Mercury Storage in Nevada

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Mercury Storage in Nevada

- National Defense Stockpile
- Transported from three locations across the country to Hawthorne, Nevada (HWAD)
- 4,436 metric tons (128,660 flasks)
- Mercury is to be stored for at least 40 years
- Much of this mercury has already been in storage for more than 40 years

- Nevada response to shipping the defense Hg stockpile to Hawthorne
  - Developed statutory and regulatory programs to ensure safe transportation, handling and storage (SB118 and modifying the CAPP to include mercury)

SB118

- Adopted during the 2007 legislative session
- Provided the statutory basis for continued oversight
- Required regulatory oversight for any mercury stored in quantities greater than 200,000 lbs under the CAPP

CAPP Program

- Proactive program that stresses hazard identification and accident prevention
- Applies to facilities that have specific, highly hazardous substances in quantities above defined thresholds.
- Three types of requirements
  - Accident prevention
  - Emergency response
  - Public right-to-know

Accident Prevention

- Evaluate and mitigate potential hazards
- Understand design parameters and operate within appropriate limits
- Prepare comprehensive operating procedures
- Provide operator training
- Provide adequate maintenance to prevent system failures

Emergency Response

- Develop action plans that address potential emergency situations
- Coordinate with local emergency response organizations
- Ensure that responders are prepared to deal with emergencies

Public Right-to-Know

- Except for trade secret information, all information required under this program is available to the public, including inspection reports

CAPP Regulations

- Revised to include Hg in September 2006
- Established a threshold of 200,000 lbs that would be specific to the national defense Hg stockpile at Hawthorne

Where are we today?

- The process hazard analysis has been drafted and is being reviewed by Hawthorne
- Many of the recommendations are already being implemented
- The necessary HAZMAT equipment and HAZMAT training are in place
- Procedures for monitoring and reflasking are still being developed
- Currently no reflasking equipment on site

Where are we today?

- Shipments have not yet begun
- NV DEP is working with DLA to address outstanding issues before shipment can begin
  - Fire suppression system
  - Flask integrity (both short and long term)

Fire Suppression

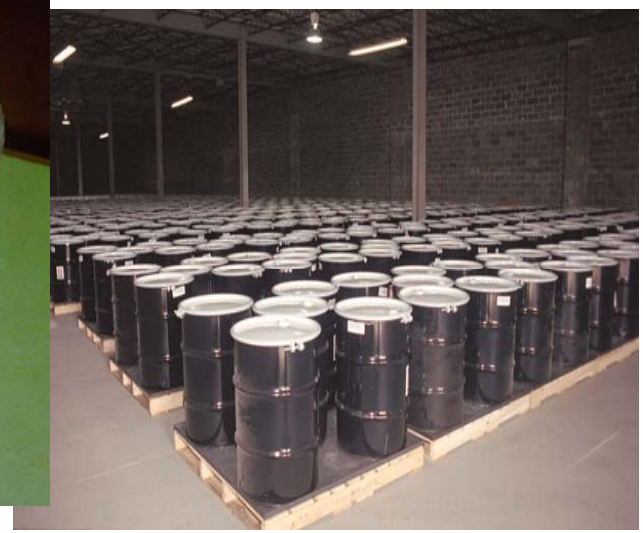
- Problem: Type of system, cost and timing
- CO_2 flood system has recently been accepted by the base fire department
- Installation may not be complete before shipments begin
- NDEP worked with Hawthorne on alternatives to be used in the short term
- Increased surveillance will be in place for any buildings where fire suppression system has yet to be installed and mercury is being stored (i.e. heat and smoke sensors)

Flask Integrity

- NV expressed concern over the integrity of the flasks that would be shipped
- Several flask leaks had been identified in the past, but no specific root cause had been identified
- Possible causes included damage during transport, faulty flask welding, inadequate repackaging, and corrosion of the gaskets
- NV questioned whether the containers are appropriate for long term storage

Flask Integrity

- To address these concerns, prior to shipment DLA has agreed to:
  - Open and sample every overpack container
  - Check for leaks
  - Install new gaskets
  - Seal each flask
  - Re-pack
- Evaluate long-term storage options



Flask and Overpack

Flask Integrity (cont)

- The Air Force Center for Environmental Excellence has prepared a protocol for NDEP review on the short term issues
- Oak Ridge National Labs is evaluating long-term storage
- Timing – NV review/comment by end of July
- Once the protocol has been approved, NDEP will be able to observe all pre-shipping activities

Once it Arrives. . .

- Off-loaded
- Stored in at least 14 buildings
  - Equipped with heat and smoke sensors
  - Floor liners in each building
  - Each building is grounded

Facility Requirements

- Hawthorne will be implementing all of the recommendations of the PHA
- On-site fire/hazmat crew
- All staff will be trained in emergency response and mercury sampling and repackaging

NDEP Responsibilities

- Working with Hawthorne on the PHA to identify potential hazards and mitigation measures
- Validate completion of the procedures and training prior to shipment and issue operating permit
- Auditing all of the CAPP requirements at least annually