



Preventing Chemical Accidents in Ethanol Facilities

Risk Management Program & EPCRA Compliance

Topeka, KS

April 24, 2013



Risk Management Program Workshop

- Today's Presenters
- Logistics—bathrooms, lunch, etc.
- Approximate Schedule
 - ▣ 11:30 — Lunch
 - ▣ Breaks — As Needed
 - ▣ 2:50 — Closing Remarks
- Student Introductions



Course Objectives

- Discuss requirements of CAA 112(r) and portions of EPCRA
- Provide information on common compliance pitfalls
- Help facilities prepare for inspections
- Help prevent accidents & minimize consequences of those that do occur



From Response to Plan/Prevention

- Bhopal, India (1984)
- Institute, West Virginia (1985)
- Increased public concern
- Worker and community planning and right-to-know laws
- Chemical accident prevention laws



Planning and Right-to-Know Federal Regulations—1986

- Worker—Occupational Health and Safety Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200)
- Community—Environmental Protection Agency (EPA) Superfund Amendments and Reauthorization Act (SARA)—EPCRA or SARA Title III



Chemical Accident Prevention Federal Regulations—1990

- Clean Air Act Amendments of 1990
 - General Duty Clause
 - OSHA Process Safety Management (PSM)—1992
 - EPA Risk Management Program [Section 112(r)]—1999
 - U.S. Chemical Safety and Hazard Investigation Board (CSB)—1998



General Duty Clause

- No thresholds, no lists
- Facilities must:
 - ▣ Identify hazards
 - ▣ Design and maintain facility to prevent releases in accordance with good engineering and industry practices
 - ▣ Minimize consequences of releases that do occur





Emergency Planning and LEPC Coordination

*Basics under the Emergency Planning and
Community Right-to-Know Act (EPCRA)*



EPCRA Requirements

- Provide for local emergency planning around chemical risks in the community
- Industry required to provide chemical information to states, local communities, and fire departments
- Allow public to request and receive information about chemicals and chemical risks in their community



EPCRA Sections

- 301-303 Emergency planning
- 304 Emergency notification
- 311 Hazardous Chemical Inventory (MSDSs)
- 312 Hazardous Chemical Inventory (Tier I or II)
- 313 Toxic Chemical Release Reporting
- 321-329 Miscellaneous



EPCRA Sections 301 & 303 LEPCs and TERCS

□ Includes representatives from the following groups/organizations

- Elected state & local officials
- Local environmental
- Broadcast & print media
- Community groups
- Law enforcement
- Transportation
- Health
- Civil defense
- Firefighting
- First aid
- Hospital
- ***Facilities***



EPCRA Sections 302 & 303 Emergency Planning

- Supply LEPC/SERC/TERC with planning information
- Coordinate emergency response planning with community
- Designate facility emergency coordinator



Threshold Planning Quantities (TPQ)

- For all listed substances - Lesser of 500 pounds or TPQ
 - Anhydrous ammonia 500 pounds
- Gasoline* 75,000 gallons
- Gasohol* (90% gasoline/10% ethanol) 75,000 gallons
- Diesel* 100,000 gallons
- All other hazardous chemicals 10,000 pounds

*(at retail gas station, stored entirely underground, in compliance at all times in previous calendar year with UST requirements)



EPCRA 304 & CERCLA 103 Emergency Release Notification

- Provide **IMMEDIATE (15 min)** notification via telephone, radio, or in person to:
 - Emergency coordinators of **ANY** area likely to be affected by the release
 - TERC/SERC representative of **ANY** tribe/state likely to be affected by the release; and
 - National Response Center (NRC) *if required under CERCLA Section 103*



EPCRA 304 & CERCLA 103 Reports Include

- Chemical and amount released
- Known information about the cause, weather, and impacts at the time of the call
- Who called in the information



EPCRA 304 & CERCLA 103

Written Follow-Up

- Send to LEPC/SERC/TERC *as soon as practicable*
- Update of initial information, including:
 - ▣ Actions taken
 - ▣ Known or anticipated chronic health risks
 - ▣ Medical attention and/or advice for exposed individuals



QUERY STANDARD REPORT

NOTE: Be advised that this application makes use of a remote executable file that may be blocked by firewall or browser settings. If you have problems querying the database, please check your browser security settings or contact your system administrator for further assistance.

[Need Help?](#)

The database is current for reports received through 11/12/2006.

Submit Query Clear

<input checked="" type="checkbox"/>	NRC Report #	789	<input type="text"/>
<input checked="" type="checkbox"/>	Incident Date (MM/DD/YYYY)	31	<input type="text"/>
<input checked="" type="checkbox"/>	Street	A	<input type="text"/>
<input checked="" type="checkbox"/>	Location County	A	<input type="text"/>
<input checked="" type="checkbox"/>	City	A	<input type="text"/>
<input checked="" type="checkbox"/>	State	A	<input type="text"/>
<input checked="" type="checkbox"/>	ZIP	A	<input type="text"/>
<input checked="" type="checkbox"/>	Suspected Responsible Company	A	<input type="text"/>



EPCRA 304 & CERCLA 103 Exemptions

- Federally permitted releases
- Continuous releases - *as defined under 40 CFR 302.8(b)*
 - ▣ *if appropriate continuous release notifications have been made and all conditions are met*
- Pesticide or fertilizer application
- Motor vehicle emissions

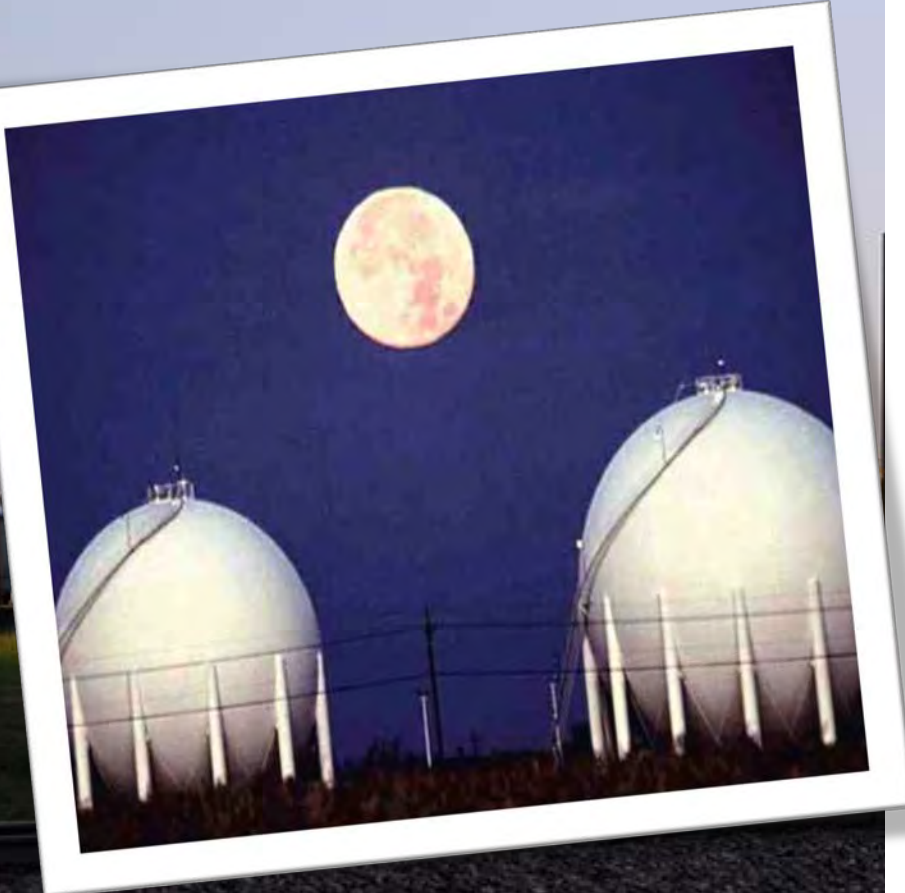


EPCRA 304 & CERCLA 103 Petroleum Exemption

- CERCLA—Petroleum is **generally** exempted
- EPCRA—Petroleum is **NOT** excluded if an EHS is present in the petroleum



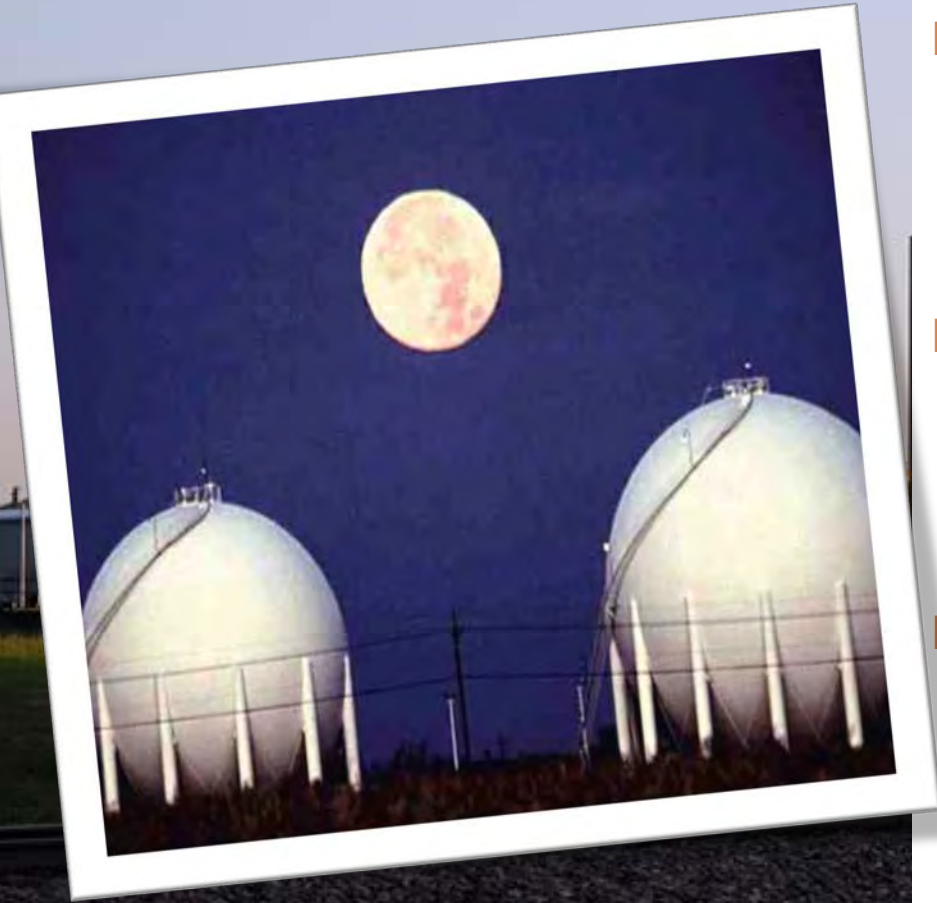
EPCRA Sections 311-312 Hazardous Chemical Inventory Reports are Required if



- Maximum on-site at any one time is more than or equal to:
 - ▣ 500 pounds or TPQ - whichever is less - for EHSs (including those in mixtures), or
 - ▣ 10,000 pounds or more if OSHA requires a MSDS



EPCRA Section 311 Chemical List/MSDSs

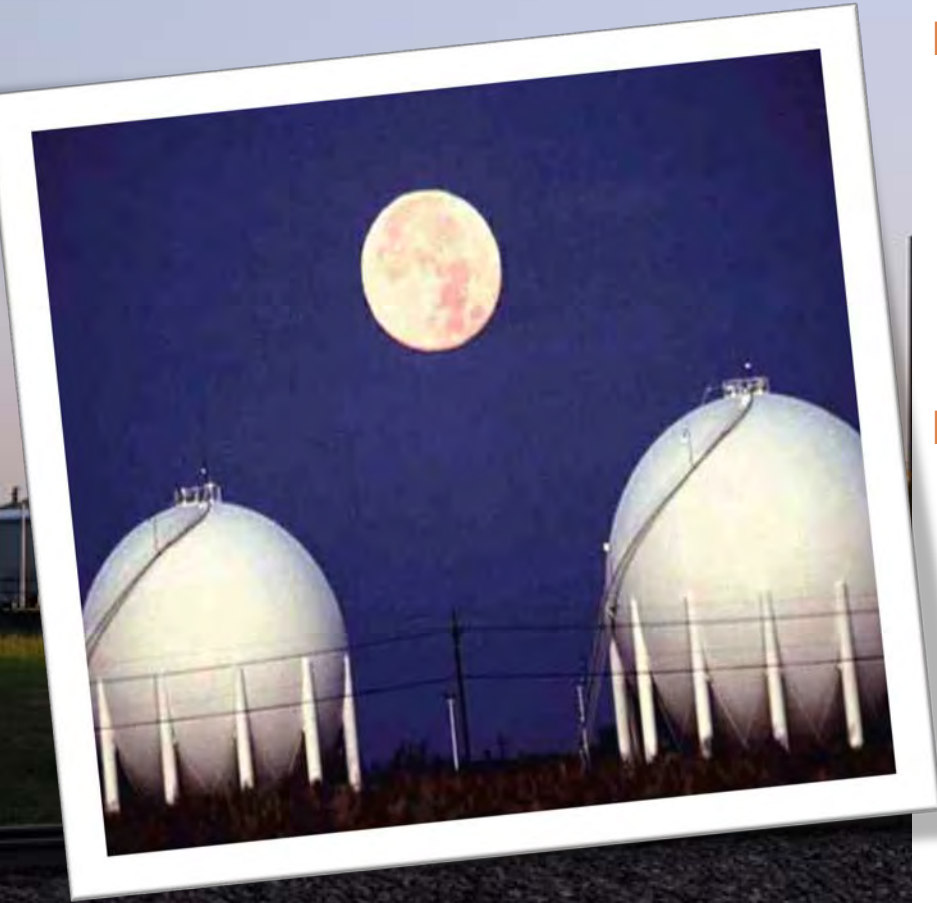


- Generate list of chemicals sorted by hazard category
- Send list or MSDSs to LEPC/SERC/TERC and local fire department
- Submit within 90 days of inventory changes



EPCRA Section 312

Tier I or II



- Submit forms to LEPC/SERC/TERC and local fire department by **March 1**
- Submit any additional requested emergency planning information



EPCRA Sections 311-312

Other Provisions

- MSDS and Tier II information available with respect to a specific facility to the general public upon written request (*40 CFR 370.30-31*)
- Allow fire department(s) to conduct on-site inspections of facilities [*40 CFR 370.25(d)*]



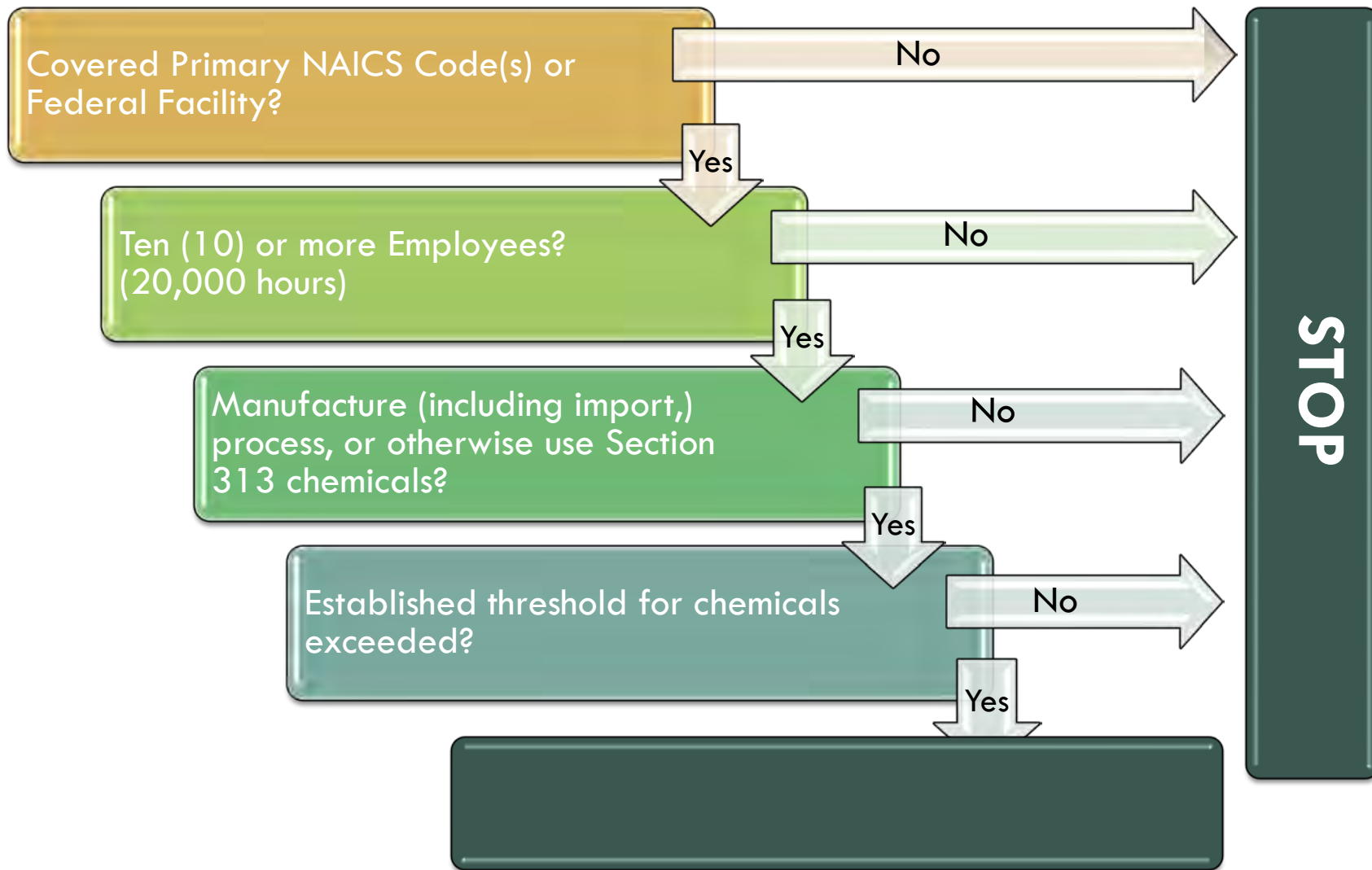
EPCRA Section 313

Toxic Release Inventory

- Facilities that manufacture, process, or otherwise use over certain threshold quantities of listed chemicals (that also are a listed NAICS code and have more than 10 employees).
- Report Includes:
 - ▣ Chemical release and disposal information
 - ▣ Facility contact Information



So, Do You Need to Report?





Common 313 Substances at Ethanol Facilities

1,2,4-trimethylbenzene	lead
acetaldehyde	lead compounds
acrolein	mercury
ammonia	mercury compounds
barium compounds	methanol
benzene	n-hexane
chlorine	nitrate compounds
cyclohexane	toluene
ethylbenzene	xylene (mixed isomers)
formaldehyde	zinc compounds
formic acid	



Why TRI?

- Publicly available data
 - ▣ Public has access to the data to be able to research how prevalent chemicals of concern are in their community
 - ▣ Envirofacts: www.epa.gov/enviro
 - ▣ TRI Explorer: www.epa.gov/triexplorer

- Holds facilities accountable for what they are releasing into the environment



TRI Websites & Resources

- Main Website: www.epa.gov/tri
- U.S. EPA EPCRA Hotline: 1-800-535-0202
- CRIB Main Contact: Steve Wurtz
913-551-7315
wurtz.stephen@epa.gov



EPCRA Common Deficiencies

- Procedures for reporting release preclude notifying agencies within 15 minutes
- Not all potentially affected LEPCs/SERCs/TERCs notified
- EPCRA 311 reports do not occur within 90 days of a previously unreported substance being brought on-site



EPCRA Enforcement

- Subject to penalties of up to \$37,500 per day per violation
- Companies subject to citizen suits; could also be liable for attorney fees and litigation costs



CFATS & EPCRA/CAA 112(r) Information

- Nothing in Department of Homeland Security's Chemical Facility Anti-Terrorism Standards (CFATS) regulations alters the requirements that apply to a facility covered under CFATS and EPCRA or CAA 112(r)



LEPC/TERC Conference Information

- Mark your calendars!
2013 LEPC/TERC Conference
Overland Park Marriott, Overland Park, KS
July 25-27

- Five great tracks, including:
Hazmat Response, Health and Medical, LEPC 101,
Industrial Facility Preparedness and Planning, Chemical
Transportation & Security Awareness

- Optional training