

Course Overview

- 2-hour seminar
- Focused on regulatory & legislative requirements related to:
 - Notification for hazardous chemical releases
 - Community emergency planning
 - Chemical accident prevention
- · Provides an overview of requirements of:
 - Section 103 of the Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA)
 - Emergency Planning and Community Right-to-Know Act (EPCRA)
 - CAA section 112(r) (the EPA Risk Management Program)



Introductions

Instructors

- Steve Mason EPA Region 6
- Lynn Beasley EPA HQ / OEM
- Sicy Jacob EPA HQ / OEM
- Jim Belke EPA HQ / OEM

Course Objectives

- Overview of CERCLA section 103, EPCRA & RMP
- Understand chemical lists & TQs triggering applicability & common exemptions
- · Learn actions that facilities must take to comply
- In-depth focus on release reporting & emergency response requirements
- Understand relationship to other agency's hazardous chemical regulations



Statutory & Regulatory Background

- CERCLA (1980)
 - Reportable Quantity (RQ) Adjustments (1985)
 - Reporting Continuous Releases of Hazardous Substances (1990)
- Superfund Amendments and Reauthorization Act (SARA) (1986)
 - Emergency and Hazardous Chemical Inventory Forms and Community Right-to-Know Reporting Requirements (1987)





CERCLA has statutory requirement for newspaper notice to potentially injured parties – no regulations for this - MRQ (5/1/2006)



CERCLA 103, EPCRA 204 302.6 and 355.40 in CFR





definition of facility. CERCLA in **CFR – 302.3** EPCRA in **CFR – 355.10(?)**

What is a Release?

• *Release* means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing *into the environment...*



CERCLA §101(22), 40 CFR §302.3; EPCRA §304, 40 CFR §355.20

CERCLA §101(22), 40 CFR §302.3; EPCRA §304, 40 CFR §355.20



April 4, 1985 FR

Starting on page 13462, Column 1, Paragraph 3...

- Enclosed
- Unenclosed
- Facility
- Facility response/public access
- Ambient air



deliberate releases

Landfill- April 4, 1985, p. 13461-2.

POTW- 2/1986 MRQ & Q&As on Web site



48 FR 23552, 23553; May 25, 1983 and 4/4/85 p. 13459

Aggregating Releases

 All releases of same substance from single facility in any 24 hour period must be aggregated to determine whether an RQ has been released from facility into the environment (50 <u>FR</u> 13456, 13459; April 4, 1985)



Aggregate releases of the same HS or EHS that occur within 24-hour period; in other words, it is a moving 24-hour window.

24 hour period does not mean facility O/Os have 24 hours to report a release that exceeds an RQ, it must be immediate

Find this right in CERCLA applicability. Not so with EPCRA.

EPCRA Statute 304(a): facility shall immediately provide notice if the release "occurs in a manner which would require notification under section 103(a) of CERCLA" (63 FR 31268, 31283; June 8, 1998 proposed rule);



The lists of HSs and EHSs are two **separate** but **overlapping** lists of substances. The HS list is bigger, but not all EHSs are HSs.

you can have a release of an EHS that is reportable under EPCRA but not reportable under CERCLA. Examples would include bromine and ozone.

Extremely Hazardous Substances (EHSs)

- EPCRA §302 originally chemicals in Chemical Emergency Preparedness Program (CEPP) Interim Guidance
- EPA has statutory authority to add to or revise list EPCRA §302(a)(2)
- 40 CFR 355 (Appendices A & B)

CERCLA Hazardous Substances

- CERCLA establishes list of "hazardous substances"
 - Approximately 800 specific substances & 1,500 radionuclides
 - Identified under other statutes
 - Clean Water Act (CWA)
 - Clean Air Act (CAA)
 - Toxic Substances Control Act (TSCA)
 - Resource Conservation and Recovery Act (RCRA)
 - Authority to designate (add to list) CERCLA section 102
 - Substances which, when released into environment may present substantial danger to public health or welfare or environment
- 40 CFR 302.4 List of Hazardous Substances and Reportable Quantities





- CWA hazardous substances & CERCLA hazardous substances
 - All CWA hazardous substances are CERCLA hazardous substances
 - CWA section 311(b)(4)
 - CWA section 307(a)
 - Some CERCLA hazardous substances are CWA hazardous substances



CERCLA Hazardous Substances

- How does EPA choose chemical name(s) to list for each substance on List of Hazardous Substances (40 CFR 302.4)?
 - Use name from environmental statutes & implementing regulations
 - If more than one name, each chemical name will appear as separate entry (with same CAS Registry Number)
 - Column of regulatory synonyms removed in 2002





nvironmental Protection Agency				§302.4	
TABLE 302.4—LIST OF HAZARDOUS SUBST. [Note: All Comments/Notes /	ANCES AND F Are Located at th	EPORTABLE e End of This	QUANTITIES—(Table]	Continued	
Hazardous substance	CASEN	Statulory code†	RCRA waste No.	Final RQ pounds (Kg)	
Instewater treatment studges, excluding neutralization and biological studges, generated during the treatment of wasie-waters from the production of sight- (or meth- yl-) chiomated bitesnes, ing-chiorinated bitesnes, ben- zoyl chiodides, and compounds with mixtures of these functional groups. 156		4	к156	10 (4.54)	
Crganic weste (including heavy ends, still bot- toms, light ends, spent solvents, fitteates, and decantates) from the production of carbamates and carbamoyl oxtimes. (This listing does not apply to westes generated from the manufac- ture of 3-todo-2-propynyl n-butykarbamate.)					
Visitewaters (including soutber waters, con- denser waters, wastraaters, and separation waters) from the production of carbamates and carbamay domes. (This leting does not apply to wastes generated from the manufacture of 9-lood-2-crocyruf h-tuth/sattemate).		4	K157	10 (4.54)	
159 Big house dusts and filter/separation solids from the production of carbamaies and carbamayic colmee. (This listing does not apply to wastee generated from the manufacture of 3-lodo-2- propyrul n-buty/carbamate.)		4	K159	10 (4.54)	Indicates no RQ, the Agence
Crganics from the treatment of thiocarbamate wastes.		4	K159	10 (4.54)	has not yet established.
Cl61 Putification solids (Including filtration, evapo- nation, and contrifugation solids), beg-house dust and floor sweepfings from the production of diffliccathamate actios and their saits. (This Bitting does not include K125 or K126).		4	K161	1 (0.454)	
C1691		4	K169	10 (4.54)	
x170 ¹		4	K170	1 (0.454)	
1711 spent hydrotreating catalyst from petroleum retining oper- ations. (This listing does not include inert support made).		4	K171	1 (0.454)	
inducty (1721 spenthydrorefining catalyst from petroleum refining oper- ations. (This listing does not include inert support media.)		4	К172	1 (0.454)	
1741		4	K174 K175	1 (0.454) 1 (0.454)	
176. laghouse filters from the production of antimony odde, including filters from the production of intermediates (e.g., antimony metal or crude antimony codde) 177.		4	к176	1 (0.454)	
lag from the production of antimony colde that is specu- latively accumulated or disposed, including stag from the production of intermediates (e.g., antimony metal or crude antimony colde)		4	К177	5,000 (2270)	
C178		4	K178	1000 (454)	
rae using the chloride-ilmenite process. (181		4	K181	(Y CON



CERCLA Hazardous Substances: Hazardous Wastes

Listed wastes

- Dangerous Waste Discarded Chemical Products P & U (40 CFR §261.33)
 - Specific commercial chemical products in unused form
 - · Some pesticides & pharmaceutical products become hazardous waste when discarded
- Nonspecific Source Wastes F (40 CFR §261.31)
 - · Wastes from common manufacturing & industrial processes (e.g., solvents used in cleaning or degreasing operations)
 - Known as wastes from non-specific sources because processes producing these wastes can occur in different sectors of industry .
- Source Specific Wastes K (40 CFR §261.32)
 - · Wastes from specific industries (e.g., petroleum refining or pesticide manufacturing) Certain sludges & wastewaters from treatment & production processes in these industries

Unlisted/characteristic wastes - 100 pound RQ

- Ignitability (D001)
- Corrosivity (D002)
- Reactivity (D003)
 Toxicity (D004 D043) See Table 302.4

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Unlisted/Characteristic Wastes

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§ 302.4		40 C	R Ch. I (7-1-	09 Edition)	
TABLE 302.4—LIST OF HAZARDOUS SUBST Note: All Comments/Notes	ANCES AND F Are Located at th	EPORTABLE e End of This	QUANTITIES—C Table)	ontinued	
Hazardous substance	CASEN	Statulory code†	Waste No.	Final RQ pounds (Kg)	
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CERCLA Hazardous Substances: Hazardous Wastes

- Releases of wastes that are not individually listed as CERCLA hazardous substances
- CERCLA reporting requirements apply to wastes or waste streams exhibiting characteristics of ignitability, corrosivity, reactivity or toxicity under RCRA
- Release of a non-designated substance exhibiting any of these four RCRA characteristics is release of a hazardous substance if substance is a waste prior to release or becomes a waste after release
- Under RCRA regulations, substance becomes waste after release if it is not cleaned up or if it is cleaned up only for eventual disposal



CERCLA Hazardous Substances: Hazardous Wastes & the Mixture Rule

 Releases of mixtures or solutions (*including hazardous waste streams*) of hazardous substances are subject to notification requirements, if quantity of all hazardous constituents are known, where an RQ or more of any hazardous constituent is released (40 CFR §302.6(b))

CERCLA Hazardous Substances: Hazardous Wastes & the Mixture Rule

- Mixture rule versus RQ for waste listing
 - If exact composition of waste stream is known, report when constituent is released in excess of its RQ
 - If exact composition of waste stream is unknown, report when *total quantity released* exceeds RQ for waste stream listing





There is one exception. These are haz wastes from the petroleum refining process. **SEE §302.6**

Continuous Release Reporting

CERCLA section 103(f)(2)

- Reduced reporting for continuous releases of hazardous substances that exceed RQ
 - Continuous
 - Occurs without interruption or abatement, or is
 - Routine, anticipated & intermittent during normal operations or
 - treatment processes
 - Stable in quantity & rate
 - Predictable & regular in amount & rate of emission
- Notification given once
 - Unless change in source or composition of release, change in normal range of release or change in other reported information
- Follow-up report on first anniversary of initial report
- Report statistically significant increases





Reporting when in doubt is not only a good idea, but EPA has actually said in FR from 3/18/90 (8666) and in the Ehrhart memo (11/15/2000)




Not a Release: Federally Permitted Releases

- Clean Air Act (CAA) Permits
 - Emission limitations
 - Technology requirements
 - Operational requirements
- Guidance on federally permitted releases for certain air releases (67 <u>FR</u> 18899; April 17, 2002)
 - VOC, PM & NO_X
 - Minor sources
 - Waivers, accidents & malfunctions
 - Start-up & shut-down
- · Discharges in excess of federally permitted limits
 - Do not qualify as federally permitted releases
 - RQ calculations begin at the point at which release exceeds permit



Not a Release

- Any release which results in exposure to persons solely within workplace
- Emissions from engine exhaust of motor vehicle, rolling stock, aircraft, vessel or pipeline pumping station engine
- Certain releases of source, byproduct or special nuclear material from nuclear incident
- Normal application of fertilizers

Release Notification: CERCLA Exemptions				
Petroleum exclusion	Normal application of pesticide			
Consumer product	Federally permitted releases			
Engine exhaust from motor vehicles	Solid particles (>100 microns) of certain metals			
Nuclear incident	Certain radionuclide releases			
Normal application of fertilizer	Releases to RCRA Subtitle C facilities			

The first five listed are exemptions based on exclusions from definitions:

petroleum – def HS

Consumer product - def facility

Engine exhaust – def release

nuclear incident - def release

application of fertilizer - def release

The next four are reporting exemptions from the statute and or regulations:

pesticide - statute and regs applicability

fed perm release - statute and reg applic

solid particle (massive forms of metals) – regulatory (4/4/85)

There are also two administrative exemptions: One for releases to RCRA Subtitle C facilities (50 FR 13456, 13461; April 4, 1985)...

...and NOx exemptiom - October 4, 2006,

Release Notification: EPCRA Exemptions

Household product	Normal application of pesticide
Engine exhaust from motor vehicles	Federally permitted releases
Nuclear incident	Certain radionuclide releases
Normal application of fertilizer	Qualified NOx Emissions
Release solely within facility boundaries	

Relationship Between CERCLA Liability & Reporting

- Failure to comply with CERCLA section 103 notification requirements may result in fines, per offense, of up to \$37,500 and prison sentences of up to three years (or up to five years for second and subsequent convictions)
- Proper & timely reporting of release in accordance with CERCLA section 103 does not preclude liability for cleanup costs, natural resource damages & costs of any necessary health studies conducted under CERCLA section 104(i)
- A release of CERCLA hazardous substance below its RQ does not preclude liability from any damages that may result (including cleanup costs or natural resource damages)



How DOT relates to CERCLA

- CERCLA section 306(a) Transportation of hazardous substances; listing as hazardous materials; liability for release
 - Department of Transportation (DOT) required to list & regulate as hazardous materials all CERCLA hazardous substances
 - All CERCLA hazardous substances covered by DOT's Hazardous Materials Regulations
 - Materials shipped in quantities equal to or greater than their RQs
 - Present in single package, above certain concentration thresholds
 - Must be identified as such on shipping papers & by package markings









history...



another Union Carbide Plant, Institute West Virginia,



Establishment of State Commissions, Planning Districts & Local Committees (section 301)

- State Emergency Response Commissions (SERCs)
- Local Emergency Planning Committees (LEPCs) for each planning district



• Members of LEPCs include representatives from local government, law enforcement, civil defense, fire fighting, first aid, health, media, community groups, facilities, etc.



Emergency Planning Notification (section 302)

- Applicable to <u>any</u> facility that has an Extremely Hazardous Substance (EHS) present <u>at any time</u> at or above its Threshold Planning Quantity (TPQ)
- EHSs & their TPQs are codified in 40 CFR part 355

Emergency Planning Notification (section 302)

Facility Requirements:

- One-time notification to SERC & LEPC if any EHS is present in an amount ≥TPQ
 - 60 days after facility becomes subject to requirements
- Designate facility emergency coordinator
- Provide any information necessary for developing & implementing local emergency plan



Emergency Response Plans (section 303)

- LEPC required to develop an emergency response plan for their community
- Plan should be reviewed annually or more frequently if changes occur
- LEPCs have authority to request any information from facility necessary for developing & implementing emergency response plan



Emergency Release Notification (section 304)

- Applicable if both of these conditions are met:
 - Facility at which hazardous chemical is produced, used or stored; <u>and</u>
 - which there is release of a reportable quantity (RQ) of any extremely hazardous substance (EHS) or CERCLA hazardous substance



Emergency Release Notification (section 304)

 EPCRA notification is in addition to CERCLA release notification

requirements:

- SERC & LEPC (State or area likely to be affected by release)
- Written follow-up of the notification (as soon as practicable after release)
- Notify 911 or operator for transportation related-releases (SERC or LEPC phone numbers are not available)



EPCRA section 304 Exemptions

- What is different from CERCLA?
 - <u>No</u> Petroleum exclusion (if any EHSs are present in any petroleum product, notification under EPCRA section 304 will apply)
 - Do <u>not</u> need to report releases solely <u>within</u> facility boundaries
- All other CERCLA exemptions apply to EPCRA section 304

Hazardous Chemical Reporting (sections 311 & 312) 40 CFR part 370

Applicability:

- Hazardous Chemicals (chemicals that require an MSDS) defined under OSHA Hazard Communication Standard (HCS), which include EHSs
- Exemptions under OSHA HCS
- Exemptions under section 311(e)
- Transportation Exemption (section 327)

Exemptions under OSHA HCS

- Examples of few exemptions under OSHA HCS:
 - Hazardous Waste: Hazardous waste is exempted from the standard when subject to RCRA regulations
 - Consumer Products: Windshield wiper fluid for cars (however, an employee using windshield wiper fluid on a daily basis is <u>not</u> exempt)
 - Articles: Stainless steel table, tires, adhesive tape, etc.

For more details on these & other exemptions, see 29 CFR part 1910.120 (www.osha.gov)

-



EPCRA section 311(e) Exemptions

- Although OSHA HCS MSDS requirements may apply to these substances, these are excluded from EPCRA sections 311 & 312:
 - Substances regulated by the Food and Drug Administration (e.g., chlorine to bleach flour)
 - Solids in any manufactured item where no exposure occurs under normal conditions of use (e.g., sheets of metal in storage)
 - Personal or household products (e.g., heating fuel at homes but <u>not</u> in business buildings)
 - Substances used in research laboratories, hospitals or other medical facilities under direct supervision of technically qualified individual (e.g., chemicals in school lab under supervision of science teacher)
 - Substances used in routine agricultural operations or fertilizer held for sale by retailer (e.g., ammonia used as fertilizer by farmer)



Hazardous Chemical Reporting (sections 311 & 312)

Thresholds:

- EHSs 500 lbs or TPQ whichever is less
- Gasoline 75,000 <u>gallons</u> (at <u>retail gas station</u>, stored entirely underground, in compliance at all times in previous calendar year with UST requirements)
- Gasohol (90% gasoline & 10% ethanol) 75,000 gallons (at retail gas station, stored entirely underground, in compliance at all times in previous calendar year with UST requirements)
- Diesel 100,000 <u>gallons</u> (at <u>retail gas station</u>, stored entirely underground, in compliance at all times in previous calendar year with UST requirements)
- All other hazardous chemicals 10,000 lbs

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Hazardous Chemical Reporting

- Two parts to hazardous chemical reporting:
 - Material safety data sheet (MSDS) reporting
 - One-time reporting requirement
 - Hazardous chemical inventory reporting
 - Annual hazardous chemical inventory due by March 1

Hazardous Chemical Reporting (section 311)

Requirements:

- Submit MSDS or list of hazardous chemicals grouped by hazard category that meet or exceed applicable thresholds to following three entities:
 - State Emergency Response Commission (SERC)
 - Local Emergency Planning Committee (LEPC)
 - Local Fire Department with jurisdiction over facility
- One-time submission
- Supplemental Reporting Information on new chemicals & significant new information on already submitted chemicals – must be provided within 3 months



Hazardous Chemical Reporting (section 312)

- Section 312 Submit Inventory form (Tier I/Tier II or State form – paper form) for all hazardous chemicals present at facility <u>at any time</u> during previous calendar year in an amount equal to or in excess of applicable thresholds. Report is due March 1 annually
 - SERC
 - LEPC
 - Local fire department with jurisdiction over facility
- Tier2 Submit or State Electronic format

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Facility Identificat	tion			Owner/Operator Det	tails
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Pennsylvania Tier II Emergency and Hazar	rdous Chemical Inventory (Facility ID: 4532)

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Chemical Description	Physical & He Hazards	alth	Inventory			Storage Codes	& Location
Chamical ID : 195813 Check (I Chemical Information has changed from the last submission CAS :	Fire Pressure Reactivity Immedia Delayed (Chronic)	4008266 06 2366794 e 06 365	5 Max Dally Amt(ibs) Max Dally Amount Code 4 Ave. Daily Amount (bs.) Ave. Daily Amount Code No of days in site	Container Type A	Pressure	Temperature	Storage Location (confidential)
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Diemical Information has : 244219 Track IC hemical Information has : 3 A3 A3 Chamical Servet : 1120381 Tade Servet : 1 Chamical Name : ALPHA OLEFINS () HS : 3 Pure ⊴ Mix ⊴ Solid ⊴ Liquid ⊡ Gas	Fire Pressure Reactivity Immedial Delayed (Chronic)	33857 04 26039 e 04 365	Max Daily Aml(lbs) Max Daily Amount Code Ave. Daily Amount (lbs.) Ave. Daily Amount Code No of days in site	Container Type A	Pressure 1	Temperature 4	Storage Location

Public Availability (section 324)

 Each emergency response plan, material safety data sheet, list described in section 311(a)(2), inventory form & follow-up emergency notice shall be made available to general public shall be consistent with section 322 (Trade Secrets)





Legislative Background

- Clean Air Act Amendments (1990)
 - Process Safety Management Standard – PSM (1992)
 - Risk Management Program Regulation (1994-1996)
 - U.S. Chemical Safety and Hazard Investigation Board – CSB (1998)
 - Chemical Safety Information, Site Security, and Fuels Regulatory Relief Act – CSISSFRRA (1999)



The Clean Air Action established a General Duty Clause.

The CAA required EPA to list at least 100 regulated substances known to cause death or serious adverse effects to human health or the environment (**Regulated Substances and Thresholds).**

The CAA also required EPA to promulgate regulations and guidance to prevent, detect, and respond to accidental releases of regulated substances. These regulations also include a **Risk Management Plan** available to government officials and the public (persons except employees or contractors at the stationary source).

The following slides will discuss each of these provisions in more detail.



The general duty provisions apply to owners and operators of all stationary sources which have any "*extremely hazardous substances*". Extremely hazardous substances are not limited to the list of regulated substances listed under section 112(r), nor the extremely hazardous substances under EPCRA §302 (40 CFR Part 355, Appendices A and B).

Although there is no definition for extremely hazardous, the Senate Report on the Clean Air Act provides criteria EPA may use to determine if a substance is extremely hazardous. The report expressed the intent that the term "extremely hazardous substance" would include any agent "which may or may not be listed or otherwise identified by any Government agency which may as the result of short-term exposures associated with releases to the air cause death, injury or property damage due to its toxicity, reactivity, flammability, volatility, or corrosivity" (Senate Committee on Environment and Public Works, Clean Air Act Amendments of 1989, Senate Report No. 228, 101st Congress, 1st Session 211 (1989) "Senate Report").
Final List of Regulated Substances

- 77 toxic & 63 flammable substances
- Toxic mixtures w/ >1% listed toxic substance and partial pressure > 10 mm Hg
- Flammable mixtures w/ >1% listed flammable substance in mixture exceeding NFPA 4 flammability criteria
- Substances with specified concentrations:
 - Nitric Acid (≥80%)
 - Hydrofluoric Acid (≥50%)
 - Hydrochloric Acid (≥37%)
 - Aqueous Ammonia (≥20%)





The release of these types of chemicals could result in toxic conditions, fires, or create explosive hazards

Goals of the Risk Management Program:

- Prevent Accidental Release of Regulated Substances (Toxics and Flammables)
- Reduce Regulated Substances (Toxics and Flammables) at the local level
- · Effective management of chemical processes
- · Communicate dangers with local responders and the community



Definition of "**Stationary Source**": "...any buildings, structures, equipment, installations or substance emitting stationary activities"

(i) which belong to the same industrial group,

(ii) which are located on one or more contiguous properties,

(iii) which are under the control of the same person (or persons under common control), and

(iv) from which an accidental release may occur." (CAA section 112(r)(2))

Definition of "process":

Any activity involving a regulated substance, including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities.

Any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, are considered a single process.

More information can be found in the List of Lists.

RMP Regulation – Requirements

- Offsite consequence analysis
- Five-year accident history)
- Accident prevention program (most facilities)
- Emergency response program or plan
- Risk Management Plan (RMP)





Prevention Program Levels

- Covered processes placed into one of 3 "Program Levels"
 - Program 1 processes with no public receptors in worst case scenario zone & no significant accidents in last five years
 - Program 3 processes not eligible for P1 that are already covered by OSHA PSM or that are within any of 10 specified NAICS codes
 - Program 2 processes not eligible for P1 & not covered by P3



Emergency Response Program

- Program 1 processes: Owner/operator must ensure that response actions have been coordinated with local emergency planning and response agencies
- Program 2 & 3 processes: Requirements depend on whether facility uses its own employees to respond to accidental releases

ER Program: P2 & P3 Non-Responding Facilities

- Facilities that rely on public responders must:
 - Have appropriate notification mechanisms in place
 - Coordinate response actions with community ER plan or local fire department

ER Program: P2 & P3 Responding Facilities

- Facilities that use their own employees to respond to accidental releases must have:
 - Written ER plan addressing response procedures, medical treatment, public & local authority notification
 - ER equipment inspection, testing & maintenance
 - Training for all employees in relevant procedures

Risk Management Plans

- Executive summary
- Registration info: Facility ID, location, lat/long, chemical process info (e.g., NAICS, chemical name, CAS #, quantity), etc.
- 5-year accident history
- Accident prevention program info: hazard analysis methods, mitigation measures, etc.
- Emergency response planning information
- Offsite consequence analysis: Worst-case & alternative release scenarios



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	 Personal protective equipment (e.g., protective clothing, self-contained breathing apparatus) 1.6 Five-year Accident History In the last 5 years, there have been no releases at the ISP Texas City site that have resulted in deathin place, off-site property damage, or environmental damage. 1.7 Emergency Response Program The Texas City Flatt maintains a written emergency response program, which is in place to protect wor consist of procedures for responding to a release of a regulated subtance, including proper first aid and me accounting for plant personnel after an evacuation, policitated subtance, including proper first aid and me accounting for plant personnel after an evacuation, policitated subtance, including proper first aid and me accounting for plant person and there is a subtance shows a plant and decontamination requirements. In addition, the Texas City Plant has procedures that address main equipment, as well as instructions that address the use of emergency response equipment. Employees emergency response program thanges are administered through the management of change process, the changes. The overall emergency response program for the Texas City Plant is coordinated with the Texas City fin and with offsite responders, Texas City MAS, who would be called to support emergency response effects and mustary resonnese program thanges are administered through the management of change process, the changes. The overall emergency response program for the Texas City Plant is coordinated with the Texas City fin in individing and with offsite responders, Texas City MAS, who would be called to support emergency response equipment. 1.8 Planned Changes to Improve Safety Texas City Plant constantly strives to improve the safety of its operations through periodic safety review following types of thanges are planned during the next Sy easer: Upgrade acetylene analyzer shutdown system in v	s, injuries, or known deaths, injuries, evacuations, sheltering ker and public safety as well as the environment. The program a fire or explosion if a flammable substance is accidentally dical treatment for exposures, plant evacuation plans and not the public f a release occurs, and post-incident cleanup tenance, inspection, and testing of emergency response receive training in these procedures to perform their specific nodifications made to plant processes or facilities. The which includes informing and/or training affected personnel in e department, local emergency planning committee (LEPC), rist if required. This provides a means of nothing the public ing in periodic LEPC meetings, the Texas City Plant conducts provides annual refresher training to local emergency ws, the incident investigation program, and a program ne of which result in modifications to the process. The
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This slide represents the percentage of RMP processes that contain the various chemicals shown.

The United States has just under 15,000 RMP facilities containing 20,210 covered processes.

There are more processes than facilities, since some facilities have more than one process. Likewise, a single process may contain more than one RMP chemical. In calculating the percentages on this slide, a process was counted once for each chemical it contains. Therefore, while the total number of RMP processes in the United States is just over 20,000, the total number of different "chemical streams" in those processes is actually over 25,000.

Top six chemicals, as measured by the number of processes they occur in are Ammonia (Anhydrous), Chlorine, Flammable Mixture, Propane, Sulfur Dioxide, and Aqueous Ammonia. They account for 75% of all RMP processes.



This slide shows percentage of chemicals by quantity, instead of by number of processes. The aggregate percentages represent the sum of all quantities of each chemical in all processes with that chemical.



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