



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Museum and Cultural Heritage Site Hazards

On Display and Unseen



“To assure safe and healthful working conditions for working men and women of America.”

The Museum of Science, Boston
Experience with the OSHA
Consultation Program

MOS Mission: To inspire a lifelong love in science in Everyone



Museum of Science

Who is your point
of contact for
SAFETY at your
institution?

Environmental
Health & Safety
Manager



Our Journey to Safer Shops

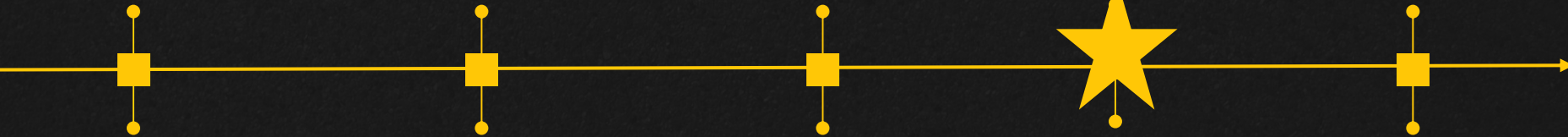
Initial
Contact

Part I
Physical
Safety

Part II
Health
Safety

Mandatory
Leadership in
Safety
Training

Closed Out
the Process



November 2022 –
contacted MA DLS for
Consultation

01/06/2023 - On-site
Physical Safety
Inspection

02/22/2024 –
Completed observed
“serious” violations

04/05/2023 - On-site
Health Safety
Inspection

05/19/2023 –
Completed observed
“serious” violations

05/19/2023

05/24/2023

*General “renewed” institutional
appreciation for Safety resulting
in opportunities for improvement
beyond the REQUIREMENTS*

Why we chose to do this?

- Make a fresh DEDICATED “refocused” commitment to employee safety in our **highest hazard areas**.
- Fresh set of EYES! With a VOICE that was not mine.



Shop Safety

- **Exhibit Shops**
 - Carpentry
 - Metal Fabrication
- **Education**
 - Maker-Space
- **Facilities**
 - Carpentry
 - Plumbing/HVAC
 - Mechanical



Requested Documents for Review

Setting the Stage

- Emergency Action Plan
- Fire Prevention Plan
- Lockout/Tagout
- Forklift Training
- Hazard Communication
- Respiratory Protection
- Hearing Conservation
- Bloodborne Pathogens
- Personal Protective Equipment/ Job Hazard Analysis Process
- OSHA 300 logs – past 5 years



Onsite Visit Agenda



Cross-divisional and at all-level Museum representation

Opening Conference	<ul style="list-style-type: none">• Outline of Expectations• Required written programs and documentation reviewed• Discussed the Museum's general management of safety and health
Inspection of Shops	<ul style="list-style-type: none">• Hazards identified & prioritized• Effects of Hazards explained• Recommended Actions Provided
BREAK for Inspector to Prepare for Close	
Closing Conference	<ul style="list-style-type: none">• Expectations• Identified Hazards Reviewed• Clarifications & Robust Conversation about Recommendations



SERIOUS HAZARDS



Physical

16 violations

- Fall Protection
- Compressed gas
- Machine guarding
- Incompatible accessory (Forklift)
- Electrical
- Storage

Onsite consult- 01/06/2023
Report received- 02/22/2023
Due Date- 03/10/2023



Health

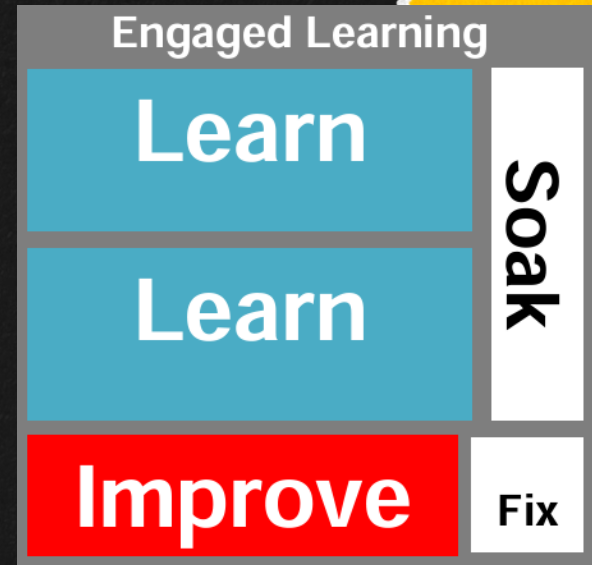
13 violations

- Chemical
- Labeling
- Ventilation
- Housekeeping
- Eyewash/Shower

Onsite consult – 04/05/2023
Report received- 04/10/2023
Due Date- 05/19/2023

“Safety is not the absence of events; safety is the presence of defenses”

—Todd Conklin,
Pre-Accident Investigations: An Introduction to Organizational Safety





SENSING-SAF-START®
(ANTI-AUTOMATIC RESTART PROTECTION)
MODEL #1998, 120-VOLT A.C., 18-AMP

OPERATING INSTRUCTIONS

PRESS THE PUSH BUTTON. IF A "ZZ"
LEFT "ON." TURN
BUTTON

Benefit: Upgraded older machines to current safety requirements





Benefit: Recognizing significant hazards could be present and appreciate alternatives



changes. Safety data sheets identify and classify the hazards of a chemical, and safety data sheets provide information on how to handle and store the chemical. Safety data sheets also provide information on how to handle and store the chemical. Safety data sheets also provide information on how to handle and store the chemical.

1 Identification — includes the product name, manufacturer or distributor's name, and any other name and emergency phone number, recommended use and restrictions on use.

2 Hazard identification — includes all hazards regarding the material and the required label elements.

3 Composition/information on ingredients — includes information on a chemical's ingredients, including a trade secret name.

4 First aid measures — includes advice and steps to take for any and required treatment.

5 Fire-fighting measures — lists suitable extinguishing techniques, equipment, and special hazards from fire.

6 Accidental release measures — lists emergency procedures, protective equipment, proper methods of containment and cleanup.

7 Handling and storage — lists precautions for safe handling and storage, including chemicals that are incompatible with each other.

8 Exposure controls/protection — lists OSHA's Permissible Exposure Limits (PELs), Threshold Limit Values (TLVs), and other exposure controls and occupational exposure limits (OELs).

9 Physical and chemical properties — lists the chemical's key characteristics.

10 Stability and reactivity — lists chemical stability and possibility of hazardous reactions.

11 Toxicological information — includes study results of acute, repeated, and chronic toxicity, effects, chemical measures of toxicity, and other relevant information.

12 Ecological information — provides information to evaluate the environmental impact of the chemical, if it was released to the environment.

13 Disposal considerations — provides guidance on proper disposal practices, recycling or reclamation of the chemical, or its container, and safe handling practices.









14 Transport information — provides guidance on classification information for shipping and transporting of hazardous chemicals by road, air or sea.

15 Regulatory information — identifies the safety, health and environmental regulations specific for the product that is not included elsewhere in the SDS.

16 Other information — includes the date of preparation or last revision.
* Not-mandatory information by other agencies.

PICTOGRAMS and HAZARDS

Pictograms are graphic symbols used to communicate specific information about the hazards of a chemical. The GHS uses a total of nine pictograms, however, OSHA advises the use of eight. The environmental pictogram is not mandatory under 1910.1205, but may be used to provide additional information.



				
HEALTH HAZARD Corrosion Flammable Gases Flammable Liquids Flammable Solids Highly Flammable Gases Highly Flammable Liquids Highly Flammable Solids Oxidizing Gases Oxidizing Liquids Oxidizing Solids Reproductive Toxicity Serious GHS Acute Toxicity Very Serious GHS Acute Toxicity	FLAME Extremely Flammable Highly Flammable Flammable Gas Flammable Liquid Flammable Solid Oxidizing Gas Oxidizing Liquid Oxidizing Solid	EXCLAMATION MARK Irritant Skin Sensitizer Acute Toxicity (H302) Acute Toxicity (H311) Acute Toxicity (H331) Aquatic Acute Toxicity (H400) Aquatic Chronic Toxicity (H410) Hazardous to the Ozone Layer (A600)	GAZ CYLINDER Gaseous Oxidizer Gaseous Corrosive Gaseous Toxic Liquefied Gas Compressed Gas	CORROSION Non-Corrosive Metals Skin Corrosion Eye Corrosion Corrosive to Metals
				
EXPLOSION BOMB Explosive Self-Heating Organic Peroxide	FLAME OVER CIRCLE Corrosive	ENVIRONMENT Aquatic Toxicity Hazard to the Environment	SKULL AND CROSSBONES Acute Toxicity Hazard to Health	

GH S LABELS

The GHS requires that label preparers designate the appropriate hazard warnings. This is accomplished by including the following elements on each label:

- 1 Product Identifier:** This can be, but is not limited to, the chemical name, code number or batch number used to identify the chemical.
- 2 Pictogram:** A visual warning that identifies the hazards of a specific chemical.
- 3 Signal Word:** A single word that indicates the severity of a hazard: **Danger** = more severe; **Warning** = less severe.
- 4 Hazard Statements:** Describe the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.
- 5 Precautionary Statements:** Describe the measures to be taken to minimize or prevent adverse effects resulting from exposure to the hazardous chemical or improper storage or handling.
- 6 Name, Address and Telephone Number:** Identifies the chemical manufacturer, importer or other responsible party.

1 Isopropyl Alcohol

2  

3 DANGER

4 Hazard Statements: Highly flammable. Irritating to skin/respiratory tract. May cause dizziness.

5 Precautionary Statements:

- Avoid breathing in dust.
- Avoid contact with skin.
- Avoid contact with eyes.
- Avoid contact with clothing.
- Wash hands after handling.
- In case of spill, stop up with inert material such as sand, vermiculite, etc. Chemical converter should avoid contact.

6 Name, Address and Telephone Number: In case of fire: Highly flammable. Use water in large amounts, carbon dioxide or alcohol-resistant foam. Use foam extinguishers. Extinguish if safe.

First Aid: Flush face. Remove contaminated clothing. Flush skin with water for at least 15 minutes. Inhalation: Remove to fresh air. Administer breathing if necessary. Get medical attention. Do not induce vomiting. Contact physician.

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BRADY



**Benefits: Education!
Formal, Passive, and Sustained.**



Positive Reinforcements for & Sustainable Recommendations on Core Elements



**Management
Leadership**



**Hazard
Identification and
Assessment**



**Hazard
Prevention and
Control**



**Education and
Training**