



U.S. EPA

REGION VIII PREPAREDNESS

PARatus

Volume IV No. 3 Quarterly Newsletter 2013

Unplanned Experiments



Chemical Incidents in Schools: Are You Prepared for "Unplanned Experiments?"

Unexpected chemical releases, whether in schools or elsewhere, rarely occur on a convenient day or time. The federal Agency for Toxic Substances and Disease Registry (ATSDR) conducts national public health surveillance of chemical incidents through its Hazardous Substances Emergency Events Surveillance (HSEES) system. ATSDR conducted an analysis of HSEES data for 2002-2007.

During that period, 423 chemical incidents in elementary and secondary schools were reported by 15 participating states. Mercury was the most common chemical released. The analysis found that 62% of reported chemical incidents at elementary and secondary schools resulted from human error (i.e., mistakes in the use or handling of a substance), and 30% of incidents resulted in at least one acute injury. Proper chemical use and management (e.g., keeping an inventory and properly storing, labeling, and disposing of chemicals) is essential to protect school building occupants. Additional education directed at raising awareness of the possible problems and providing resources to reduce the risk is needed to ensure that schools are safe from potential dangers posed by hazardous chemicals.

The consequences for these releases in schools can be great and may be carried over to the home environment. Additional monetary costs and time lost in careful cleanup of these unexpected chemical events cannot be properly accounted as these types of incidents in schools are probably under-reported. Failure to report may be due, in part, to the small quantities of chemicals involved (for example the small amount of mercury in a thermometer).

The common factors that are often the underlying causes of chemical incidents and injuries in schools:

- Improper chemical storage
- Unsafe handling practices
- Improper application of standard workplace procedures
- Equipment failure (i.e., broken containers, hoses, or pipes).

Prepare Ahead to Prevent Chemical Incidents and Exposures

These four strategies and prevention practices may control many preventable chemical events.

1. Identify places where chemical health and safety incidents might occur on your school's campus such as:
 - Store rooms
 - Custodial closets
 - Kitchens
 - Nurses' offices
 - Swimming pools
 - Science and art classrooms
 - Motor pools (bus barns)
 - Vocational and agricultural shops

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Partner Corner

Want more
localized info?
Check out these
sites:

- [Montana](#)
- [Wyoming](#)
- [North Dakota](#)
- [South Dakota](#)
- [Utah](#)
- [Colorado](#)
- [Denver](#)

Unplanned Experiments (cont.)



2. Develop and follow appropriate health and safety training and worksite practices for staff/students who use chemicals:

- Store hazardous chemicals securely, in well-ventilated and lit areas; and, in tightly closed, properly labeled containers.
- Avoid the combination of incompatible chemicals (For example, do not store alphabetically).
- Avoid the use of flammable chemicals near open ignition sources (i.e. furnaces and space heaters) or damaged electrical outlets and wiring.
- Perform periodic maintenance checks on vessels and equipment that contain hazardous chemicals (Look for unexpected crystallization in bottles, or bulging containers).

3. Develop and distribute campus-specific contingency plans; then, train staff and students on emergency practices and procedures for chemical events, such as:

- Practice evacuation and "shelter-in-place" drills with faculty
- Compile chemical event notebooks with emergency checklists and phone contacts, chemical inventories and material safety data sheets (MSDS).
- Designate lead staff to serve as monitors who would be responsible for making sure everyone under their charge follows the appropriate evacuation procedures.

4. Develop, communicate and implement preventative policies and practices with chemicals on school grounds to:

- Ensure that proper ventilation practices are considered when chemicals like pesticides, paints, and floor strippers are applied.
- Identify and properly dispose of waste or derelict chemicals that have been in storage for an unknown period of time.
- Enforce policies on improper possession or use of chemicals when observed on school grounds; common items may include liquid mercury, pepper spray, or cans of spray paint.
- Substitute equipment that does not use mercury when replacement purchases are made; such as thermometers, blood pressure cuffs, or electrical equipment.

Another important factor with school safety is the potential for chemical/flammable risks outside of the school. School administrators should consider information that is available through GIS mapping tools and Tier II reports that would contain important information to assess potential environmental threats to schools. For more information on accessing GIS mapping tools, please contact one of the EPA Region 8 Preparedness staff. (contact information found on pg. 8). For more information on accessing Tier II reports, please contact the State Emergency Response Commission (SERC) contact for your state. You can find out who your SERC contact is at http://www.epa.gov/oem/content/epcra/serc_contacts.htm.

Resources:

Additional information and resource materials for schools are available from the federal government's Environmental Protection Agency, such as the Indoor Air Quality Tools for Schools Kit <http://www.epa.gov/schools/toolkit.html> or the Healthy School Environments Assessment Tool www.epa.gov/schools/healthyseat

SPCC Revised Guidance



Revised Oil Spill Prevention, Control, and Countermeasure (SPCC) Guidance for Regional Inspectors

In August 2013, EPA revised the *SPCC Guidance for Regional Inspectors* which is intended to assist regional inspectors in reviewing a facility's implementation of the Spill Prevention, Control, and Countermeasure (SPCC) rule at [40 CFR part 112](#). This guidance document is also available to owners and operators of facilities that may be subject to the requirements of the SPCC rule, and the general public on how EPA intends the SPCC rule to be implemented. The document is designed to provide a consistent national policy on several SPCC-related issues.

This guidance is a living document and will be revised, as necessary, to reflect any relevant regulatory amendments. Additionally, EPA welcomes comments from the regulated community and the public on the guidance. For further information:

[Webinars on the revisions to the SPCC Guidance for Regional Inspectors](#)

[How do I comment on the Spill Prevention, Control, and Countermeasure \(SPCC\) Guidance for Regional Inspectors?](#)

[Disclaimer](#)

[Using the Guidance](#)

[Guidance Content](#)

Prepare Pueblo Launch



September was National Preparedness month...

... and what a great time to launch the exciting new "Prepare Pueblo" campaign!

Over the next year the Colorado Chemical Stockpile Emergency Preparedness Program (CSEPP) PIOs will use a combination of paid media advertising (in theatres, on radio and billboards, in

the news paper, and the chamber of commerce and direct mail pieces), social media, and traditional outreach tactics (information booths at events, presentations, news releases, etc.) to encourage Pueblo, Colorado to prepare for emergencies **at home, at school, and at work**. The over arching theme throughout the next year will be **"It starts with you!"**

The campaign kicks off with a with a simple message.... **"Talk."**

Please take a moment to checkout and bookmark www.PreparePueblo.com

"Like" us on Facebook. ([click here](#))

"Follow" us on Twitter. ([click here](#))

Congratulations to team Colorado CSEPP PIOs (**Lisa Shorter**, Pueblo County Emergency Services Bureau; **Micki Trost**, Colorado Division of Homeland Security and Emergency Management; and **Chuck Sprague**, Pueblo Chemical Depot) for your hard work and dedication to preparing your Whole Community! They challenge you, no matter where you are, to have that family talk because. . .

"It starts with you!"

Lessons Learned... Ammonium Nitrate

EPA, OSHA and ATF Provide Information and Lessons Learned About the Safe Storage, Handling and Management of Ammonium Nitrate

The U.S. Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA) and the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), have issued a chemical advisory that provides information on the hazards of ammonium nitrate (AN) storage, handling and management. This action supports the goals of President Obama's August 2013 executive order on "Improving Chemical Facility Safety and Security." The advisory provides lessons learned for facility owners and operators, emergency planners and first responders from recent incidents, including the explosion in West, Texas, involving AN in order to prevent similar incidents.

"Understanding and minimizing the hazards posed by solid ammonium nitrate used in fertilizers is a key component of this advisory," said Mathy Stanislaus, assistant administrator for EPA's Office of Solid Waste and Emergency Response. "In addition, the community emergency planning and response information in this document provides a valuable tool that will help protect workers, first responders and communities throughout the country."

"Ammonium nitrate can be very dangerous, and it's imperative that employers, workers and first responders all understand the hazards," said Dr. David Michaels, Assistant Secretary of Labor for Occupational Safety and Health. "With this understanding, together they can control these hazards and save lives and limbs."

"ATF National Response Team works closely with other federal, state and local emergency personnel responding to incidents, to include ammonium nitrate explosions," says Arthur Herbert, ATF Assistant Director for the Office of Enforcement Programs and Services. "ATF maintains an open dialogue with first responders of the possible hazards of ammonium nitrate and is committed to working towards development of best practices in collaboration with our federal partners, industry members and their association representatives."

The advisory takes steps now to reduce the risks associated with AN to workers, first responders and communities. It is part of an ongoing coordinated federal government effort to improve chemical safety with regards to AN and includes information on ensuring proper building design, storage containers and fire protection at their locations; learning from other accidents; and knowing and understanding the hazards that exist when developing their emergency response plans.

Earlier this month, President Obama directed the federal government to improve operational coordination with state and local partners; enhance federal agency coordination and information sharing; modernize policies, regulations and standards; and work with stakeholders to identify best practices to improve chemical safety.

President Obama established the Chemical Facility Safety and Security Working Group. To this end, this advisory was developed by working group members and was facilitated by the working group process.

View the advisory and more information on EPA's risk management program: <http://www.epa.gov/emergencies/content/rmp/index.htm>

View President Obama's Executive Order: <http://www.whitehouse.gov/the-press-office/2013/08/01/executive-order-improving-chemical-facility-safety-and-security>



Training & Exercises

Region 8 creates an annual Training and Exercise Plan (TEP) to address our current priorities and methodologies in training and exercise (T&E) activities. A schedule listing our regional trainings and exercises is developed for each year showing the type of T&E, location, time, sponsor, participants and regional priorities being addressed (see attached T&E Schedule).

We are always open to assist and participate in exercises that relate to or have a component of our ESF 10 responsibilities including: chemical, biological, radiological, nuclear or explosive (CBRNE) events, as well as other hazardous materials incidents.

Please contact Luke Chavez (chavez.luke@epa.gov, 320-312-6512) - Exercise Coordinator if you have any questions regarding EPA Region 8 T&E or have an exercise that we may assist you in. [Planning and Exercise Schedule](#)

Isotope Identifier Training Class



Register for one of our [upcoming seminars](#) on the SAM 940 Isotope Identifier, a fast and accurate radionuclide detection tool for radiation safety and health physics professionals. The SAM 940 training course provides attendees with a comprehensive understanding of the principles and techniques involved in radiation detection and isotope identification. The workshop includes theory and hands on use of the Berkeley Nucleonics Model SAM 940 with NaI (Sodium Iodide) and CeBr (Cerium Bromide) detection materials.

Expanded Topics include -

- *Faster Isotope Identification with Hysterisis
- *Considering Neutron Detectors
- *Gamma Detection with NaI vs Bromides
- *Transferring Data to Reachback
- *WiFi, Streaming, Logging, Application Specific Tools

Washington DC Area	Nov 12, 2013
Los Angeles, CA	Nov 14, 2013
San Francisco, CA	Dec 3, 2013
Princeton, NJ	Jan 14, 2014
Houston, TX	Jan 16, 2014
Baton Rouge, LA	Feb 13, 2014
Salt Lake City, UT	April 11, 2014

EPA Region 8 Presents RMP Ag Ammonia Training

The focus of this training is program 2 RMP facilities reporting for anhydrous ammonia.

EPA CAA 112(r)(7) RMP Ag Ammonia Webinar:

<http://www.epa.gov/region8/agammonia/player.html>

EPA and Community Avert a Potential Disaster



A potential disaster was avoided as a result of an attentive home owner who recognized the potential negative consequences of the surface application of a rodenticide in their Elkhorn Ranch Subdivision of Elbert County, Colorado. The green colored toxic rodenticide (oats laced with chlorophacinone) was applied liberally around more than 1,000 prairie dog holes in the subdivision and remained openly accessible to a vulnerable population including children, pets and other wildlife.

When the Colorado Department of Agriculture called the EPA Emergency Response center around 4 p.m. on Friday, April 12, OSC Pete Stevenson alerted Response On-Scene Coordinator Duc Nguyen and the

Federal Insecticide, Fungicide & Rodenticide Act Program (FIFRA). FIFRA put together information sheets detailing the specifics on how to safely apply the rodenticide and provided fact sheets for distribution to homeowners to inform and alert them to the danger of the poisonous bait then lying openly on the ground.

EPA called a meeting with contractors, Colorado Department of Agriculture, and the Elbert County Sheriff's Department for 8:00 a.m. on April 13th at the site to plan community outreach efforts. The Elkhorn Ranch Subdivision is a multi-acre housing development about 10 miles east of Parker, CO. Homes are built on small acreages; approximately 20% or 80 acres of the subdivision is currently developed.

The Colorado Department of Agriculture and the Elbert County Sheriff's Department helped obtain access and distribute the FIFRA fact sheets to residents through door-to-door inquiries. The Home Owners' Association provided a map of the location where the pesticide had been applied and, through their website, asked home owners to call to verbally grant property access.

EPA and their contractors worked through the weekend to rid the community of the rodenticide, which was identified as Rozol® Prairie Dog Bait. The active ingredient, chlorophacinone, is an anticoagulant. Label warnings specify that the chemical must only be used between October 1 and March 15 (to avoid contact with other wildlife) and be placed 6 inches down the prairie dog burrow entrance. The warning states specifically that no bait should be left exposed on the soil surface.

EPA filled a total of seven 55-gallon drums with the inappropriately applied prairie dog bait. Collection was at first made with shovels, and later with a vacuum. The local fire department volunteered to store the barrels of recovered bait for the three weeks before the disposal and final transportation could be arranged.

Soil samples verified that no significant residue remained. The only known casualty of the mis-applied bait was a field mouse. Homeowners were trained on how to properly use rodenticide in accordance with labels in the future. Emergency Responders were successful in purging the area of the poisonous prairie dog bait before any children, their parents, pets or wildlife were affected.



Preparedness Unit Mission Statement:

We will increase EPA Region 8 preparedness through:

- Planning, Training, Exercising, and developing outreach relations with federal agencies, states, tribes, local organizations and the regulated community.
- Assisting in the development of EPA Region 8 preparedness planning and response capabilities through the RSC, IMT, RRT, OPA, RMP, etc.
- Working with facilities to reduce accidents and spills through education, inspections and enforcement. **To view our programs, or contact a member of our team:**

[\(Click here for Org Chart\)](#)

Acronym List

IMT Incident Management Team
 OPA Oil Pollution Act
 RRT Regional Response Team
 RSC Response Support Corps
 SPCC Spill Prevention, Control, and Countermeasures



1 (800) 424-8802



**National
Response
Center**

www.nrc.uscg.mil



Need More info on the Risk Management Program (RMP)?

RMP Reporting Center

The Reporting Center can answer questions about software or installation problems. The RMP Reporting Center is available from 8:00 a.m. to 4:30 p.m., Monday through Friday, for questions on the Risk Management Plan program: (703) 227-7650 (phone) RMPPRC@epacdx.net (e-mail)

Chemical Emergency Preparedness & Prevention Office (CEPPO) <http://www.epa.gov/oem>

Compliance and Enforcement: <http://www2.epa.gov/enforcement>

Compliance Assistance: <http://www.epa.gov/oecaerth/assistance/index.html>

Call our hotline, the Superfund, TRI, EPCRA, RMP, and Oil Information Center (800) 424-9346 or (703) 412-9810 TDD (800) 553-7672 or (703) 412-3323 Mon-Thurs 10:00 am to 3:00 pm ET (except Federal Holidays) or see

www.epa.gov/superfund/contacts/infocenter/

You can also call or write to:

U.S. EPA Region 8
 1595 Wynkoop Street (8EPR-ER)
 Denver, CO 80202-1129
 800-227-8917

CO, MT, ND, SD, UT, and WY

To report an oil or chemical spill, call the National Response Center at (800) 424-8802.

This newsletter provides information on the EPA Risk Management Program, EPCRA, SPCC/FRP (Facility Response Plan) and other issues relating to Accidental Release Prevention Requirements. The information should be used as a reference tool, not as a definitive source of compliance information. Compliance regulations are published in 40 CFR Part 68 for CAA section 112(r) Risk Management Program, 40 CFR Part 355/370 for EPCRA, and 40 CFR Part 112.2 for SPCC/FRP.