LANL Virtual Supplier Forum

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ASM – LANL Supplier Management, Acting Manager

January 19, 2022

LA-UR-21-31379
Agenda

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Topics

(5 min) Introduction

Tamara Greenwood
Supplier Management, Acting Manager

(15 min) “Requirements to bring chemicals on site”

Dina Siegel
OSH-ISH: Industrial Safety & Hygiene

(20 min) Demonstration of Roles and Permissions in Ariba

Michelle Bustos
Supplier Management
Bringing Chemicals on Site at Los Alamos National Laboratory

Dina Siegel
OSH-ISH

January 19, 2022

LA-UR-22-20389
Projects Potentially Involving Hazardous Chemicals

• Construction
• Demolition
• Renovation
• Equipment maintenance, calibration, repair or replacement
What is a hazardous chemical?

Chemical—Any element, compound, or mixture of elements and compounds. A substance that (1) possesses potentially hazardous properties (including, but not limited to, flammability, toxicity, corrosivity, reactivity, and instability); or (2) is included on any Federal, state, or local agency regulatory list; or (3) is associated with a MSDS/SDS.

Hazardous Chemical—A chemical classified as a health hazard or physical hazard.
What is a hazardous chemical, continued

**Health Hazard**—A chemical that is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in 29 CFR 1910.1200(g), Appendix A, *Health Hazard Criteria* having an NFPA rating of 2, 3, or 4 under fire conditions.
What is a hazardous chemical, continued

**Physical Hazard**—A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. See 29 CFR 1910.1200(g), Appendix B, Physical Hazard Criteria.
## Pictograms and Hazards

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flame</th>
<th>Exclamation Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity</td>
<td>• Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides</td>
<td>• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Gases Under Pressure</td>
<td>• Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals</td>
<td>• Explosives • Self-Reactives • Organic Peroxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flame Over Circle</th>
<th>Environment (Non-Mandatory)</th>
<th>Skull and Crossbones</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Oxidizers</td>
<td>• Aquatic Toxicity</td>
<td>• Acute Toxicity (fatal or toxic)</td>
</tr>
</tbody>
</table>
Exhibit F Requirements

F19. Chemical and Hazardous Materials Management

• Describe the mechanism that will be used to maintain a current inventory—for each location—of all hazardous chemicals, the quantities or each, location of storage, and their Safety Data Sheets (SDSs).

• Submit SDSs for all hazardous chemicals brought onto LANL to safetydatasheets@lanl.gov.

• Submit the list of chemicals or other hazardous materials for which subcontractor will be conducting worker exposure assessments and submitting sampling results.

• Submit a written Hazard Communication Program compliant with 29 CFR 1910.1200, including training.
Exhibit F Requirements

F42. Spill Prevention, Reporting, and Response

• Describe the spill prevention, control, and countermeasure actions that will be taken while using and storing chemicals, petroleum, and other products on-site. LANL Best Management Practices must be included as part of the actions.

• Submit an inventory of chemicals, petroleum, and other products to be brought to or stored at any LANL property/facility. Indicate all chemicals that will be stored or used in quantities of 500 pounds or greater.

• Submit a written Spill Prevention Control and Countermeasure Plan (SPCC) for work involving oil-handling at facilities that have an aggregate aboveground storage capacity of 1,320 gallons or more of oil or other petroleum products or coordinate with LANL Environmental Compliance Program via the STR for oil handling work on existing facilities subject to the SPCC Rule.

• Describe the steps to comply with NM Petroleum Storage Tank Regulations, NMAC 20.5 for work on an aboveground storage tank (1,320 – 55,000 gallons) used to contain oil.
Exhibit F Requirements
F52. Exposure Assessment

• Recognizing that the Department of Energy mandates 2016 ACGIH occupational exposure limits (OEL), which may be lower than what is stated in OSHA standards.

• Completing exposure assessments in accordance with procedures and frequencies established OSHA standards (as applicable) and as described in the Exposure Assessment Plan.

• Using an industrial hygienist with KSAs appropriate to the work hazards to develop the plan, provide oversight of exposure assessments, and interpretation of results. Using appropriately trained persons, as applicable, to assist with on-site exposure assessments (e.g., subcontractor ESH technician conducting personal monitoring).

• If requested by LANL, subcontractor should be able to provide evidence of comprehensive programs when required by OSHA chemical-specific standards. For example, 1910.1025 or 1926.62, Lead; 1910.1048, Formaldehyde, etc.
Exhibit F Requirements
F52. Exposure Assessment, continued.

• Submit a written Exposure Assessment Plan that has the names/types of hazards to be evaluated during work; the OEL(s) for each hazard; an initial assessment of worker exposure risk; and whether worker exposure monitoring is required/will be done for each identified hazard.
  - In accordance with the ESH Oversight Plan (F4 Subcontractor ES&H Representative Duties and Responsibilities), list the task, role of industrial hygienist/assistants, and how oversight will be provided. Name(s) and qualifications must be approved before individual(s) start work on the project.
  - Exposure monitoring results within 5-business days of receiving laboratory final results, and any new exposure assessments completed after submission of the initial Exposure Assessment Plan.
Chemical Storage

- Limit chemical storage on site to the quantity necessary to perform the work, and within safety basis and fire protection limits.
  - Liquid hazardous chemicals must be stored so that a spill will not exceed 20 L (5 gallons), as required by the National Fire Protection Association (NFPA 45, Standard on Fire Protection for Laboratories Using Chemicals and NFPA 400, Hazardous Materials Code).
  - Flammable and combustible liquids will be limited to less than the maximum quantities allowed in Tables 10.1.1(a), 10.1.1(b) and 10.1.2 of NFPA 45.
Chemical Transportation

- Movement of hazardous chemicals subject to DOT regulations for public roads and site transportation on nonpublic roads will be done in accordance with P151-1, LANL Packaging and Transportation Program Procedure. Gas must be delivered in a manner compliant with DOT Regulations, 49 CFR 100-199 Transportation—Pipeline and Hazardous Materials Safety Administration, Department of Transportation.
Help/Questions

• Contact your Subcontract Technical Representative. They will get in touch with LANL Subject Matter Experts to answer your questions.

Thank you!
Questions?
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Demonstration of Roles and Permissions in Ariba

Michelle Bustos
ASM-SM