

Appearance

Clear

Color

Pale yellow

Odor

Bleach

Odor Threshold

No information available

Property

Values

Remarks/ Method

pH

~12

None known

Melting/freezing point

No data available

None known

Boiling point / boiling range

No data available

None known

Flash Point

Not flammable

None known

Evaporation rate

No data available

None known

Flammability (solid, gas)

No data available

None known

Flammability Limits in Air

No data available

None known

Upper flammability limit

No data available

None known

Lower flammability limit

No data available

None known

Vapor pressure

No data available

None known

Vapor density

No data available

None known

Specific Gravity

~1.1

None known

Water Solubility

Soluble

None known

Solubility in other solvents

No data available

None known

Partition coefficient: n-octanol/water

No data available

None known

Autoignition temperature

No data available

None known

Decomposition temperature

No data available

None known

Kinematic viscosity

No data available

None known

Dynamic viscosity

No data available

None known

Explosive Properties

Not explosive

None known

Oxidizing Properties

No data available

Other Information

Softening Point

No data available

VOC Content (%)

No data available

Particle Size

No data available

Particle Size Distribution

No data available

10. STABILITY AND REACTIVITY

Reactivity

Reacts with other household chemicals such as toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Toilet bowl cleaners, rust removers, acids, and products containing ammonia.

Hazardous Decomposition Products

None known based on information supplied.

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SDS example

XXXXX Regular-Bleach, Revision Date June 12, 2015

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Exposure to vapor or mist may irritate respiratory tract and cause coughing. Inhalation of high concentrations may cause pulmonary edema.
Eye Contact	Corrosive. May cause severe damage to eyes.
Skin Contact	May cause severe irritation to skin. Prolonged contact may cause burns to skin.
Ingestion	Ingestion may cause burns to gastrointestinal tract and respiratory tract, nausea, vomiting, and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hypochlorite 7681-52-9	8200 mg/kg (Rat)	>10000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes. May cause burns to eyes. May cause redness or burns to skin. Inhalation may cause coughing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	-	Group 3	-	-

*IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans*

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity Carcinogenic potential is unknown.
Target Organ Effects Respiratory system, eyes, skin, gastrointestinal tract (GI).

Aspiration Hazard No information available.

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Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
54 g/kg
ATEmix (inhalation-dust/mist)
58 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. Do not allow product to enter storm drains, lakes, or streams.

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Dispose of in accordance with all applicable federal, state, and local regulations. Do not contaminate food or feed by disposal of this product.

Contaminated Packaging

Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT Not restricted.

TDG Not restricted for road or rail.

ICAO Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.

IATA Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.

IMDG/IMQ Not restricted, as per IMDG Code 2.10.2.7, Marine Pollutant exception.

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15. REGULATORY INFORMATION

Chemical Inventories

TSCA All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.

DSL/NDSL All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium hypochlorite 7681-52-9	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER: CORROSIVE. Causes irreversible eye damage and skin burns. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wear protective eyewear and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the restroom. Avoid breathing vapors and use only in a well-ventilated area.

SDS example Final

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US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Sodium hypochlorite 7681-52-9	X	X	X	X	
Sodium chlorate 7775-09-9	X	X	X		

International Regulations

Canada

WHMIS Hazard Class

E - Corrosive material



16. OTHER INFORMATION

NFPA Health Hazard 3 Flammability 0 Instability 0 Physical and Chemical Hazards -

HMS Health Hazard 3 Flammability 0 Physical Hazard 0 Personal Protection B

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date June 12, 2015

Revision Note Revision Section 14.

Reference 1096036/164964.159

General Disclaimer

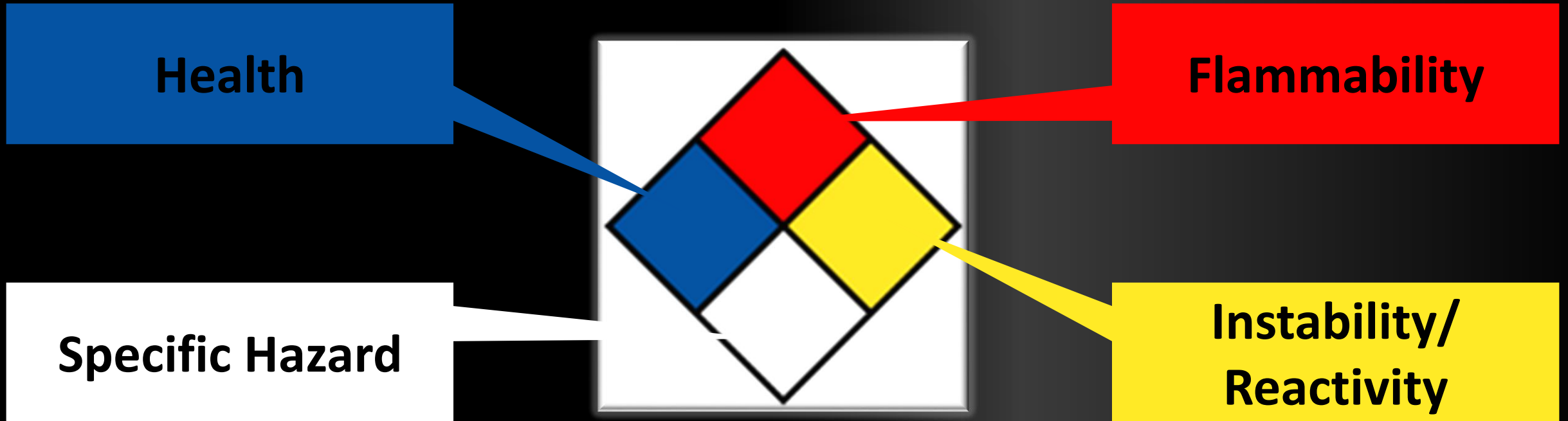
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

This material was produced under grant 46F6-HT30 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. Revisions were made to this material under grant number SH-31240-SH7 from the Occupational Safety and Health Administration, U.S. Department of Labor.

NFPA 704 “Fire Diamond”

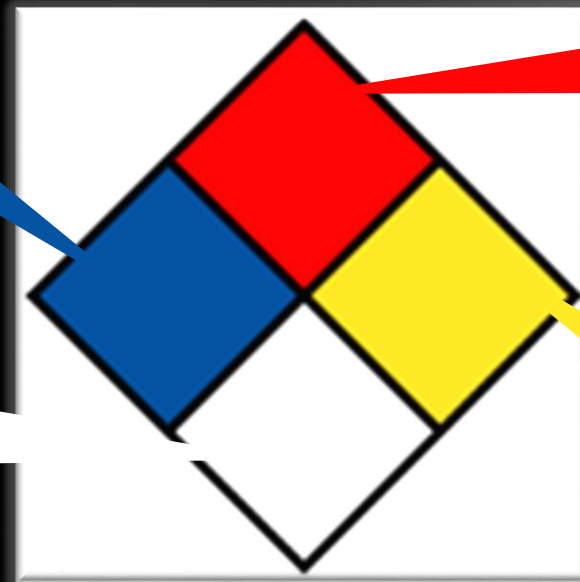
Standard system for the identification of the hazards of materials for emergency response



NFPA 704 “Fire Diamond”

Standard system for the identification of the hazards of materials for emergency response

- 4- Severe Hazard
- 3- Serious Hazard
- 2- Moderate Hazard
- 1 – Slight Hazard
- 0 - Minimal Hazard



- 4- Flammable Lq., Volatile Lq., Pyrophoric Material
- 3- Ignites at ambient Temp
- 2- Ignites when moderately heated
- 1 – Must be preheated to burn
- 0 - Will not burn

- ~~W~~ - Avoid use of water
- OX – Oxidizer
- SA – Simple Asphyxiant

- 4- Readily capable of detonation or explosion
- 3- Capable of detonation or explosion
- 2- Violent chemical change possible at elevated Temp and Pressure
- 1 – Normally stable but becomes unstable if heated
- 0 - Normally Stable

Flammability

- 0 – Materials that will NOT burn in air when exposed to a temperature of 1,500 °F (820 °C) for a period of 5-minutes. (e.g. Carbon Tetrachloride)
- 1 – Flash Point at or above 200 °F (93 °C). (e.g. Mineral Oil)
- 2 – Flash Point between 100 - 200 °F (38 - 93 °C). (e.g. Diesel Fuel)
- 3 – Flash Point below 73 °F (23 °C) and having a boiling point at or above 100 °F (38 °C) or having a flash point between 73 - 100 °F (23- 38 °C). (e.g. Gasoline, Acetone)
- 4 – Flash Point below 73 °F (23 °C). (e.g. Acetylene)

Slido Question #6



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Health

- 0 – Poses NO health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible material. (e.g. Wood)
- 1 – Exposure would cause irritation with only minor residual injury. (e.g. Acetone)
- 2 – Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury. (e.g. Diethyl Ether)
- 3 – Short exposure could cause serious temporary or moderate residual injury. (e.g. Chlorine)
- 4 – Very short exposure could cause death or major residual injury. (e.g. Hydrofluoric Acid)

Slido Questions #7



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Instability / Reactivity

- 0 – Normally stable, even under fire exposure conditions and is NOT reactive with water. (e.g. Helium)
- 1 – Normally stable but can become unstable at elevated temperatures and pressure. (e.g. Phosphorous)
- 2 – Undergoes violent chemical changes at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water. (e.g. Calcium Metal)
- 3 – Capable of detonation or explosive decomposition but requires a strong initiating source, must be heated under confinement before initiation, reacts explosively with water, or will detonate if severely shocked (e.g. Ammonium Nitrate_)
- 4 – Readily capable of detonation or explosive decomposition at normal temperature and pressures. (e.g. Nitroglycerin)

Slido Question #8



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Specific Hazards

OX – Oxidizers, allows chemicals to burn without an air supply. (e.g. Potassium Perchlorate)

W – Reacts with water in an unusual or dangerous manner. (e.g. Cesium)

SA – Simple Asphyxiant Gas. (e.g. Nitrogen, Helium, Argon)

BREAK TIME!



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Hazardous Material Business Plan

A business shall establish and implement a business plan for emergency response to a release or threatened release of hazardous material

Hazardous Material Business Plan shall include:

- Inventory
- Site Map
- Emergency Response Plan/ Contingency Plan
- Employee Training

Required to implement within 30-days of becoming subject

Business shall notify, in writing, the owner of the property that the business is subject to the Hazardous Material Program and provide a copy of HMBP 5-days after request.

Hazardous Material Inventory

In 1987 states were given flexibility to implement hazardous chemical inventory reporting requirements.

Requirements:

- Chemical Name
- Extremely Hazardous Substance (EHS)
- Trade Secret
- Mixture Composition
- Physical and Health Hazards (24 Federal Hazardous Categories)
- Max Amount, Avg. Daily Amount, # day's on-site, storage types, conditions, locations



California Electronic Reporting System (CERS)

Chemical Inventory

Chemical Identification and Physical Properties

Chemical Name

Lubricating oils, used

CERS Chemical Library ID

-

Common Name

Used lubricating oils

CAS Number

70514-12-4

US EPA SRS ID

777573

Physical State

Solid Liquid Gas

Hazardous Material Type

Pure Mixture Waste

Trade Secret

Yes No

Chemical Hazard Classification

EHS

Yes No

Radioactive

Yes No

Curies

Fire Code Hazard Classes (by priority)

[View/Edit Additional Firecodes](#)

DOT Hazard Class

State Waste Code

[Lookup Code](#)

Federal Hazard Categories

- PHYSICAL: Flammable
- PHYSICAL: Gas Under Pressure
- PHYSICAL: Explosive
- PHYSICAL: Self-heating
- PHYSICAL: Pyrophoric

California Electronic Reporting System

Chemical Inventory

Inventory Location and Quantity

Chemical Location	Average Daily Amount	Maximum Daily Amount	Units <input checked="" type="radio"/> gallons <input type="radio"/> cubic feet <input type="radio"/> pounds <input type="radio"/> tons
Chemical Location Confidential EPCRA <input type="radio"/> Yes <input type="radio"/> No	Largest Container	Annual Waste Amount	
Map # (Optional) Grid # (Optional)	Days on Site		

Inventory Storage Information

<input type="checkbox"/> Aboveground Tank	<input type="checkbox"/> Can	<input type="checkbox"/> Box	<input type="checkbox"/> Tank Truck, Tank Wagon
<input type="checkbox"/> Underground Tank	<input type="checkbox"/> Carboy	<input type="checkbox"/> Cylinder	<input type="checkbox"/> Tank Car, Rail Car
<input type="checkbox"/> Tank Inside Building	<input type="checkbox"/> Silo	<input type="checkbox"/> Glass Bottle	<input type="checkbox"/> Other
<input type="checkbox"/> Steel Drum	<input type="checkbox"/> Fiber Drum	<input type="checkbox"/> Plastic Bottle	
<input type="checkbox"/> Plastic/Non-Metallic Drum	<input type="checkbox"/> Bag	<input type="checkbox"/> Tote Bin	

Storage Pressure: Ambient Above Ambient Below Ambient

Storage Temperature: Ambient Above Ambient Below Ambient Cryogenic

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components
			<input type="radio"/> Yes <input type="radio"/> No	

Trade Secret

Chemical Identification and Physical Properties		
Chemical Name	Lubricating oils, used	
Common Name	CAS Number	CERS Chemical Library ID
Used lubricating oils	70514-12-4	-
US EPA SRS ID	777573	
Physical State	Hazardous Material Type	
<input type="radio"/> Solid <input checked="" type="radio"/> Liquid <input type="radio"/> Gas	<input checked="" type="radio"/> Pure <input type="radio"/> Mixture <input type="radio"/> Waste	
		Trade Secret
		<input type="radio"/> Yes <input type="radio"/> No

Include, but not limited to

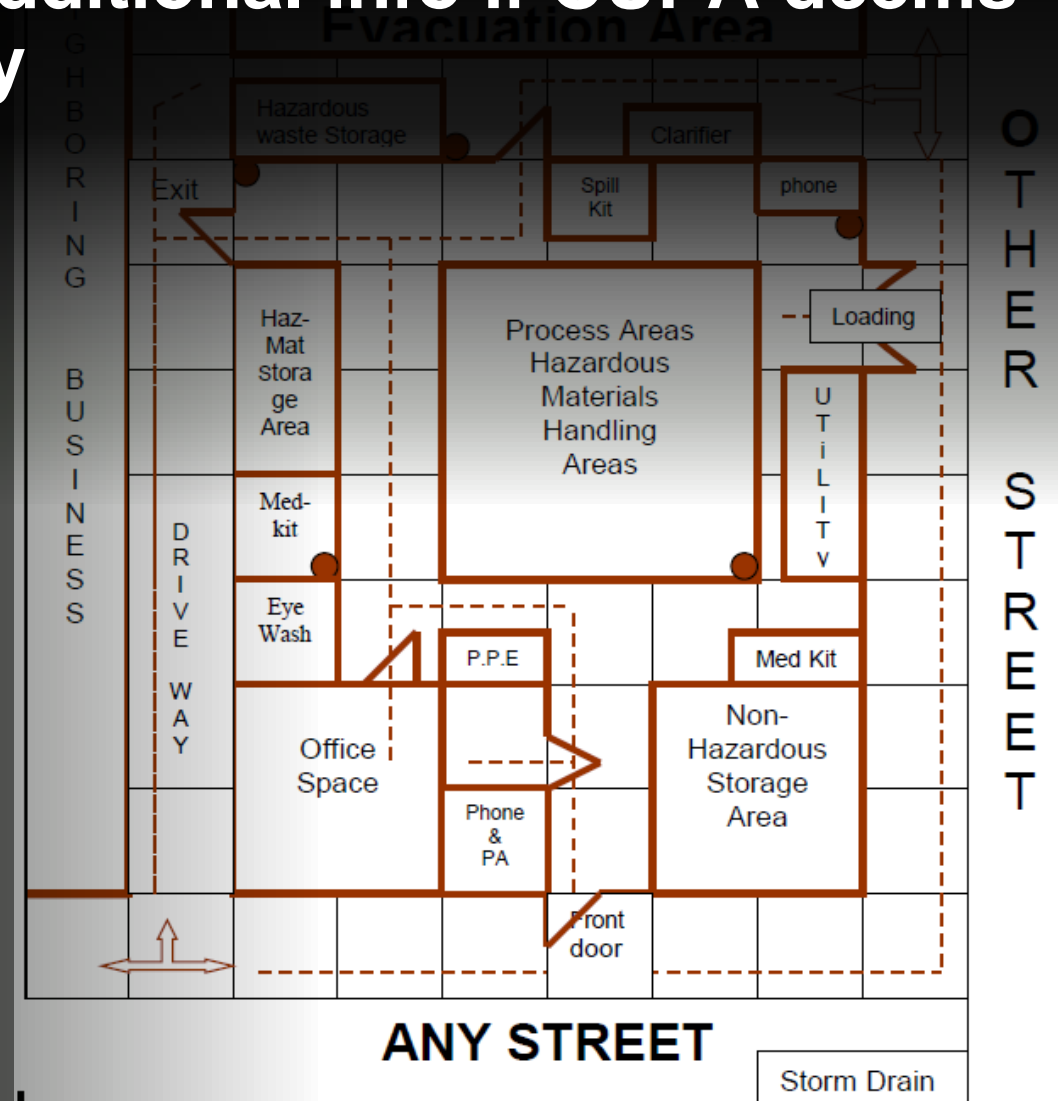
- Formula, plan, pattern, process, tool, mechanism, compound, procedure, production, data, or compiled info NOT patented
- Known only to certain individual(s) w/n a commercial concern
- Used to fabricate, produce, or compound an article of trade
- Provides an opportunity to gain an advantage over competitors

Shall not be disclosed except for official duties from CUPA to contractors if needed for protection of health and safety or medical professionals.

Site Map

Shall contain the following as well as additional info if CUPA deems necessary

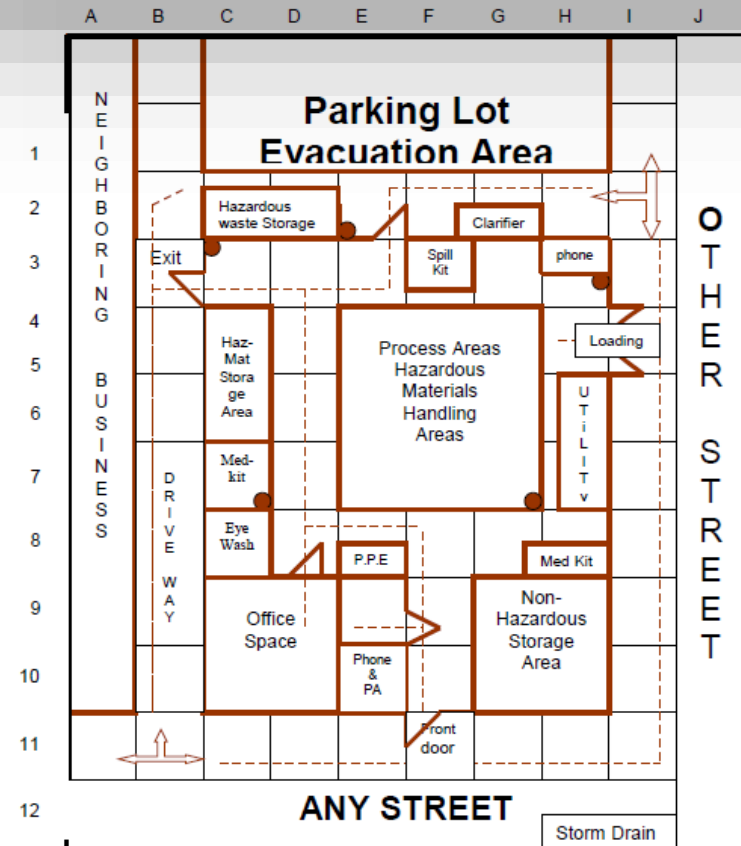
- Required
 - North Orientation
 - Adjacent Streets
 - Access and Exit Points
 - Evacuation Staging Area
 - Hazardous Material Handling/ Storage Area
 - Emergency Response Equipment
- If Present
 - Loading Areas
 - Internal Roads
 - Storm and Sewer Drains
 - Emergency Shut-offs
 - Gas, Electric, Water



Site Map Example

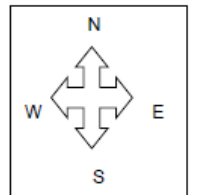
CONSOLIDATED CONTINGENCY PLAN SITE MAP

BUSINESS NAME My Company			
SITE ADDRESS 123 Any Street	103	CITY Any Town	ZIP CODE 105 90000
DATE MAP DRAWN 07-01-00	MAP # 1	FACILITY ID # 1. Official use only	



- For Site Map
- Scale of Map
 - Loading Areas
 - Parking Lots
 - Internal Roads
 - Storm and Sewer Drains
 - Adjacent Property Use
 - Locations and Names of Adjacent Streets and Alleys
 - Access and Egress Points and Roads
 - Primary and Alternate Evacuation

● Fire Extinguisher
Scale: 1"= 10 Ft.



Item and/or Description	Location Code (LC)
Hazardous materials storage areas.	5-C and 6-C
Hazardous waste storage areas.	3-C and 3-D
Hazardous materials handling areas.	5-EFG, 6-EFG, and 7-EFG
Fire extinguishers.	3-E, 4-C, 4-H, 7-C and 7-G
Spill kit.	4-F
Clarifier.	3-G
Communication equipment.	10-E and 4-H
P.P.E.	8-E
Eye wash.	8-C
Emergency exits.	4-B and 3-F
Loading area.	5-I
Parking lot / Evacuation area.	1-CDEFGH and 2-CDEFGH
First Aid kit.	7-C and 8-H

Emergency Response and Contingency Plan

In the event of a reportable release or threatened release of a hazardous material

- Immediate Notification
 - Local Emergency Rescue Personnel (911)
 - Local CUPA
 - Cal OES (800) 852-7550
 - National Response Center (800) 424- 8802
 - Nearest Hospital
- Procedures for mitigation
- Evacuation plans and procedures

BUSINESS NAME (Same as Facility Name or DBA - Doing Business As)		A4
BUSINESS SITUATION		A5
BUSINESS (e.g., Painting Contractor)	CA	ZIP CODE
INCIDENTAL OPERATIONS (e.g., Fleet Maintenance)		A9
THIS PLAN COVERS CHEMICAL SPILLS, FIRES, AND EARTHQUAKES INVOLVING (Check all that apply):		
<input type="checkbox"/> 1. HAZARDOUS MATERIALS; <input type="checkbox"/> 2. HAZARDOUS WASTES		
INTERNAL FACILITY EMERGENCY RESPONSE WILL OCCUR BY (Check all that apply):		
<input type="checkbox"/> 1. CALLING PUBLIC EMERGENCY RESPONDERS (e.g., 9-1-1)		
<input type="checkbox"/> 2. CALLING HAZARDOUS WASTE CONTRACTOR 22CCR86265.52(c)		
<input type="checkbox"/> 3. ACTIVATING IN-HOUSE EMERGENCY RESPONSE TEAM		
<p>In the event of an emergency involving hazardous materials and/or hazardous waste, all facilities must IMMEDIATELY:</p> <ol style="list-style-type: none"> 1. Notify facility personnel and evacuate if necessary in accordance with the Emergency Action Plan (Title 8 California Code of Regulations §3220); 2. Notify local emergency responders by calling 9-1-1; 3. Notify the local Unified Program Agency (UPA) at the phone number below; and 4. Notify the State Warning Center at (800) 852-7550. <p>Facilities that generate, treat, store or dispose of hazardous waste have additional responsibilities to notify and coordinate with other response agencies. Whenever there is an imminent or actual emergency situation such as an explosion, fire, or release, the Emergency Coordinator must follow the appropriate requirements for the category of facility and type of release involved:</p> <ol style="list-style-type: none"> 1. Title 22 California Code of Regulations §66265.56. Emergency Procedures for generators of 1,000 kilograms or more of hazardous waste in any calendar month. 2. Title 22 California Code of Regulations §66265.196. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems. 3. Title 40 Code of Federal Regulations §302.6. Notification requirements for a release of a hazardous substance equal to or greater than the reportable quantity. 4. Title 22 California Code of Regulations §66262.34(d)(2) and Title 40 Code of Federal Regulations §262.34(d)(5)(ii) for generators of less than 1000 kilograms of hazardous waste in any calendar month. <p>Following notification and before facility operations are resumed in areas of the facility affected by the incident, the Emergency Coordinator shall notify the local UPA and the local fire department's hazardous materials program, if necessary, that the facility is in compliance with requirements to:</p> <ol style="list-style-type: none"> 1. Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from an explosion, fire, or release at the facility; and 2. Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until cleanup procedures are completed. 		
EMERGENCY RESPONSE PHONE NUMBERS:	AMBULANCE, FIRE, POLICE AND CHP 9-1-1 CALIFORNIA STATE WARNING CENTER (CSWC)/CAL OES. 22CCR862.52(g) (800) 852-7550 NATIONAL RESPONSE CENTER (NRC) (800) 424-8802 POISON CONTROL CENTER (800) 222-1222 LOCAL UNIFIED PROGRAM AGENCY (UPA) 8.95HSC25505(3)(A) C1 OTHER (Specify): C2 OTHER (Specify): C3 OTHER (Specify): C4 OTHER (Specify): C5	
NEAREST MEDICAL FACILITY / HOSPITAL NAME:	19CCR2658(b)	
AGENCY NOTIFICATION PHONE NUMBERS:	CALIFORNIA DEPT. OF TOXIC SUBSTANCES CONTROL (DTSC) (916) 255-3545 REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) C6 U.S. ENVIRONMENTAL PROTECTION AGENCY (US EPA) (800) 300-2193 CALIFORNIA DEPT. OF FISH AND WILDLIFE (CDFW) (916) 358-2900 U.S. COAST GUARD (USCG) (202) 267-2180 CAL OSHA (916) 263-2800 CAL FIRE OFFICE OF THE STATE FIRE MARSHAL (OSFM) (916) 323-7390 OTHER (Specify): C7 OTHER (Specify): C8 OTHER (Specify): C9 OTHER (Specify): C10	

HSC§ 25505(a)(3)
 19 CCR § 2658
 22 CCR § 66265.52

Employee Training

- **New Employees and Current Employees**
 - Safety Procedures in the event of release or threatened release
 - Familiarity with Emergency Response Plan
 - Section 313 → Toxic Chemicals
 - May take into consideration the position of each employee
 - Documented electronically or by hard copy
 - Available for 3-years



Annual CERS submittal

An accurate and complete HMBP is required to be submitted annual to CERS

- Due Date
 - Established by the CUPA
 - Otherwise, March 1st
- Complete CERS
 - All elements in CERS
 - Exemption for Hazardous Waste ONLY

The screenshot shows the CERS Central website. At the top, there are navigation tabs for Home, Businesses, and Regulators. Below these are sub-tabs: Business Portal Sign In and Regulator Portal Sign In. The main content area is divided into several sections: Businesses, Regulators, Training, Announcements, EDT, and Data Seeding. The Businesses section includes links for Business User Training, Local Reporting Requirements, Unified Program Regulator Directory, CERS Chemical Library, Unified Program Internet Site, and CERS Business User Group. The Regulators section includes links for Training Portal Sign In, Regulator User Training, CERS Regulator Users Group (CRUG), Unified Program Violation Library (Excluded), CERS Data Registry, and Unified Program Internet Site. The Data Seeding section contains a notice that businesses must report electronically to CERS or a local reporting portal. The Training section provides information on CERS Training Portals. The Announcements section includes a notice for multi-facility/multi-jurisdictional businesses. The EDT section provides information on what is CERS. The Recent Announcements/Blog Postings section lists several updates and policy changes. The Other CERS Links section includes links to CERS Enhancements Listing, CERS Change Management Committee, and Unified Program Regulator Directory. For additional assistance, users are directed to contact the CERS Help Center at cers@calarpa.ca.gov.

Slido Question #9



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Changes and Updates

Within 30 days update and electronically submit

- 100% increase in quantity of hazardous material
- Additional of new hazardous material
- Change of the following:
 - Address
 - Ownership
 - Business Name
 - Operation
 - Update of site map needed
 - Update of Emergency Response Needed



Hazardous Material Inventory – Reportable Quantities



Hazardous Material Business Plan

A business shall establish and implement a business plan for emergency response to a release or threatened release of hazardous material

Hazardous Material in a Reportable Quantities:

- 200 - cubic feet
- 500 – lbs.
- 55 - gallons



Reporting Thresholds

Handles at any one time during the year

1,000 cubic feet of cryogenic, refrigerated, or compressed gases

- Simple Asphyxiant
- Oxygen
- Nitrogen
- Carbon Dioxide
- Nitrous Oxide at physician, dentist, vet, pharmacist, or EMS
- Closed Fire suppression system

Shall be reported in the physical state at which they are stored.
(e.g. Propane or Liquid Nitrogen is reported in gallons)

Slido Question #10



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Reporting Thresholds

Handles at any one time during the year

In any quantity

- Perchlorate
- Combustible Metal or Metal Alloy
 - Pyrophoric or Water Reactive
 - Combustible Dust
 - Flammable Solid
 - Explosive potential when in a molten form



Reporting Thresholds

Handles at any one time during the year

Quantities Listed in Chapter 1 of Title 10 Code of Federal Regulation

- Radioactive
 - Part 30, Section 30.1
 - Part 40, Section 40.1
 - Part 70, Section 70.1



Reporting Thresholds

Handles at any one time during the year
(Report in lbs.)

Amount that is \geq threshold planning quantity (TPQ)

- Extremely Hazardous Substance
 - Defined - Title 40 Code Federal Regulation, Section 355.61
 - Listed - Title 40 Code of Federal Regulation
 - Appendices A and B of Part 355 of Subchapter J
 - Less than 500 lbs.

CAS No.	Chemical name	Notes	Reportable quantity* (pounds)	Threshold planning quantity (pounds)
75-86-5	Acetone Cyanohydrin	10	1,000
1752-30-3	Acetone Thiosemicarbazide	1,000	1,000/10,000
107-02-8	Acrolein	1	500
79-06-1	Acrylamide	f	5,000	1,000/10,000
107-13-1	Acrylonitrile	f	100	10,000
814-68-6	Acrylyl Chloride	d	100	100

Reporting Thresholds

Increased Reportable Quantity

Irritant and Sensitizers

- 5,000 lbs.
- 550 gallons
- Classified in Title 8 CCR§ 5194

Paint Recovery Program

- 10,000 lbs.
- 1,000 gallons



Exemptions

Exempt From Reporting

- Refrigerant gases in closed cooling system
 - NOT ammonia or flammable gases
 - Used for comfort cooling
 - Used for cooling computer rooms
- Compressed air in cylinders, bottles, and tanks
 - Used by Fire Dept or emergency response organizations



Exemptions – Lubricating Oil

Used in an internal combustion

- Quantities
 - Each oil does not exceed 55-gallons
 - Total of all oil does not exceed 275-gallons
 - E.g. 5 x 55-gallon lubricating oil = 275-gallons
- Less 1,320-gallons and no SPCC required
 - Fluid in hydraulic system
 - Oil – filled electrical equipment, not contiguous to electric facility

Exemptions – Retail Establishments

Consumer product in a retail establishment for direct sale to the ‘end user’

- Assembly Bill 2059
 - National Fire Protection Association “NFPA” or Hazardous Material Identification System “HMIS” rating 3 or 4
 - Quantities equal to, or greater than
 - 165-gallons
 - 600-cubic feet
 - 1,500 lbs.

(e.g. propane, hand sanitizer, lighter fluid, muriatic acid)

- Impacted: Lowes, Home Depot, Gas Station, Pool Supply

Exemptions

- Propane
 - Used for cooking, heating work areas, or heating water
 - NOT to exceed 500-gallons
- Fuel in vehicle
 - Liquid or Gaseous
 - (e.g. Propane on forklifts)
 - Fuel tank integral to operation of vehicle
- Treated Wood
 - Presence of preservative in or on wood
 - Registered with Insecticide, Fungicide, and Rodenticide Act

Exemptions – HMBP 201

NOT discussed in this presentation

- Agricultural (Farms)
- Unstaffed Facilities
- Batteries
- Supplier of Hazardous Materials (Wholesale)
- Mixtures
- Trade Secrets



Spills and Violations



Release Reporting

Release or threatened release shall be reported to CUPA and OES

Report Immediately

- Provide access to the facility
- Does NOT apply to transportation on highway

Define 'Release'

- Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into environment.

Define 'Threatened Release'

- Immediate action required
- Prevent, reduce, or mitigate a release

Non-Compliance

Release or threatened release shall be reported to CUPA and OES

Fees

- Not more than \$2,000 a day
- Contributes to an emergency (e.g. fire)
 - Full cost of emergency response
 - Cost of clean-up and disposal

'Knowingly' Violates

- Not more than \$5,000 a day

Conviction

- Not more than \$25,000 a day
- Imprisonment in county jail not more than 1 year

Authority to Conduct Inspection

UPA has the authority to conduct inspections

Facility

- Premises of handler
 - Within 2,000 ft of premises

Inspections

- At least once every three years



Additional Resources

- **California Governor's Office of Emergency Services (CalOES)**
 - www.caloes.ca.gov
- **California Certified Unified Program Agencies (CalCUPA)**
 - www.calcupa.org
- **Environmental Protection Agency (EPA)**
 - www.epa.gov
- **Official California Legislative Information**
 - www.legislature.ca.gov
- **California Environmental Reporting System (CERS)**
 - <http://cers.calepa.ca.gov>



Any Questions?

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