



EPA REGION 7 CHEMICAL RISK MANAGEMENT UPDATE

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Kansas City, KS

GCAP Ammonia Safety Day

May 29, 2014

SHOULD I BE CONCERNED ABOUT CAA 112(r)?



The Clean Air Act applies to ALL ammonia refrigeration facilities

Less than 10,000 lbs

10,000 lbs or more

General Duty Requirements

Risk Management Program applies



GENERAL DUTY

- Facility has a general duty to
- Identify hazards which may result from releases using appropriate hazard assessment techniques
 - Design and maintain a safe facility, taking steps to prevent releases



GENERAL DUTY (CONTINUED)

- Facility has a general duty to
- Minimize consequences of accidental releases that occur
 - Coordinate with local emergency responders

IIAR Ammonia Refrigeration Management (ARM) is one example

RISK MANAGEMENT PROGRAM ELEMENTS



Under CAA 112(r)(7), facility must develop

- Hazard Assessment
- Prevention Program
- Emergency Response Practices
- Management System
- Risk Management Plan (RMP; submit to EPA)

RMP Program VS. OSHA PSM



RMP Program includes elements that PSM does not

- Management system, hazard assessment, emergency response, and submitted RMP

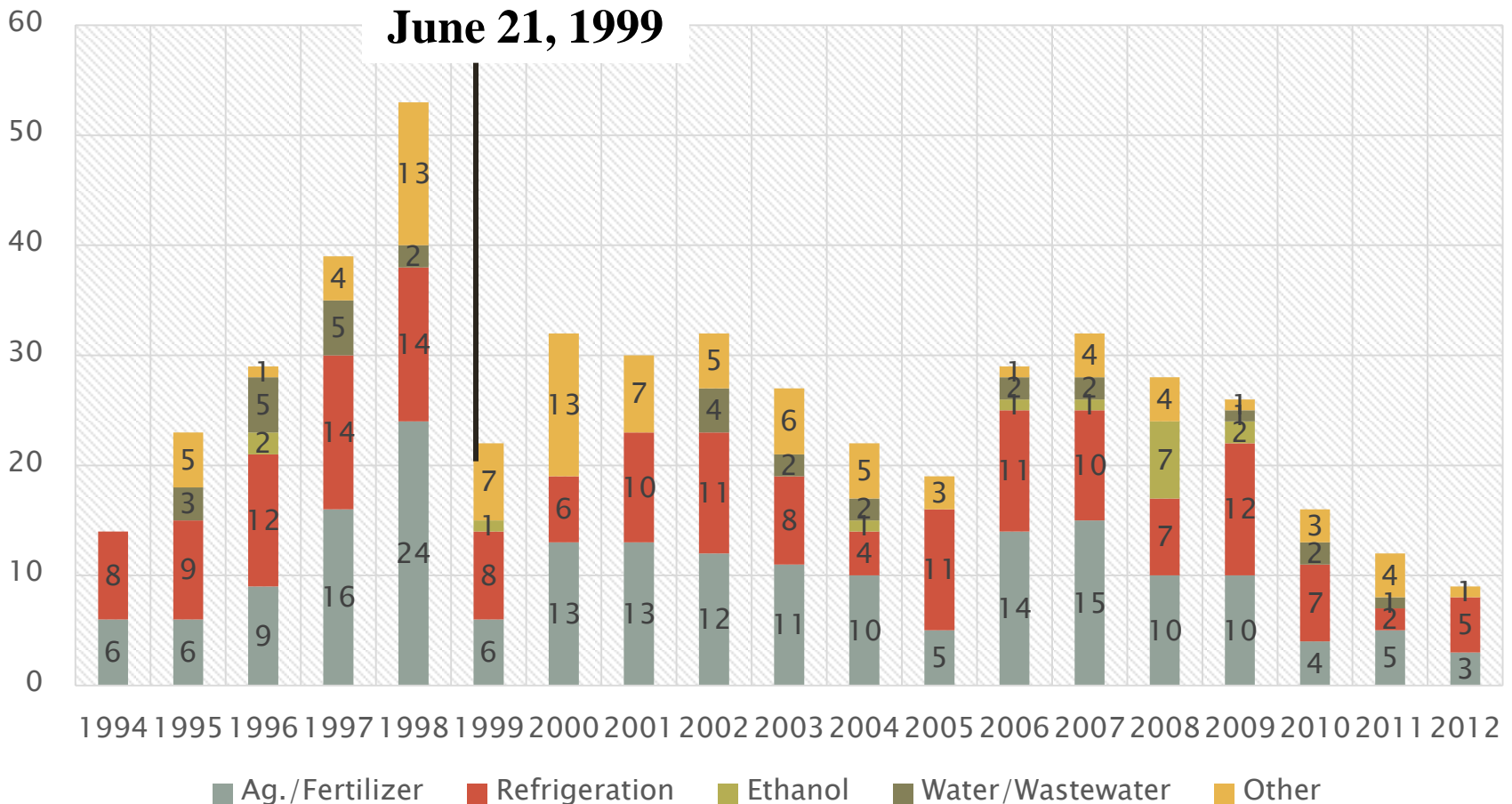
OSHA PSM and RMP Program Program 3 Prevention Program are essentially the same

REGION 7 TOP 10 TOXIC CHEMICALS (TONS)



Chemical (Toxic)	Total
	1,282,388
Ammonia (anhydrous)	8
Chlorine	18,072
Chloroform [Methane, trichloro-]	8,090
Ammonia (conc 20% or greater)	2,250
Ethylene oxide [Oxirane]	2,052
Formaldehyde (solution)	1,776
Sulfur dioxide (anhydrous)	1,774
Methyl chloride [Methane, chloro-]	1,566

R7 RMP ACCIDENTS ACCIDENTS BETWEEN JUNE 1994-MAY 2013





ACCIDENTAL RELEASES

RMP–Reportable Accidents

- No quantity thresholds
- Caused death, injury, significant property damage, off-site shelter-in-place, evacuation, environmental damage

EPCRA/CERCLA Releases

- Meets RQ threshold (100 pounds for ammonia)



REPORTING (IN POUNDS)

	CERCLA 103 & EPCRA 304 EHS RQ (release)	EPCRA 311 & 312 TPQ	EPCRA 313 TRI 10 employees + Mfg NAICS code	CAA 112(r) RMP
<i>When due</i>	<i>Within 15 minutes</i>	<i>Initially: 60 days for EHS; 3 months for all others</i> <i>Annually: March 1</i>	<i>July 1</i>	<i>When threshold exceeded</i>
Anhydrous ammonia (EHS)	100	500	10,000	10,000



REPORTABLE RELEASES/SPILLS

EPCRA

- If transportation
 - "0" or 911 < 15 minutes
- All other releases
 - Notify LEPC (usually 911) < 15 minutes
 - Notify SERC < 15 minutes

CERCLA

- Notify NRC < 15 minutes 1-800-424-8802

101st Congress }
2d Session }

COMMITTEE PRINT

{ S. Prt. 101-120
Vol. 2 }

A LEGISLATIVE HISTORY OF THE SUPERFUND
AMENDMENTS AND REAUTHORIZATION ACT OF
1986 (PUBLIC LAW 99-499)

TOGETHER WITH

A SECTION-BY-SECTION INDEX

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WHY 15
MINUTES?



600

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consumption in drinking water, but inhalation after the volatile

One problem that has emerged, however, is that notification of the National Response Center may not be relayed quickly enough back to the State and local authorities who must provide the first line of emergency response.

releases of any other hazardous substance in quantities exceeding that determined by the President by regulation potentially to require emergency responses.

Section 103(b) of the Act imposes penalties for failure to report a release. For a first or second conviction is a fine of up to five years, or both. In addition, the maximum fine for a first or second violation is \$25,000, and the maximum fine for a third or subsequent violation is \$50,000.

The reported bill adds a provision for a third violation, which would be assessed by the President. The maximum fine for a third violation is \$75,000. The maximum fine for a fourth or subsequent violation is \$100,000. The maximum fine for a fourth or subsequent violation is \$100,000.

Section 103(a) of CERCLA requires the owner or operator of a vessel or facility to notify the person in charge of the vessel or facility if a release of a hazardous substance in an amount that equals or exceeds the reportable quantity established under section 102. These notifications serve as one basis for the Federal Government to determine whether response action is appropriate for the release. One problem that has emerged, however, is that notification of the National Response Center may not be relayed quickly enough back to the State and local authorities who must provide the first line of emergency response. The importance of effective reporting requirements, and tough penalties for failure to report releases.

The lessons of the past year have underscored the importance of effective reporting requirements, and tough penalties for failure to report releases.

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several advantages. For example, civil penalties may be imposed in situations where the violations do not merit the sanctions associated with criminal violations. In addition, the availability of an easily-imposed civil penalty will increase the incentive to comply.

In these emergency situations, every minute may count in taking effective action, and immediate notification of local authorities is essential. Ordinarily, delays in making the required notification **should not exceed 15 minutes** after the person in charge has knowledge of the release, and "immediate notification" requires shorter delays whenever practicable.

are those that manufacture a hazardous substance or store 6,000 kilograms or more of a hazardous substance, and have ten or more full-time employees.

The inventory is required to be completed and distributed within



WHO DO WE INSPECT?

Non-reporters & late resubmittals

High risk (FFY 2014 = 30%, ↑ from 25%)

- Accidents (reported & non-reported in RMP)
- Hazard Index (quantity and number of chemicals, number of processes)
- Population

Referrals, complaints, or other issues



WHAT HAPPENS NEXT

Inspection

Case Review & Development

- Determination of appropriate enforcement action

Enforcement



POTENTIAL ENFORCEMENT OUTCOMES



Closure of case/compliance

Compliance assistance letter

Finding of Violation (FOV)

Administrative Order

Expedited Settlement Agreement (ESA)

Administrative Civil Complaint

Judicial Civil Complaint (DOJ cases)

Criminal Charges (handled by CID)

CASE STUDIES



BUTTERBALL, LLC (CARTHAGE, MO.)



Initiating activity: CAA 112(r)
inspection conducted February 2, 2010



BUTTERBALL, LLC (CARTHAGE, MO.)



Issue identified: annual certification of operating procedures

Results: Finding of Violation (FOV)

- Facility certified completion of SOP update
- No penalty

BEEF PRODUCTS INC.

(WATERLOO, IOWA; S. SIOUX CITY, NEB.)



Initiating events:

- Accident in July 2007
- Additional EPCRA/CERCLA reportable releases
- Inspection
- 4 formal information requests

CAA 112(r) inspection in April 2008

BEEF PRODUCTS INC.

(WATERLOO, IOWA; S. SIOUX CITY, NEB.)



Issue: implementation of elements of risk management program

Issues related to accident: MOC, PSSR, lockout–tagout, SOPs, emergency response, communication



BEEF PRODUCTS INC.

(WATERLOO, IOWA; S. SIOUX CITY, NEB.)

Issues in program development:
management system, SOPs, RMP
submittal

EPCRA/CERCLA reportable releases at
three facilities in Region 7

Results: DOJ referral, judicial civil
complaint

Settlement

- Penalty \$450,000
- Injunctive relief – third party program
audit of all aspects of risk management²²



TYSON (MANY FACILITIES)

Initiating events:

- 8 separate releases of anhydrous ammonia between 2006 & 2010
 - Multiple injuries and 1 fatality
- Inspections at 6 facilities from 2008–2009
- 3 formal information requests from 2010–2011
- Federal and state OSHA inspections

First inspection March 25, 2008



TYSON ACCIDENT (SOUTH HUTCHINSON, KAN.)

Two employees working on a small-diameter pipe that was schedule 40 instead of schedule 80

Pipe broke; one worker escaped, the other was overcome

Issues: RAGAGEP, Incident Investigation



TYSON

RAGAGEP

- Boiler co-located in ammonia machinery room





TYSON VIOLATIONS (MULTIPLE FACILITIES)

RAGAGEP

- Relief valve replacement
- Schedule 40 piping < 2" diameter
- Ammonia sensors in machine room

Prevention Program elements



TYSON ENFORCEMENT

\$3.95M penalty

\$300,000 SEPs

Injunctive relief at 23 facilities

- 3rd-Party Audit of Risk Management Program
 - Includes audit of RAGAGEP
 - NDT on key piping < 2" diameter



RMP RESUBMITTALS

RMP*eSubmit went live in 2009

- 15–20% of facilities have not set up profile
- Approximately 40% of facilities in R7 are due for update in 2014

REMINDER: Setup for the Electronic Signature Agreement can take up to 2 weeks, so don't wait until the last minute!



RESOURCES

Risk Management Program Update Webinars

- Materials archived online
- Will be converted to online training

Ammonia Refrigeration Manual

http://www.epa.gov/region7/toxics/pdf/accident_prevention_ammonia_refrigeration.pdf

or get a copy of the link at our booth



YOU ARE INVITED!

LEPC/TERC Emergency Planning & Response Conference

- August 6–8, 2015
- Industry Track
- Located at the beautiful Lied Lodge in Nebraska City



Contact Steve Wurtz
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FOR MORE INFORMATION



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EPA Region 7 Chemical Risk Website

www.epa.gov/region7/chem_risk_prog