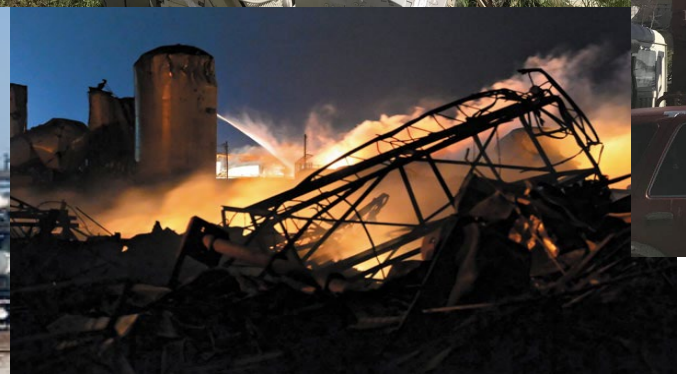
EPA EMERGENCY PREPAREDNESS AND RESPONSE
GUAM SERC/LEPC UPDATE
April 25, 2019



FIRST A LITTLE BACKGROUND CONTEXT….

- West Fertilizer Company | West, Texas | April 17, 2013
  - 15 fatalities and 260+ injuries
  - $230 million in insurance-related losses
  - $16 million spent on Federal disaster assistance
  - $1 million insurance policy held by West Fertilizer Company
- Chevron Refinery | Richmond, California | August 6, 2012
  - 15,000 people sought medical treatment
  - $2 million in fines and restitution
  - $447 million in increased gas prices passed onto consumers
- Deepwater Horizon|Gulf of Mexico| April 20, 2010
  - 11 workers killed, 17 workers injured
  - $21 billion in settlements
  - 4 million barrels of oil spilled

Source: CSB Business Case for Safety
http://www.idevmail.net/assets/chemsafety/CSB_Business_Case_for_Safety_01.pdf

A Persistent Threat….

One dead after ammonia leak at Northampton brewery – A man in his 40s is dead and more than 20 people remain in hospital, one in serious condition, after a gas leak at Carlsberg factory site. The Guardian, November 9, 2016

Authorities said one worker died after an ammonia leak at the Stavis Seafoods Warehouse Wednesday night. Boston Globe, 3/24/16

Millard refrigerated paid a $3 million penalty for a 32,000 pound anhydrous ammonia release in 2010 that sickened 152 people in Theodore Alabama. EPA, 6/2/15

Chemical Safety Board Deploying to Site of Chemical Release in Atchison, Kansas An investigative team from CSB was deployed to the scene of a chemical release that led to a shelter-in-er for thousands of residents and at least 85 members of the public seeking medical attention 10/24/16

Death due to an accidental anhydrous ammonia release onboard a tender boat docked in Sitka, Alaska. Alaska DPH, 7/17/13

Man killed by anhydrous ammonia leak A 59-year-old Nebraska man died Monday night after being exposed to a cloud of anhydrous ammonia that leaked from a pipeline north of Tekamah. Lincoln Journal Star, Oct 18, 2016

Cape Cod cold storage and ice manufacturing paid $225,000 to settle anhydrous ammonia violations
EPA, 6/2/15

U.S. Chemical Safety Board Finds Multiple Safety Deficiencies Led to February 2015 Explosion and Serious Near Miss at the Exxon Mobil Refinery in Torrance, California

Environmental Safety

- **Planning and Preparedness**
  - 1st Responder and Community Right to Know
  - SERCs and LEPCs
  - Tier II Reporting and Data Dissemination
  - Local Emergency Plans and Facility Plans
- **Prevention**
  - Compliance Assistance
  - Inspections
- **Response**
  - EPA On-Scene Coordinators
  - Regional Response Team
  - Accidental Release Notification
  - Training, Communication, Coordination w/Industry, First Responders, Emergency Management Agencies

Existing Regulatory Framework

- **Emergency Planning and Community Right-to-know (EPCRA) requirements** Local emergency planning and preparedness, emergency release notification, community right-to-know: provision of hazardous chemical storage inventory and toxic chemical release inventory to the community and first responders

- **CAA Section 112(r)(1) general duty clause**-Facility owner/operators have a general duty to prevent and minimize releases

- **CAA Section 112(r)(7) Risk Management Program**

- **Territorial/State/local requirements**

Key Provisions of EPCRA

- **Emergency Response Planning**
  - Sec. 301 Formation of SERCs / LEPCs
  - Sec. 302 Substances & facilities covered & notification
  - Sec. 303 Comprehensive Emergency Response Plans
- **Emergency Release Reporting**
  - Sec. 304 / CERCLA 103 Emergency Release Notification
- **Hazardous Chemical Inventory Reporting**
  - Sec. 311 (M)SDS
  - Sec. 312 Emergency & Hazardous Chemical Inventory Reports
- **Toxics Release Inventory**
  - Sec. 313 Form R

Section 301

Establishment of State Commissions, Planning Districts & Local Committees

SERC - State Emergency Response Commissions

TERC - Tribal Emergency Response Commissions

LEPC - Local Emergency Planning Committees

LEPCs include representatives from local government, law enforcement, civil defense, fire fighting, first aid, health, media, community groups, facilities and more

Section 302 / 303

Facility Planning / Emergency Response Plans

- Facility Planning - Establish and identify a list of substances and gather information on facilities of most concern for emergency planning and response
- Section 303 - Emergency Response Plans must:
  - Identify facilities and transportation routes of extremely hazardous substances
  - Describe emergency response procedures, on and off site
  - Designate a community coordinator and facility coordinator(s) to implement the plan
  - Outline emergency notification procedures
  - Describe how to determine the probable affected area and population by releases
  - Describe local emergency equipment and facilities and the persons responsible for them
  - Outline evacuation plans
  - Provide a training program for emergency responders (including schedules)
  - Provide methods and schedules for exercising emergency response plans

Common EXTREMELY HAZARDOUS SUBSTANCES

EHS Name	Threshold Planning Quantity (TPQ)
Ammonia	500 pounds
Chlorine	100 pounds
Sulfuric Acid	1,000 pounds*
Sulfur Dioxide	500 pounds

The TPQ for Sulfuric Acid is 1,000 pounds.

For EPCRA, "have present at any one time an EHS in quantity equal to or greater than TPQ or 500 pounds, whichever is less."

*A rough estimate to calculate sulfuric acid in a battery is to use 18% of the battery's weight as sulfuric acid (with 70% of its weight being lead).

A typical electric lift truck battery can easily weigh 2,400 lbs., therefore, it could contain as much as 432 lbs. of sulfuric acid and as much as 1,690 lbs. of lead.

EPCRA 304 / CERCLA 103

Emergency Release Notifications

- EPA has the authority to investigate releases
- What Chemicals need to be reported
  - EPCRA 304: Release of an EHS in quantity equal to or greater than reportable quantity (RQ) & follow-up report
  - CERCLA 103: Release of a CERCLA hazardous substance in quantity equal to or greater than reportable quantity (RQ)
- Who is responsible for the Release Notification
  - Either the owner or operator of a facility gives notice after a release.
  - Under EPCRA Section 304 both the owner and operator are responsible if no notification is provided.
- Exemptions
  - Releases which remain within facility boundaries
  - Continuous releases
  - Federally permitted releases

EPCRA 304 / CERCLA 103 Emergency Release Notifications
Call Your Local Responders First

- Don’t wait until you know you’ve exceeded a threshold to call
- Information helps responders
  - Know how to respond if they get calls from the public
  - Start preparing for deployment if an incident where to escalate

Clean Air Act Amendments (1990)
Section 112(r)
prevent them all or stop them small

- CAA 112(r)(1) established **General Duty Clause**
- CAA 112(r)(7) **Risk Management Program** required EPA to:
  - 77 toxic & 63 flammable substances
  - Prevent, detect & respond to accidental releases
  - Manage risk management plans (RMPs) submitted by facilities & to make plans available to government officials & public
- Also required finalization of OSHA's proposed Process Safety Management Standard

General Duty Clause

Owners and operators of facilities utilizing hazardous substances have a **General Duty** to:

- Identify hazards that may result from accidental releases using appropriate hazard assessment techniques,
- Design and maintain a safe facility taking any necessary steps to prevent releases, and
- Minimize the consequences of accidental releases that do occur.
    - Note - Not limited to specific list of chemicals or threshold quantities

Accident Prevention Program
PSM & RMP Program Level 3

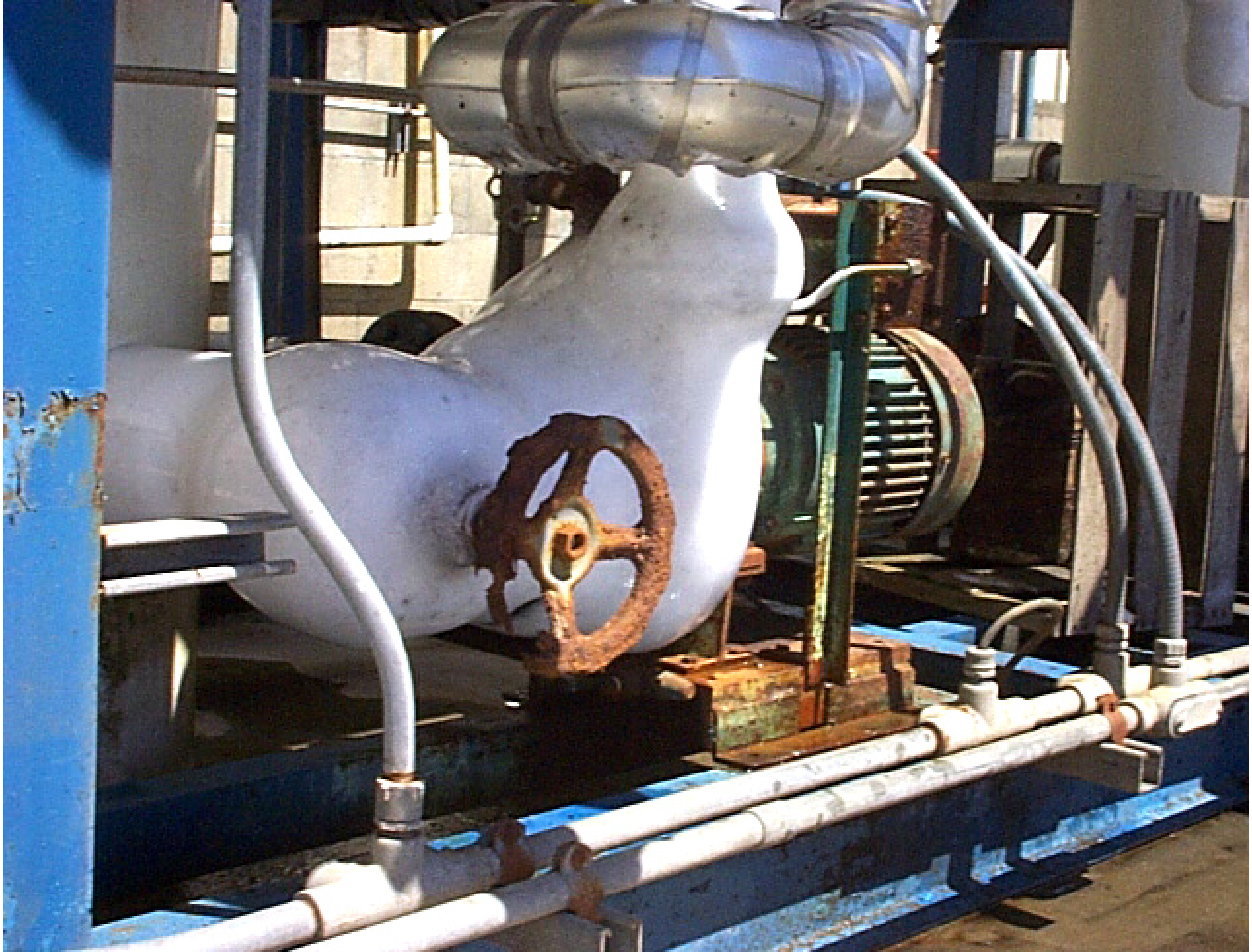
- Process safety information
- Process hazard analysis
- Operating procedures
- Training
- Mechanical integrity
- Management of change
- Pre-startup review
- Compliance audits
- Incident Investigations
- Employee participation
- Hot work permit
- Contractor management

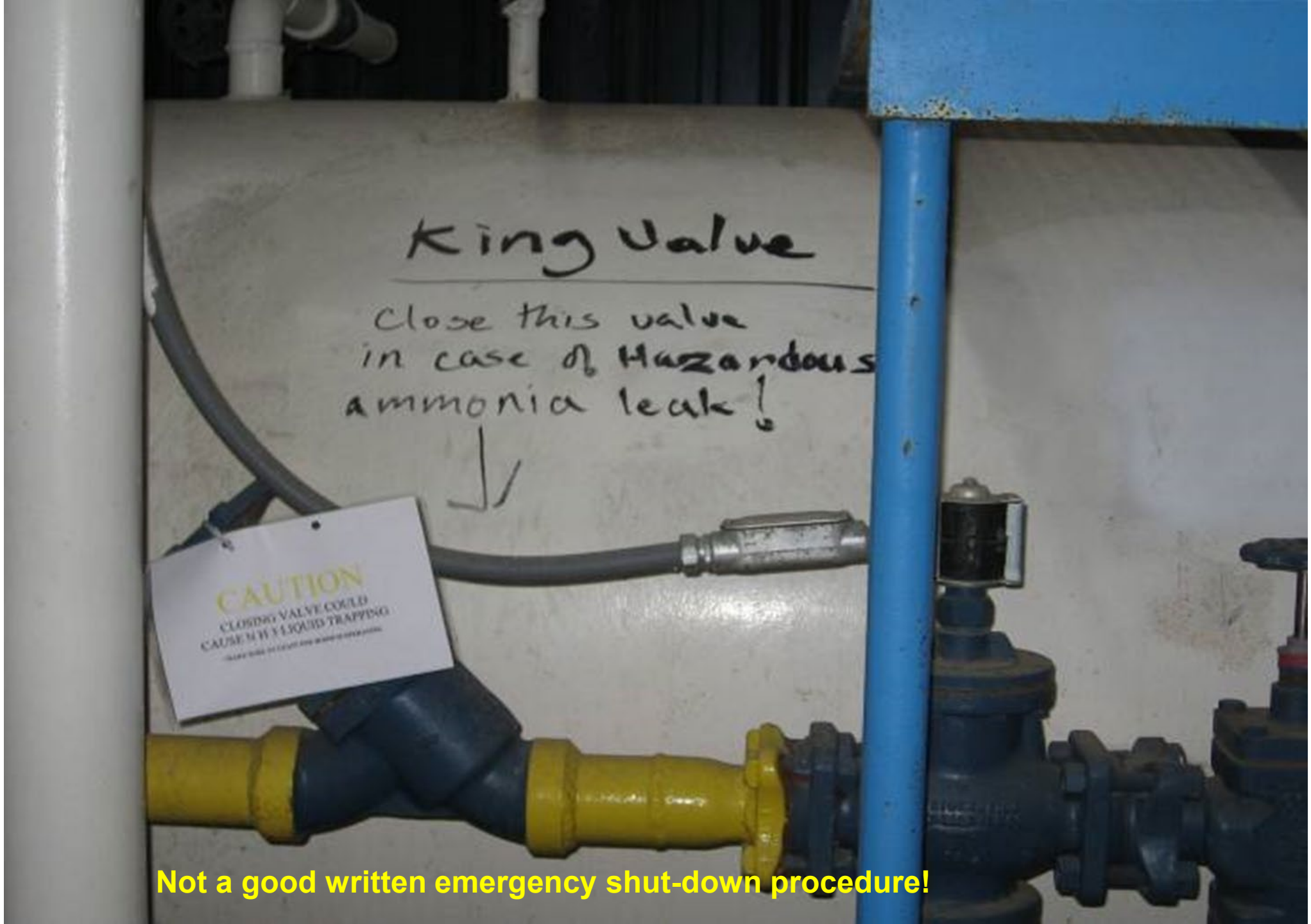
Highest Frequency Problems NH3 Refrigeration Inadequately developed/implemented

- Equipment not compliant
- Standard Operating procedures
- Emergency response and planning
- Process Hazards Analysis findings not resolved
- Annual Inspections and/or 5-year MI audits
- Ventilation
- Relief system design
- Component labeling
- Mechanical Integrity: Pressure Relief Valves, Corrosion

The same mistakes are repeated…

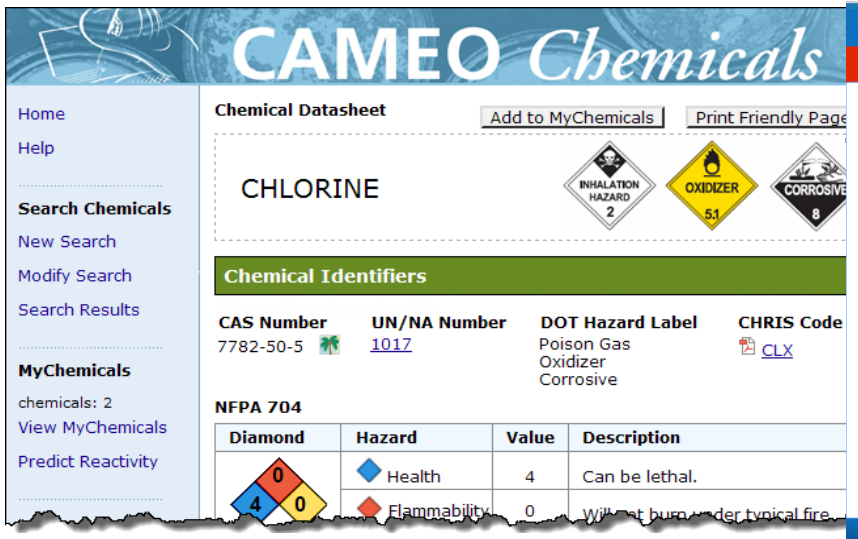
When the deficiencies are managed (prevented and mitigated), higher levels of safety and sustainability will occur.

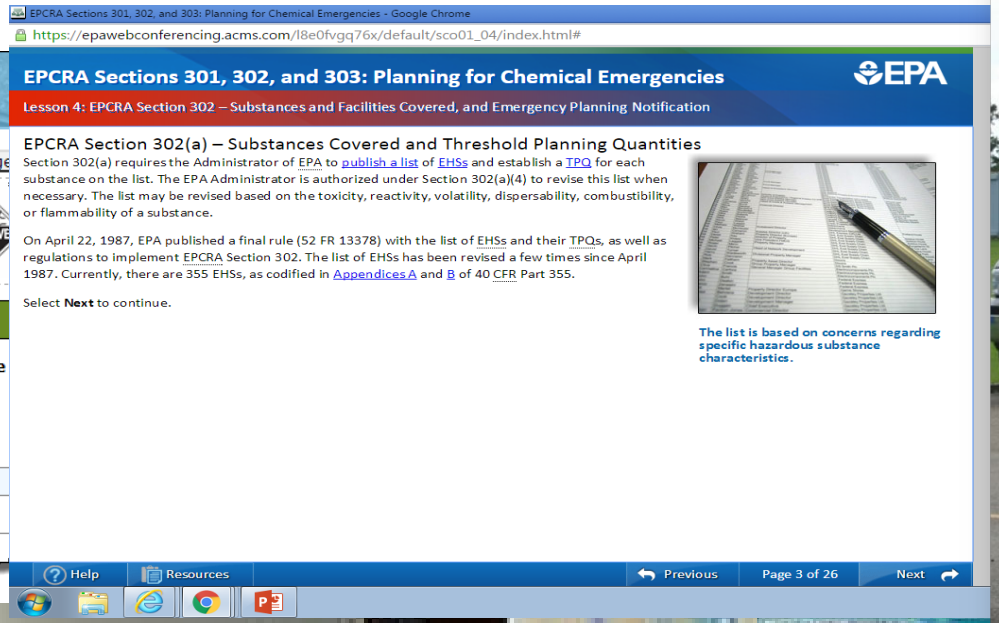




Not a good written emergency shut-down procedure!

Strengthening Community Planning, Preparedness, Prevention & Response





EPA REGION 9
(PACIFIC SOUTHWEST)

EPA REGION 9 EXERCISE PROGRAM

Propane
Ammonia
Chlorine

Exercising Facility Plans & Local Emergency Plans

AMMONIA SAFETY & TRAINING INSTITUTE
ASTI IS A 501(c)(3) NON-PROFIT

THE FIRST 30 MINUTES

CONTROL OPTIONS PPS

- Pre-Emergency
- CAN Report
- Critical Task
- EAP to ERP
- Control/Contain

CHECKLIST GUIDANCE PDF

- 30-Minute Plan
- Master Maps
- Playbooks
- E.R. Cards
- Clipboard

INDUSTRY
- Profit/Production
- Risk Management
- Process Safety
- Regulatory Compliance
- Root Cause Mitigations

PMP BRACE

GOVERNMENT
- Minimum Standards
- Health and Safety
- Community Safety
- Environmental Preservation
- Sustainability
- Emergency Planning

PUBLIC SAFETY
First Responder - Operations
Command and control
Special teams and equipment
Engage regional resources
Link to state and federal support

HAZARDS | **THREATS** | **RISKS**

Prevent Them All or Stop Them Small™

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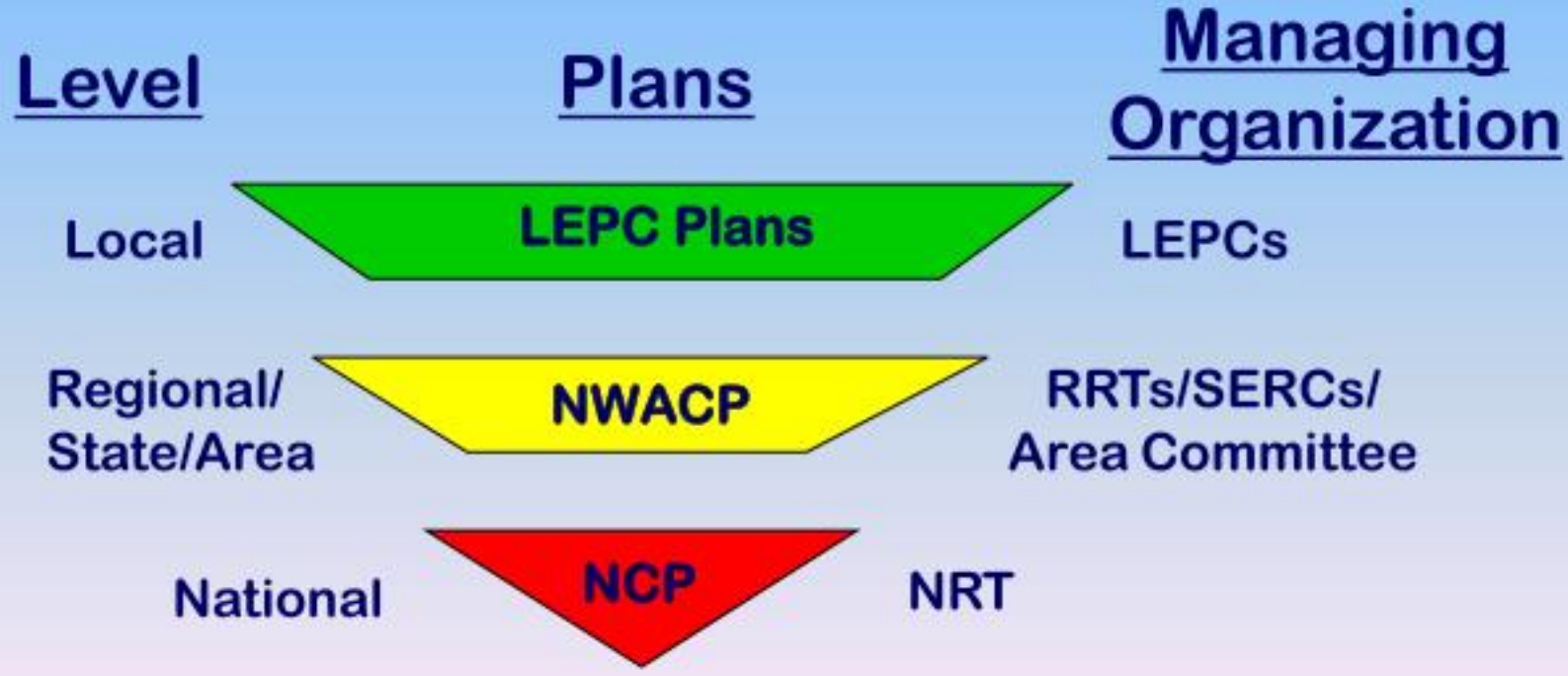
POTENTIAL TRAINING OPPORTUNITIES
A FEW EXAMPLES

- Facility Training
- Tabletop Exercises
- First Responder Awareness
- First Responder Operations
- Traffic Incident Management System
- Incident Command System
- HazMat Tech Refresher
- Hazard ID and Categorization
- FEMA, USCG, USDA, DOI Training

Preparedness Components of the National Response System



National Contingency Plan (NCP) - Est. 1968

- Provides comprehensive system of accident reporting, spill containment, and cleanup
- Establishes national response team & regional response coordinators
- Focuses on oil spills

1972 NATIONAL CONTINGENCY PLAN UPATES

- The 1972 revisions to the Clean Water Act (CWA) required the NCP to **address releases of hazardous substances, as well as oil spills**

- Additionally, in 1972, **the NCP was revised to establish the National Response System (NRS) with its 3 primary core components: the National Response Team (NRT), the RRTs, and On-Scene Coordinators (OSCs)**

The National Response System (NRS)

- The NRS is divided into local, regional, and national organizational levels.
- Participants include federal, state, local, and private sector agencies and organizations, with interests in or responsibilities for oil and hazardous materials emergencies.
- The NRT and RRTs can access key assets and capabilities of the 15 member agencies of the NRS to support federal agencies, states, and local responders in their efforts to mitigate the danger to public health and the environment from a hazardous release.

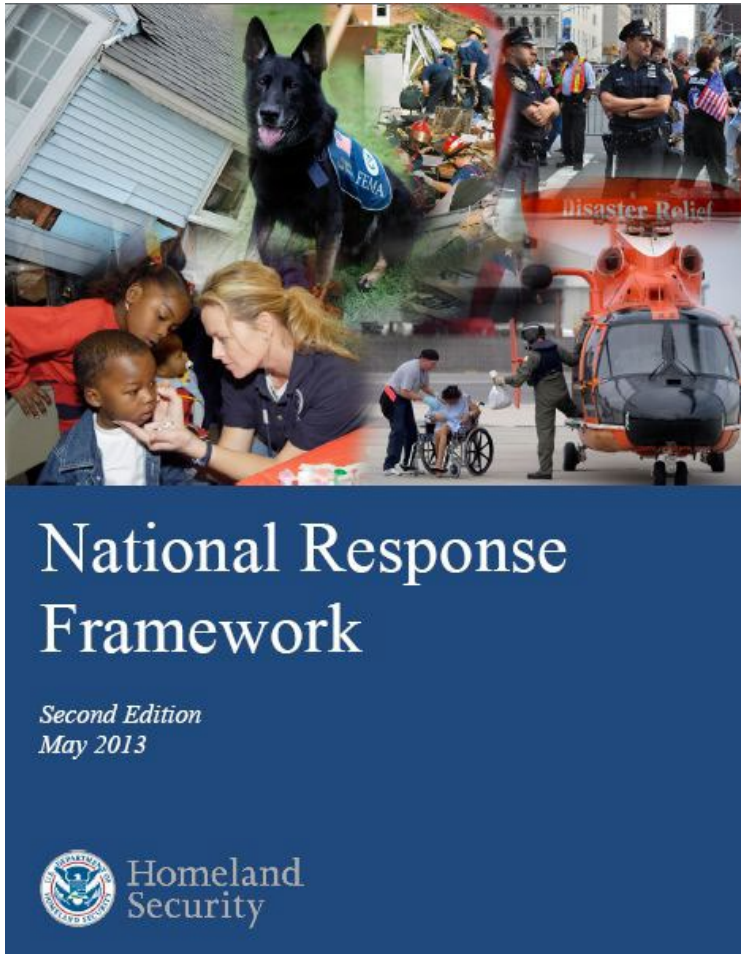
The National Response System (NRS)

The 15 federal agencies of the NRS can provide solutions for effective response to a wide range of pollution incidents, both foreign and domestic.

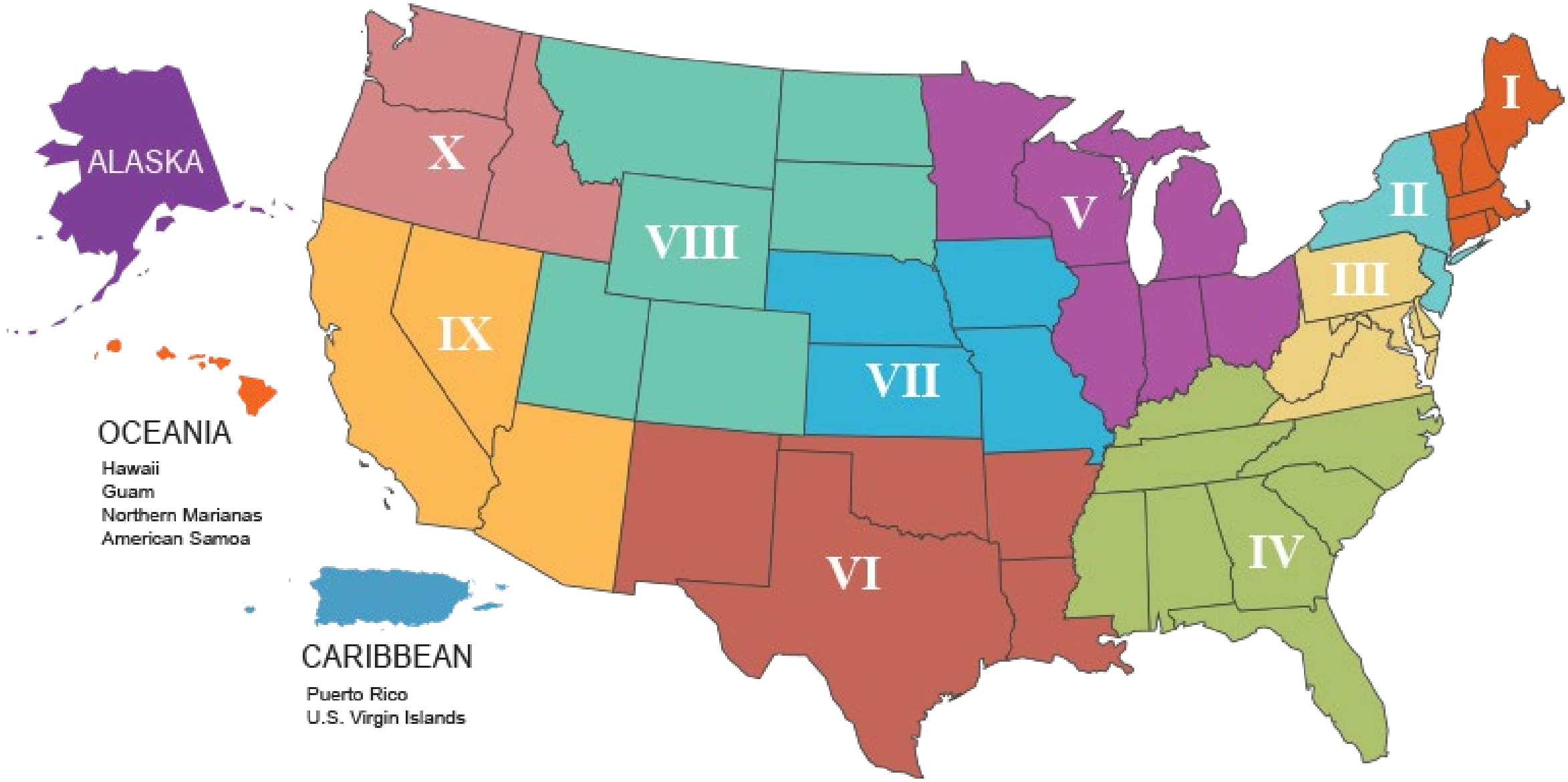
In addition, each agency can provide access to technical assistance, scientific expertise, logistical support, or coordination capabilities associated with its specific responsibilities and expertise.

The National Response System (NRS) - NRF

- When hazardous releases and oil spills are determined to be "Nationally Significant Incidents" under the NCP, the National Response Framework (NRF) is implemented.
- Components of the NRS, such as the National Response Team (NRT), are also activated.
- The NRF provides coordinating mechanisms to bring in additional agencies and components as they are needed.



REGIONAL RESPONSE TEAMS



Oceania Regional Response Team (ORRT)

EPA co-chairs the ORRT, with the USCG and provides:

- pre-designated OSCs for releases and discharges occurring in the inland zone
- expertise on human health and ecological effects of oil discharges or releases of hazardous substances, pollutants, or contaminants; ecological and human health risk assessment methods; and environmental pollution control techniques.
- legal expertise on the interpretation of CERCLA and other environmental statutes.

NEXT ORRT MEETING: Guam, Aug 2019?

- Aiming to combine training and potential tabletop exercises the same week as the ORRT meeting.

- We will be soliciting input on:
  - Focus/Theme for the meeting
  - Training Ideas
  - Draft Agenda

On-Scene Coordinators (OSCs)

- OSC is the pre-designated federal official, directing response efforts, and coordinating other efforts, at oil or hazardous substance incidents in accordance with executive powers delegated through law, regulation, executive orders and agency delegations.
- The NCP charges the OSC with the responsibility for ensuring immediate and effective response to a discharge or release.
- Under the NRS, a major duty of the OSC is to coordinate with state and local response organizations.

SUMMARY

- Territorial and Local Capacity is critical.
- Planning and preparedness and fundamental training for all constituencies is critical to make sure that everyone is in synch and ready for a variety of incidents.
- There is a system in place to provide Federal support for training and exercises and to assist with response to incidents that exceed Territorial and Local capacity.
- Participate in SERC/LEPC and align with Oceania RRT.

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Report oil or chemical spills

National Response Center: 800.424.8802

Region IX Duty Officer: 800.300.2193