

Joint Region 4 & Region 6 Regional Response Team Meeting



Spring 2023 Meeting – May 17-18

Baton Rouge, Louisiana

[Register Here](#)

Day 1 Separate Meetings Morning Agenda – Wednesday, May 17

RRT-4		Microsoft Teams meeting Join RRT-4 meeting Or call in (audio only) +1 202-991-0477 , 820573288#	RRT-6		Microsoft Teams meeting Join RRT-6 meeting Or call in (audio only) +1 210-469-3886 , 710972114#
Louisiana Oil Spill Coordinator's Office Office of Management & Finance Building, Room 308 7979 Independence Blvd Baton Rouge, Louisiana			Louisiana State Police (LSP) Training Academy Auditorium Building A, 1 st floor 7901 Independence Blvd Baton Rouge, Louisiana		
0800-0815	Welcome / Introductions		Welcome / Introductions	0800-0815	
0815-0830	Co-Chair Reports		Priorities	0815-0830	
0830-0900	State Reports		Co-Chair Reports	0830-0900	
0900-0930	Federal Agency Reports		State Reports	0900-1000	
15 Min	Break		Break	10 Min	
0945-1015	Space Operations – Sector Jax		Federal/Tribal Agency Reports	1010-1120	
1015-1045	BSEE ACP Project Brief – Bryan Rogers, BSEE			1120-1130	
1045-1100	Hurricane Ian (Mission Assignments)				
1100-1130	USCG FOSC Reports		Closing Remarks	1120-1130	
1130-1300	Lunch (on your own)				1130-1300

Joint RRT-4 & RRT-6 Meeting

Day 1

Afternoon Agenda – Wednesday, May 17

Joint Meeting

LSP Training Academy Auditorium
Building A, 1st floor
7901 Independence Blvd
Baton Rouge, Louisiana

Microsoft Teams meeting

[Join the Joint meeting](#)

Or call in (audio only)

+1 210-469-3886, 478595417#

1300-1310	Welcome / Introductions / Opening Remarks	RRT-6 Co-Chairs
1310-1340	PFOS / PFAS Overview	Tim Frederick, EPA R4
1340-1415	New Madrid Seismic Zone Overview	Jim Wilkinson, Central U.S. Earthquake Consortium (CUSEC)
15 min	Break	
1430-1500	Incorporating Natural Resource Damage Assessment (NRDA) in Exercises	<ul style="list-style-type: none"> • Mike Drieu, Oxy • Gina Saizan, LOSCO • Keith Nichols, CK Associates
1500-1530	OSC Case Study – Tulsa Gamma	Mike McAteer, EPA R6
1530-1545	Science and Response Techniques for a Major Nurdle Spill in the Gulf of Mexico	Charlie Henry, NOAA
15 min	Break	
1600-1630	Environmental Justice Overview	<ul style="list-style-type: none"> • Natasha Bashir, EPA R4 • Nabil Mzee, EPA R6
1630-1700	Endangered Species Act Consultation	Robert Tawes, USFWS
1700-1715	Open Forum	All
1715-1730	Wrap-Up / Closing Remarks by Co-Chairs / Recess to Next Day	

Networking Session – Time & Location TBD

Joint RRT-4 & RRT-6 Meeting

Day 2

Agenda – Thursday, May 18

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Joint Meeting <i>LSP Training Academy Auditorium</i>		Microsoft Teams meeting Join the Joint meeting Or call in (audio only) +1 210-469-3886 , 478595417#
0800-0815	Administrative Announcements	Coordinators
0815-0915	Lithium-Ion Batteries : Considerations for Emergency Response	<ul style="list-style-type: none"> • Liz Ladow, PHMSA • Bryan Vasser, EPA R4
0915-0945	National Academies Oil in the Sea, IV: Inputs, Fates, and Effects	Victoria Broje, Ph.D., Shell Oil
15 min	Break	
1000-1030	DOI Orphaned Well Plugging Program	Susan Lee, DOI
1030-1045	Bureau of Safety and Environmental Enforcement (BSEE) Burner Status <i>(Low emission combustor for emulsified oil)</i>	Karen Stone, BSEE
1045-1100	BSEE Source Control Support Coordinator (SCSC) Overview	James Fletcher, BSEE
1100-1130	Global Dispersant Strategy Overview – Manufacturing and Resupply	Angela Barrow, International Association of Oil and Gas Producers (IOGP)
1130-1300	Lunch (on your own)	
1300-1400	Coastal Scenario-based Tabletop Exercise – Loss of well control in the Gulf of Mexico <ul style="list-style-type: none"> • <i>RCs, ACPs, plans, policies, and procedures</i> • <i>How would we work together?</i> • <i>Dispersant preauthorization and In-Situ Burning in Offshore Waters of the Gulf of Mexico.</i> 	Michael Sams, USCG D8
1400-1500	Inland Scenario-based Tabletop Exercise	<ul style="list-style-type: none"> • Jed Hewitt, EPA R4 • Bray Fisher, EPA R6
15 min	Break	
1515-1545	International Coordination: <ul style="list-style-type: none"> • MEXUSGULF update and activities • CUBUS update and activities 	<ul style="list-style-type: none"> • Michael Sams, USCG D8 • Rich Lavigne, USCG D7
1545-1600	Wrap-Up / Moving Forward / Closing Remarks	Co-Chairs
1600	Meeting Adjournment	

Joint RRT-4 & RRT-6 Meeting



Red Star- Entrance to State Police Compound - Enter the State Police compound via this main entrance on Independence Blvd FOR ALL MEETING LOCATIONS



Yellow Star- Office of Management and Finance Building, Room 308, 3rd Floor:
7979 Independence Blvd.
Office of Management & Finance Building
Baton Rouge, LA 70806

Room 308 in Management and Finance Building -Take the first right from Public Safety Blvd into the Management and Finance Building parking lot (purple arrow). There are posted “visitor parking” signs (purple X; approximately 10 spots). If the designated visitor spots are full, park in any open undesignated spot (e.g., not in one labeled “OMV Supervisor”). Once inside the building LOSCO staff will aid in directing you to the third-floor meeting room.



Blue Star- LSP Academy Training Academy Auditorium. Building A, 1st floor
7901 Independence Blvd.
Baton Rouge, LA 70806

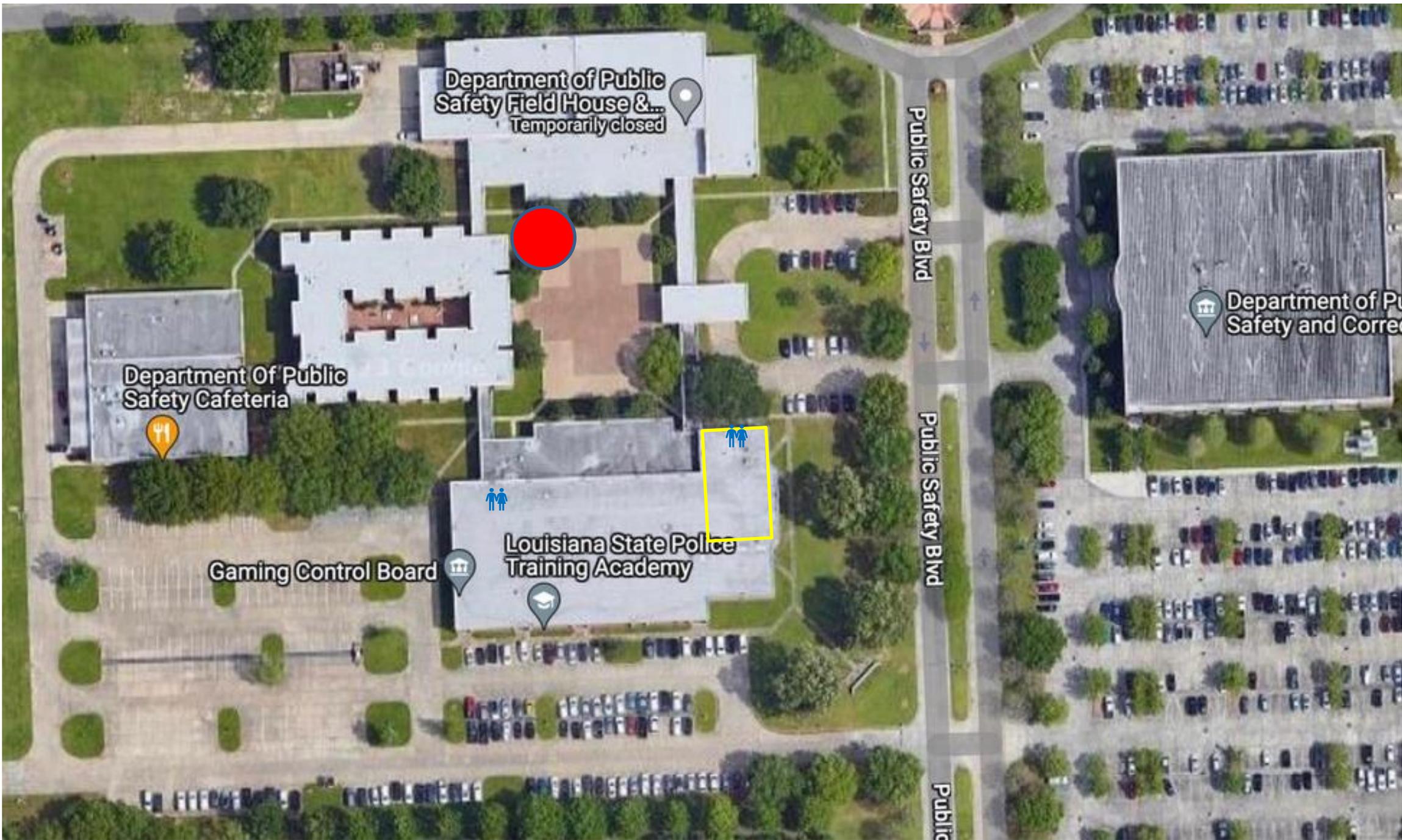
Training Academy Auditorium is in Building A on the first floor. Take the first left from Public Safety Blvd into Building A parking lot (blue arrow). Park in any open undesignated spot.

Welcome to the Spring 2023 Meeting



18 May 2023
Day 2

Meeting Call-in Number: (210) 469-3886 Passcode: 478 595 417##



Department of Public Safety Field House &...
Temporarily closed

Department Of Public Safety Cafeteria

Gaming Control Board

Louisiana State Police Training Academy

Public Safety Blvd

Public Safety Blvd

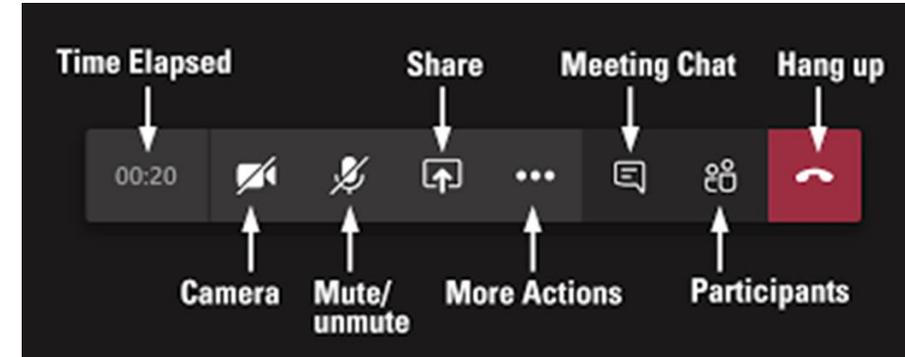
Public

Department of Public Safety and Corre...

Meeting Administrative Items

Virtual Participants

- Turn off computer camera and mute microphone when not speaking
- Place phones/microphones on mute
- For questions, **Raise Your Hand** and/or use the **Meeting Chat** function



- **Roll Call Process:**

If you called in and you do not see your name displayed in Teams, email Steve Mason to have your name added to the meeting summary.

→ Mason.Steve@epa.gov

Meeting Administrative Items

All Participants

- Identify yourself when speaking
- Breaks/Lunch
- Avoid Acronyms
- Sign-in Sheets

Joint RRT-4/6 Meeting

Day 2

Joint RRT-4 & RRT-6 Meeting

Day 2 Agenda – Thursday, May 18		
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Opening Remarks Co-Chairs



Craig Carroll, U.S. EPA



Michael Sams, USCG

Lithium-Ion Batteries: Considerations for Emergency Response

- Liz Ladow, PHMSA
- Bryan Vasser, EPA R4



Pipeline and Hazardous Materials Safety Administration

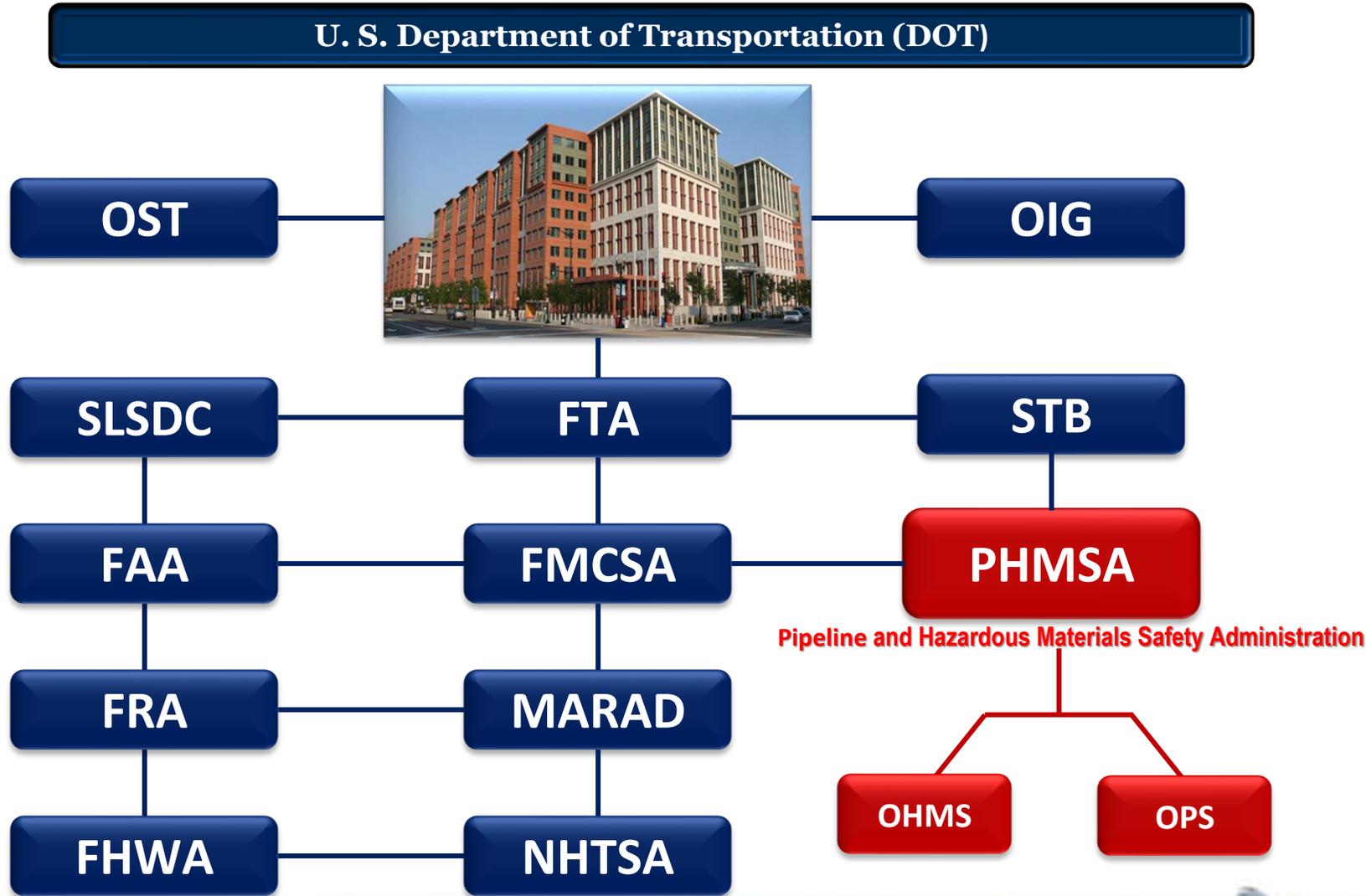


U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

PHMSA: Your Safety is Our Mission



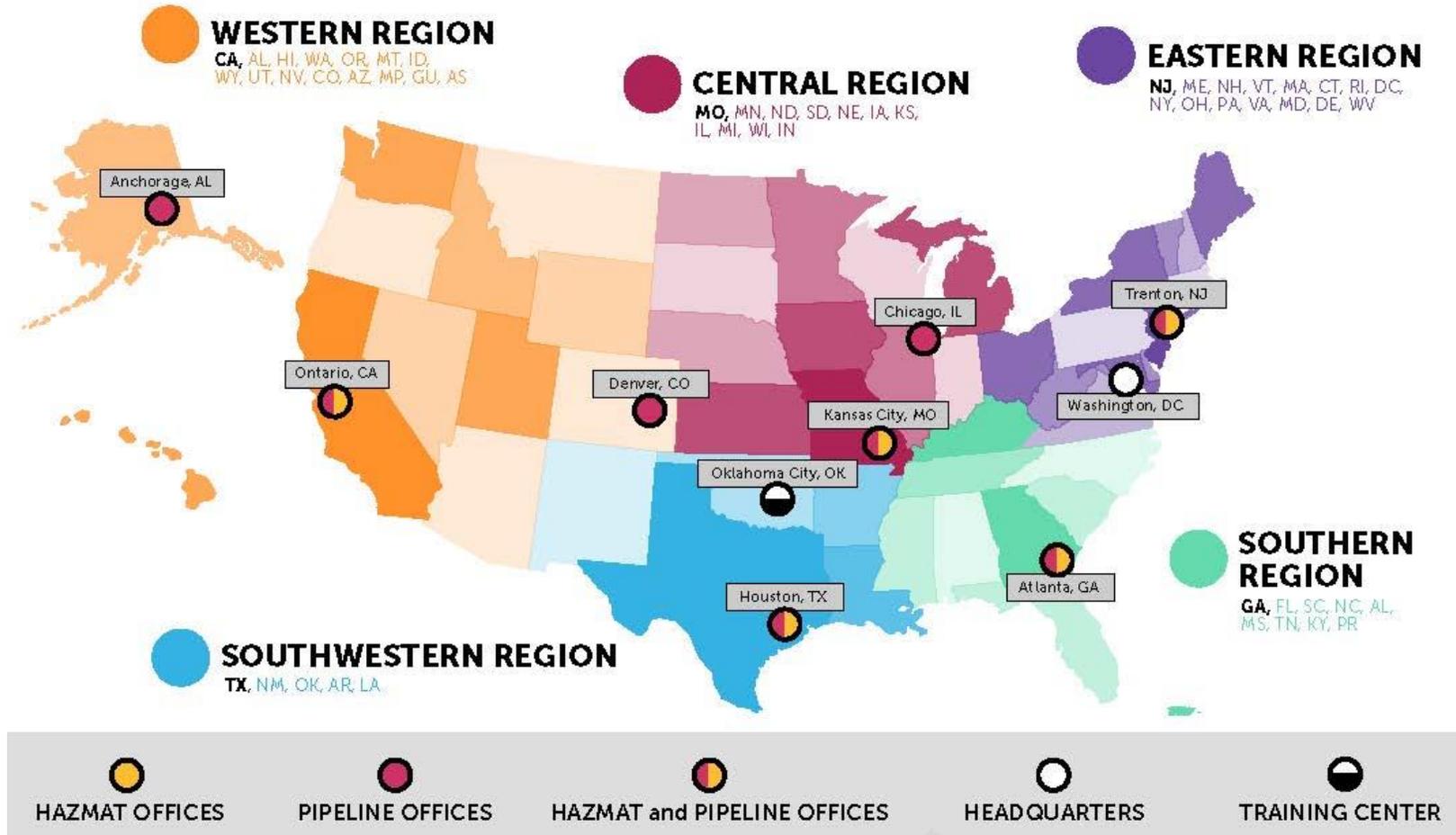
Who is PHMSA?



Pipeline and Hazardous Materials Safety Administration



PHMSA Regional Offices



Pipeline Safety – Community Liaison

Western Region

- **Dave Mulligan**, David.Mulligan@dot.gov
- AZ, CA, CO, WI, NV, UT
- **Tom Finch**, Thomas.Finch@dot.gov
- AK, ID, MT, OR, WA, WY

Central Region

- **Angela Pickett**, Angela.Pickett@dot.gov
- KS, MO, IA, IL, MI, MN
- **Sean Quinlan**, Sean.Quinlan@dot.gov
- NC, SD, IN, NE, WI

Southern Region

- **James Kelly**, James.Kelly@dot.gov
- AL, FL, KY, MS, GA, NC, SC, TN, PR
- New Community Liaison – **Coming Soon!**

Southwest Region

- **James “Jay” Prothro**, James.Prothro@dot.gov
- AR, OK, TX (North)
- **Bill Lowry**, Bill.Lowry@dot.gov
- LA, NM, T (South)

Eastern Region

- **Karen Gentile**, Karen.Gentile@dot.gov
- CT, ME, MA, NH, NJ, NY, RI, VT,
- **Nita Raju**, Nitander.Raju@dot.gov
- DE, MD, OH, PA, VA, DC, WV

Program Manager - Headquarters

- **Karen Lynch**, Karen.Lynch@dot.gov



HAZMAT Community Liaisons

Western Region

- **Evelyn Yang**, Evelyn.Yang@dot.gov
- **Nii Sampah**, Nii.Sampah@dot.gov
- AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY, Guam

Central Region

- **Dan Richards**, Daniel.Richards@dot.gov
- New Community Liaison – **Coming Soon!**
- IN, IL, MI, MN, WI, IA, NE, KS, MO, ND, SD

Southern Region

- **Liz LaDow**, Elizabeth.Ladow@dot.gov
- **Vielka Moreno**, Vielka.Moreno@dot.gov
- NC, SC, GA, FL, AL, MS, TN, KY, PR, USVI

Southwest Region

- Mayra Ramos, Mayra.Ramos@dot.gov
- New Community Liaison - **Coming Soon!**
- LA, AR, OK, TX, NM

Eastern Region

- **Wayne Lalicon**, Wayne.Lalicon@dot.gov
- **Ijeoma George**, Ijeoma.George@dot.gov
- CT, DE, D, NC, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV

Field Outreach Coordinator

- **Marc Nichols**, Marc.Nichols@dot.gov



Emergency Special Permits & Waivers During Disasters

PHMSA can issue emergency special permits or emergency waivers to the Hazardous Materials Regulations (HMR) that will allow EPA and US Coast Guard to conduct their Emergency Support Function #10 under the National Response Framework to safely remove, transport and dispose of Hazardous Materials.

Examples:

Waiver to EPA and US Coast Guard during **Hurricane Ian in 2022** ([Emergency Waiver No. 24 – Docket No. PHMSA 2022-0128](#))

Waiver to EPA and US Coast Guard during **California Wildfires in 2018** ([DOT-SP 20811](#))



PHMSA Permits and Approval Contacts

General Inquires: specialpermits@dot.gov

How to Obtain an Emergency Special Permit
Website: <https://www.phmsa.dot.gov/hazmat/special-permits/how-obtain-emergency-special-permit>

Phone: (202) 366-4535

DOT Crisis Management Center
(after-hours assistance): (202) 366-6525





Lithium Battery Incident PHMSA – 2023



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Pipeline and Hazardous Materials
Safety Administration



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Safety Administration

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Houston TX – April 23, 2017

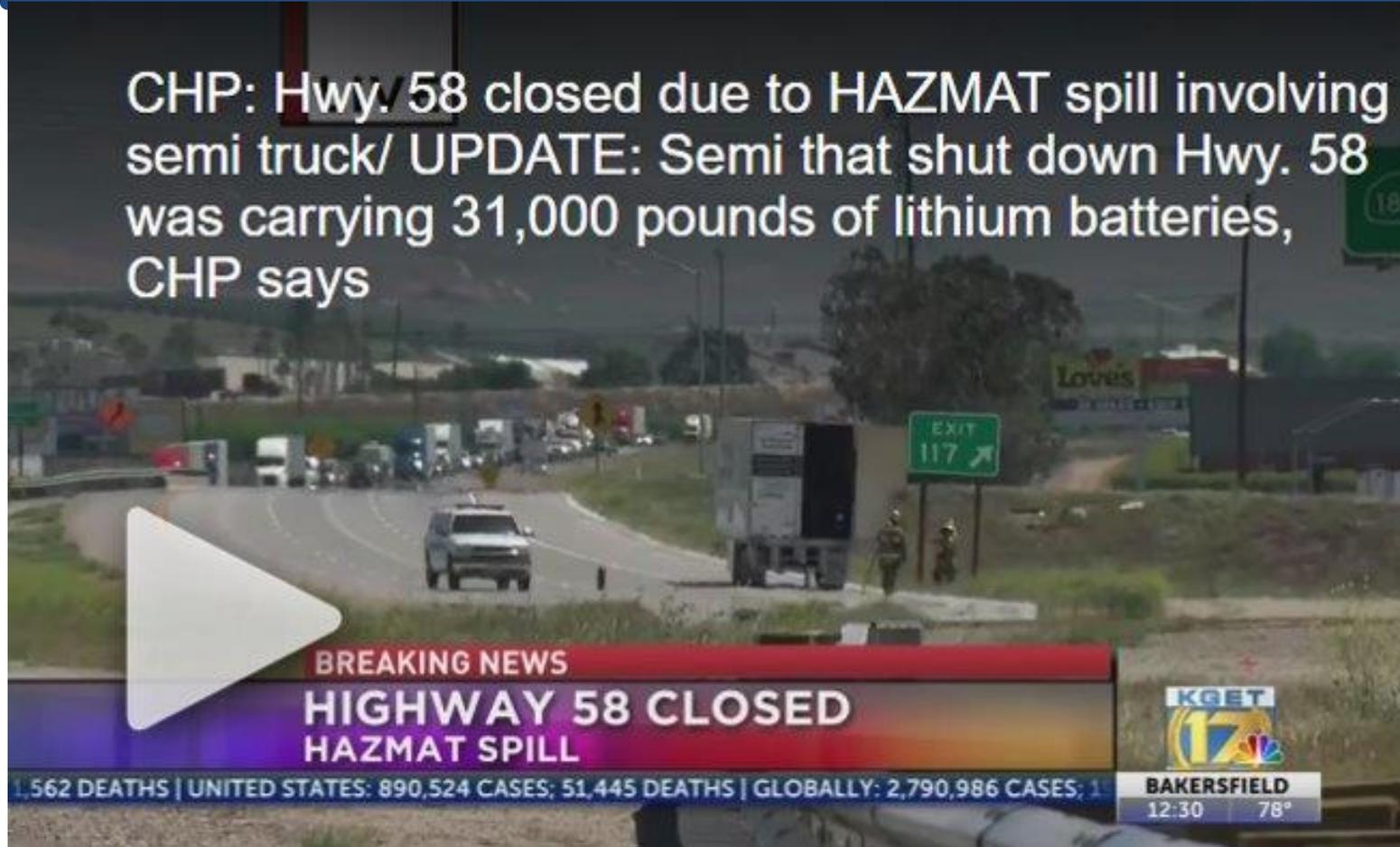


Shipping container exploded while in transportation by rail. There was no warning or indication that lithium batteries were involved.



Bakersfield, CA – April 27, 2020

CHP: Hwy. 58 closed due to HAZMAT spill involving semi truck/ UPDATE: Semi that shut down Hwy. 58 was carrying 31,000 pounds of lithium batteries, CHP says



One
Shipment

Two
incidents



Suffolk, VA – August 19, 2021



Ground
shipment
headed to
a port



20



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Lawrenceville, GA – December 7, 2021



Rolla, MO – January 27, 2022



A trailer load of new Chevy Bolt batteries got involved in a traffic accident on its way to Oklahoma. Packaging may have played a role in keeping this incident becoming much worse than it was.



Rolla, MO – January 27, 2022



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San Antonio, TX – February 10, 2022



Use of black shrink-wrap made it difficult to see damage that impacted the cellphones/batteries in the packages.



Port – L.A. Long Beach – March 4, 2022



- Shipper described the contents as **Synthetic Resins N.O.S.**
- Many other containers were found in the port and loaded on ships with the same description



Port – L.A. Long Beach – March 4, 2022



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Safety Administration



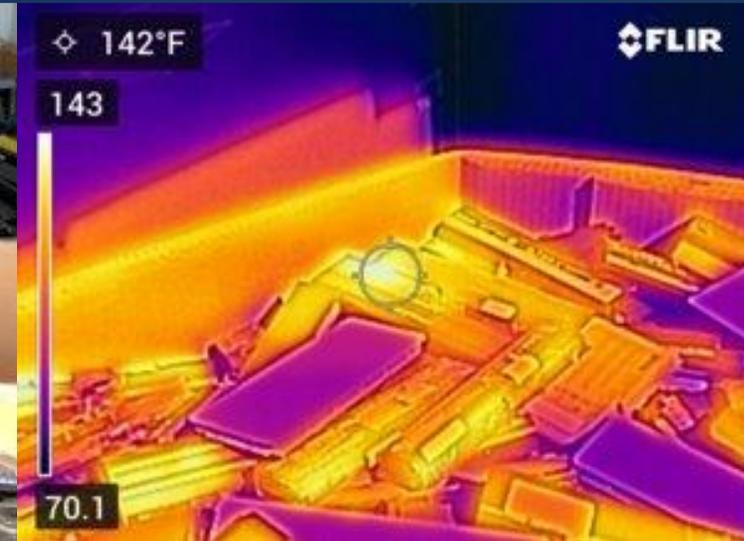
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Port – L.A. Long Beach – March 4, 2022



Container of undeclared lithium ion batteries involved -- associated with the previous container -- contains laptop batteries.



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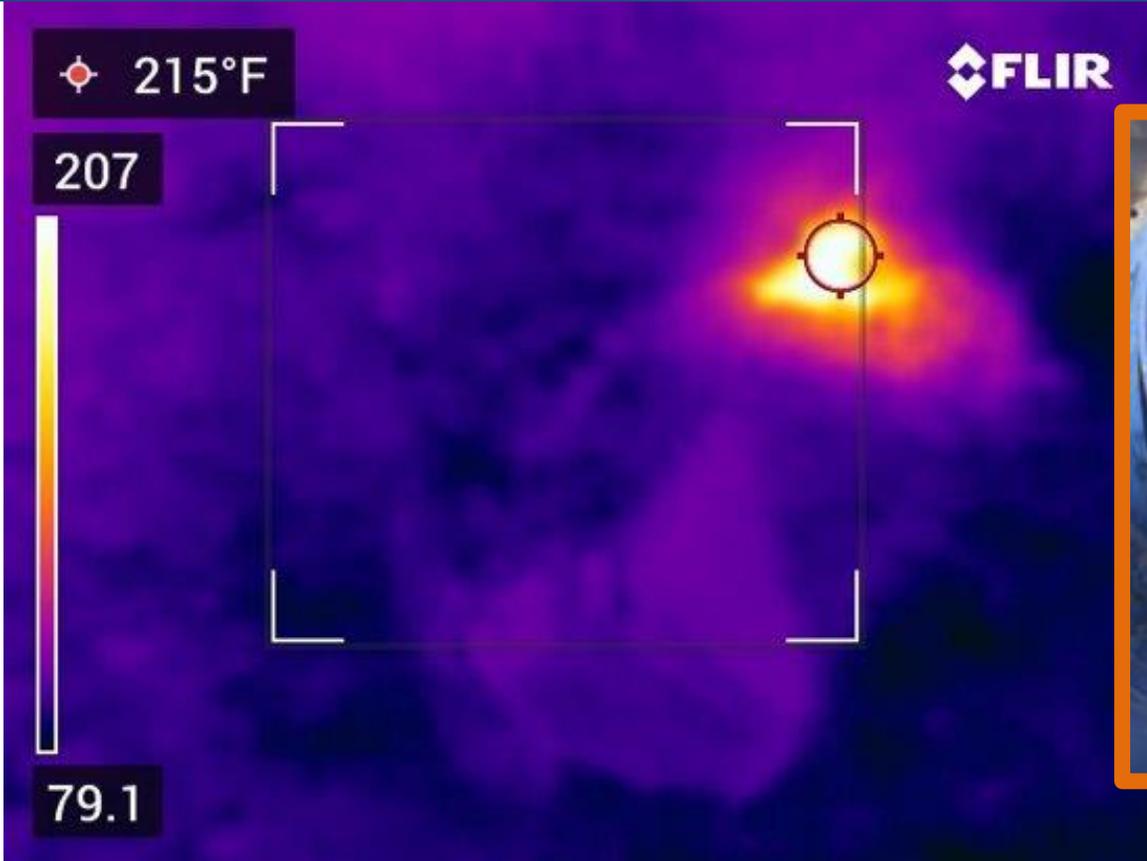
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International Import Shipment Madison, IL – August 10, 2022



International Import Shipment Madison, IL – August 10, 2022



Hurricanes – September 28, 2022



Hundreds of EV's and thousands of devices exposed to sea water and other forces associated with hurricanes.



Hurricanes – September 28, 2022



Photos provided by Sanibel Fire Department



Monahan, TX – February 23, 2023



Birmingham, AL– March 31, 2023



Shameless Plug for NRC



1-800-424-8802 NRC



Review

- Poor handling in use, collection and storage at end-of-life
- Poor handling and packaging methods in transportation
- Frustrated shipping is occurring because there is no way to see damage outside of clear physical evidence.
- End of life battery handling by industry is inconsistent.



Presentation Evaluation

TELL US HOW WE DID!

Scan the QR code or go to the below link and tell us how we can improve!



<https://www.surveymonkey.com/r/5DBGHFW>



Presenter Contact Information

Today's Presenter:

Liz LaDow, Community Liaison

404.519.9748 (Cell) – elizabeth.ladow@dot.gov





2023 OSC Readiness Training Program



Lithium Ion Battery Fires

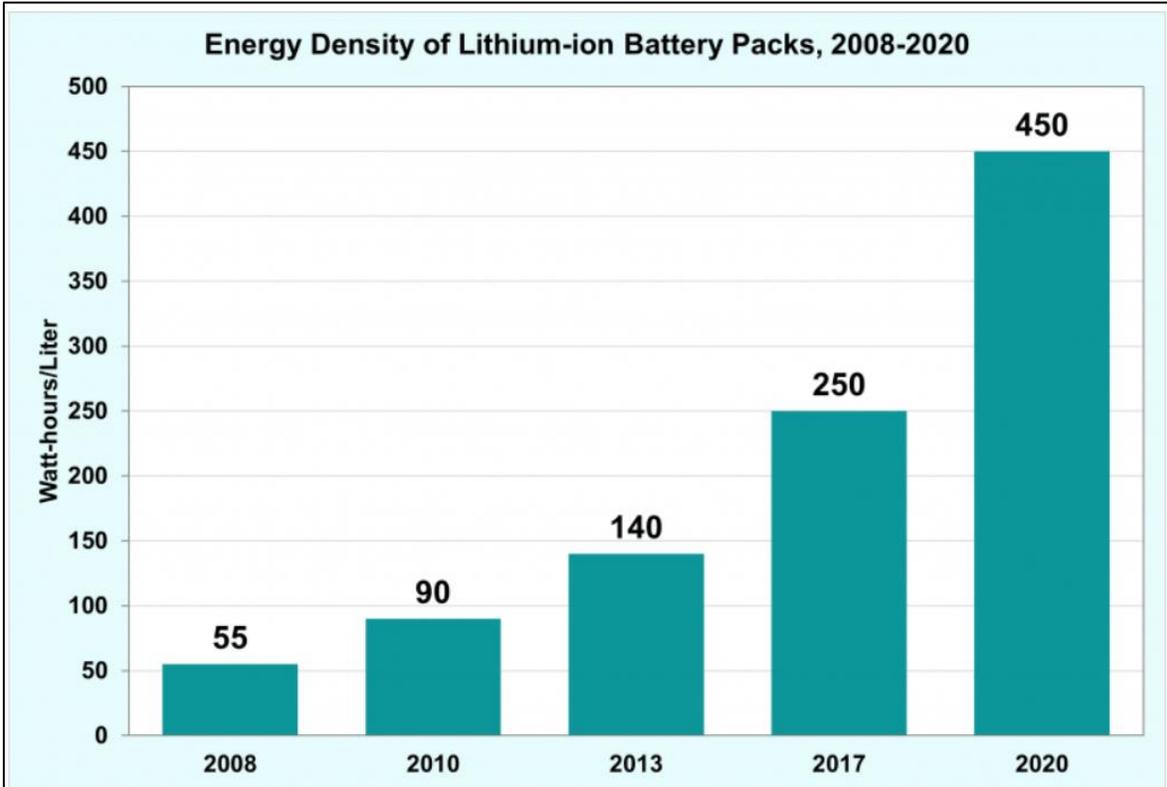
Bryan Vasser, OSC R4

Objectives

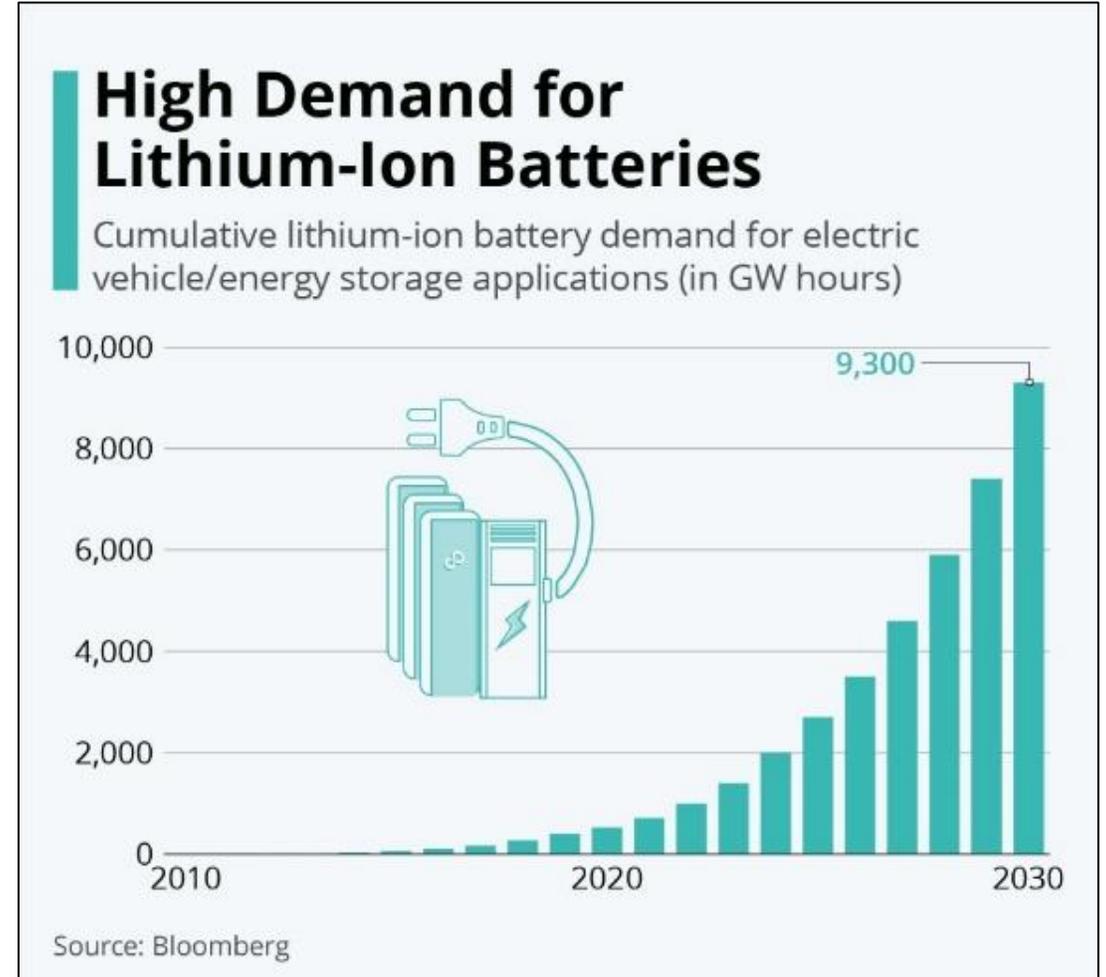
- ◆ Background Information
- ◆ Incident Types
- ◆ EPA Response Considerations
 - Site Safety
 - Air Monitoring
 - Shipping
 - Disposal
 - Expertise/Guidance



Battery Fires are on the Rise

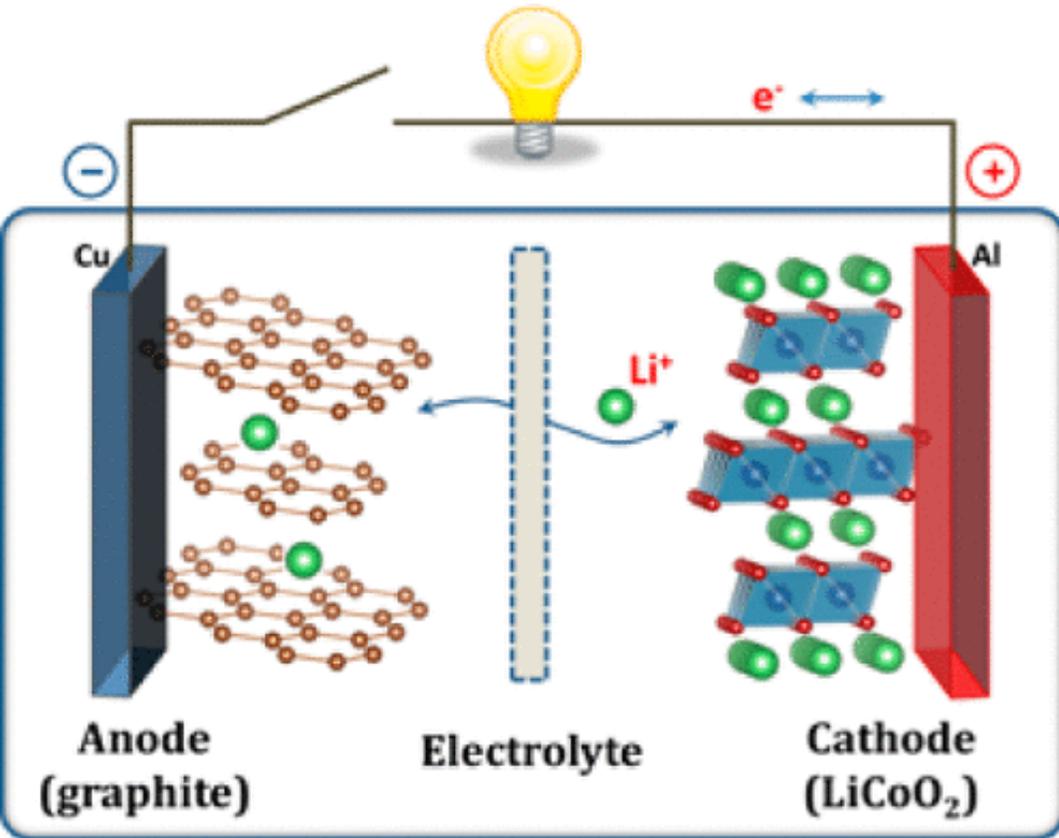


Source: Nitin Muralidharan, Ethan C. Self, Marm Dixit, Zhijia Du, Rachid Essehli, Ruhul Amin, Jagjit Nanda, Ilias Belharouak, Advanced Energy Materials, *Next-Generation Cobalt-Free Cathodes – A Prospective Solution to the Battery Industry's Cobalt Problem*, January 2022.



Source: Bloomberg

Terminology



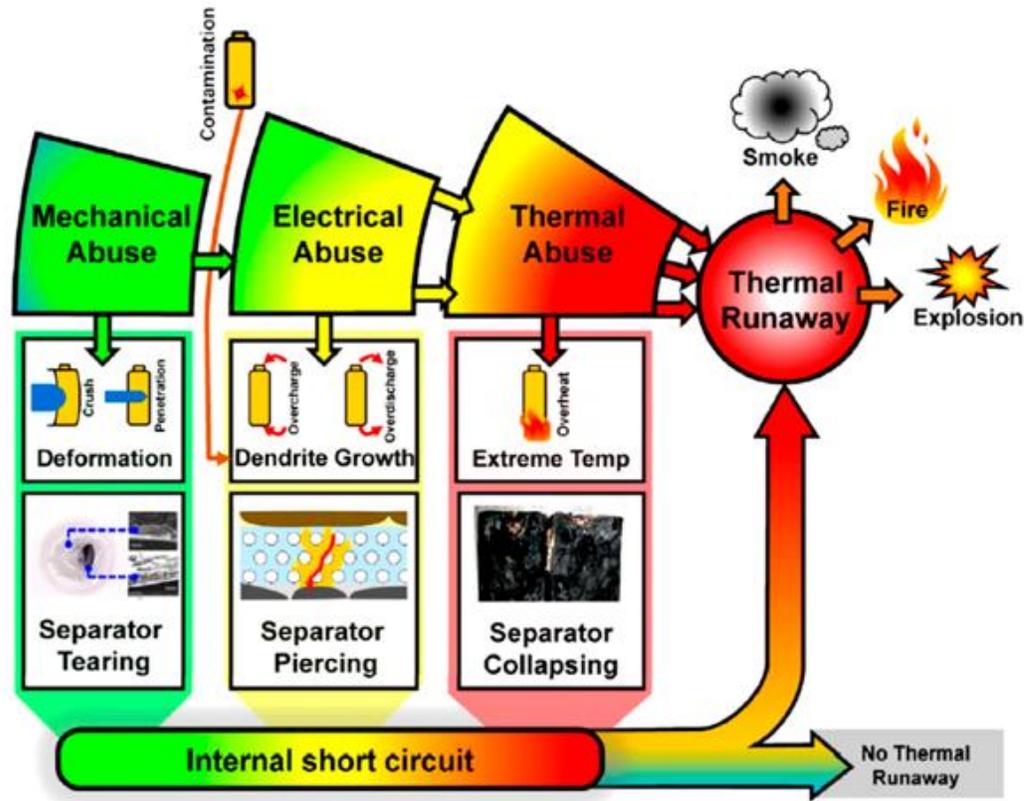
- ◆ Primary Battery – Lithium Metal batteries (not Li-ion); not rechargeable
- ◆ Secondary Battery – these are rechargeable, such as Li-ion batteries.
- ◆ Separator – used to isolate the two electrodes from one another and is usually made up of a microporous polymer membrane. Critically, the membrane prevents the two electrodes from contacting but allows the Li ions to pass through its pores.
- ◆ Electrolyte – the organic solution that the Li ions pass through, from the anode to the cathode. This organic solution is usually flammable, as such, electrolyte compositions all have similar risks due to their flammable nature.
- ◆ Dendrites – metallic branch-like structures that grow on the negative electrode. These are detrimental to battery life and can result in a short circuit.

18650s



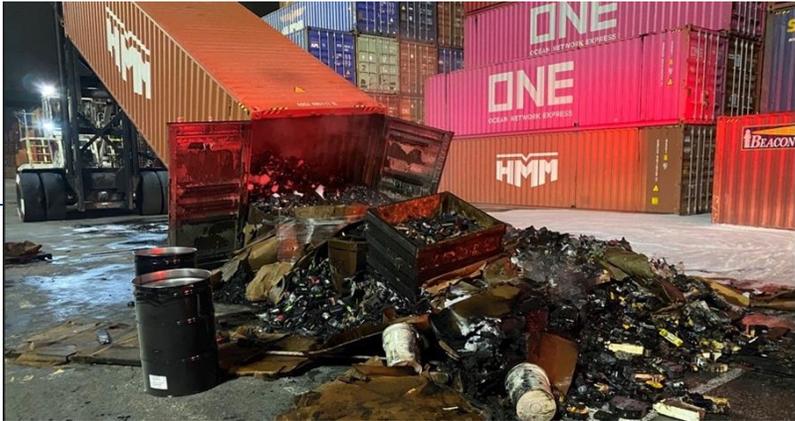
- ◆ Most common battery cell
 - 18 mm diameter
 - 65 mm long
- ◆ 3.7 Volts and 2.2 Amp hours
- ◆ Wired in series or parallel to obtain desired characteristics

How do Fires Occur



◆ Fires can occur in just 1 cell and propagate throughout the battery pack





Incident Scales Vary

EPA Incidents

- ◆ Morris Fire – Recycling Facility R5
- ◆ Lakes Parkway Fire – Recycling Facility R4
- ◆ Asset Recycling Fire – Recycling Facility R4
- ◆ Scooter Facility Fire – R9 - current
- ◆ Moss Landing – MegaPak Fire R9
- ◆ Yellowstone Battery Fire – R8
- ◆ Mt Horeb – Recycling Facility R5
- ◆ Vape Shop – R9 current



Li-ion Battery Fire Response Considerations

- ◆ Site Safety – Lakes Parkway
- ◆ Air Monitoring – Asset Recycling
- ◆ Shipping – Mount Horeb
- ◆ Disposal – Asset Recycling
- ◆ Expertise and Guidance



Site Safety

Lakes Parkway Fire Response

- ◆ Fire Department responded to facility, twice, three days apart and requested EPA assistance



Damaged Batteries are Unpredictable

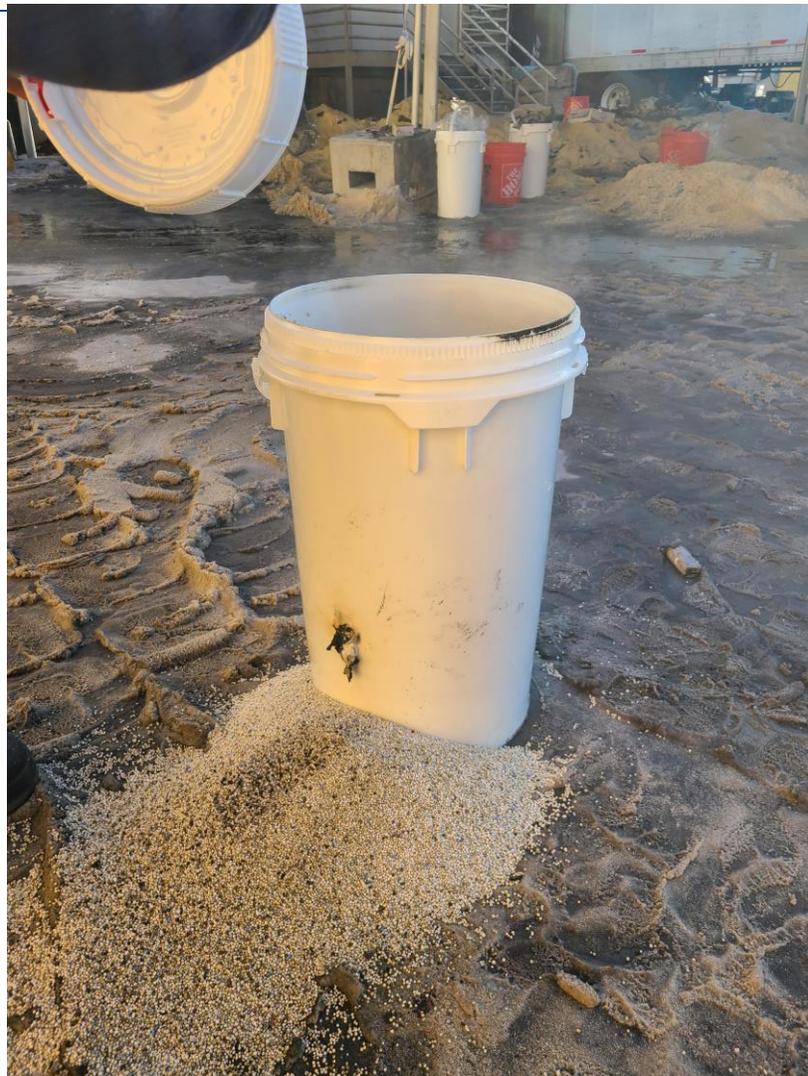




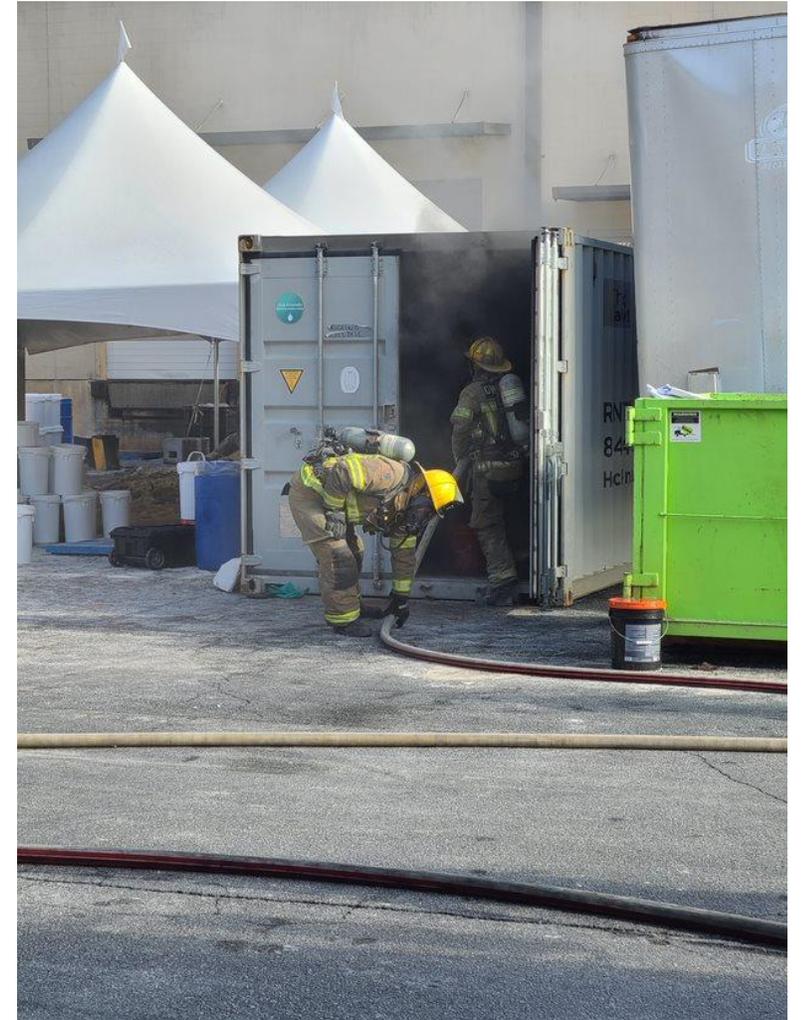
First Fire of the Day – recently packaged bucket



Technically not a Fire



Second Fire of the Day – bucket packaged 5 days ago







Aftermath

- ◆ Approximately 20 buckets were damaged during the second fire
- ◆ The bucket that caught fire had been packaged approximately 5 days ago and not been touched/moved for 4 days

Stop Work

Primary Goal:

- ◆ Stop calling the Fire Department

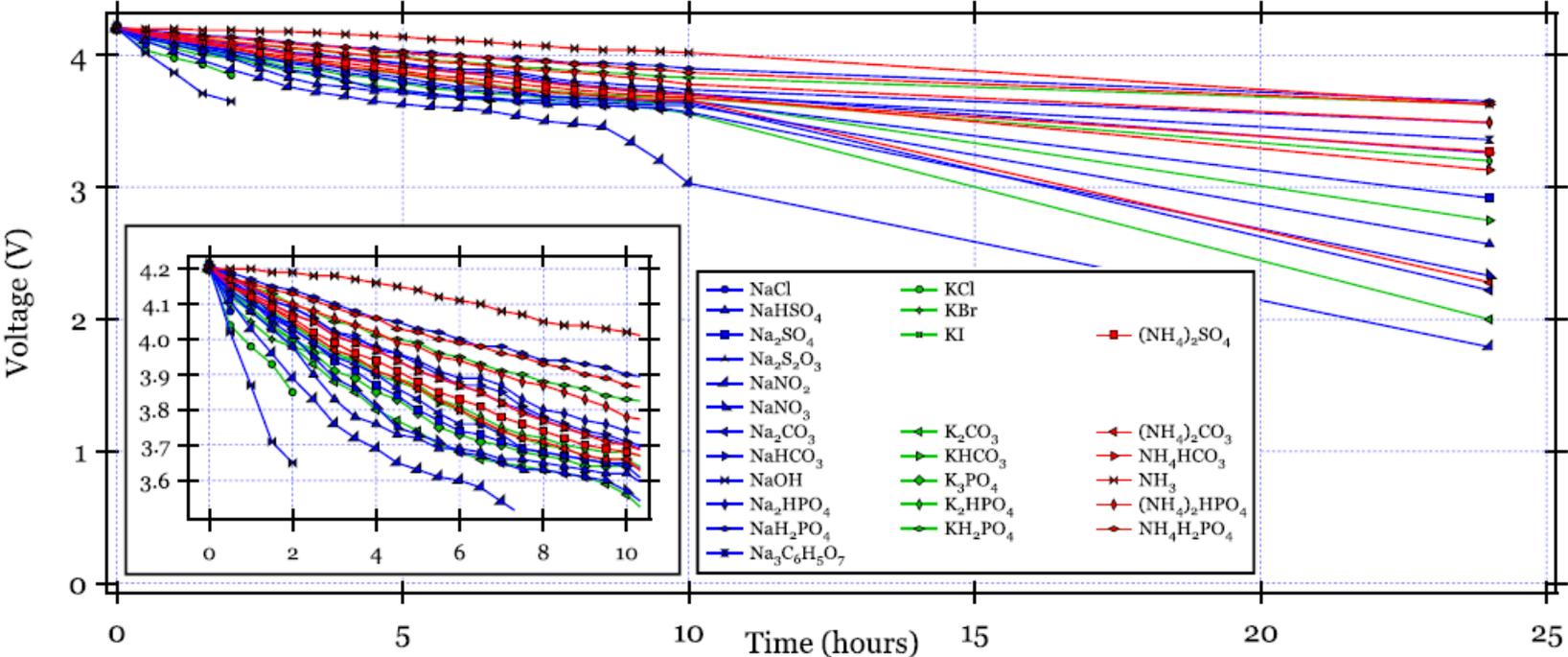
Secondary Goals:

- ◆ Stop having fires
- ◆ Find a way to safely package/ship/dispose of the DDR batteries

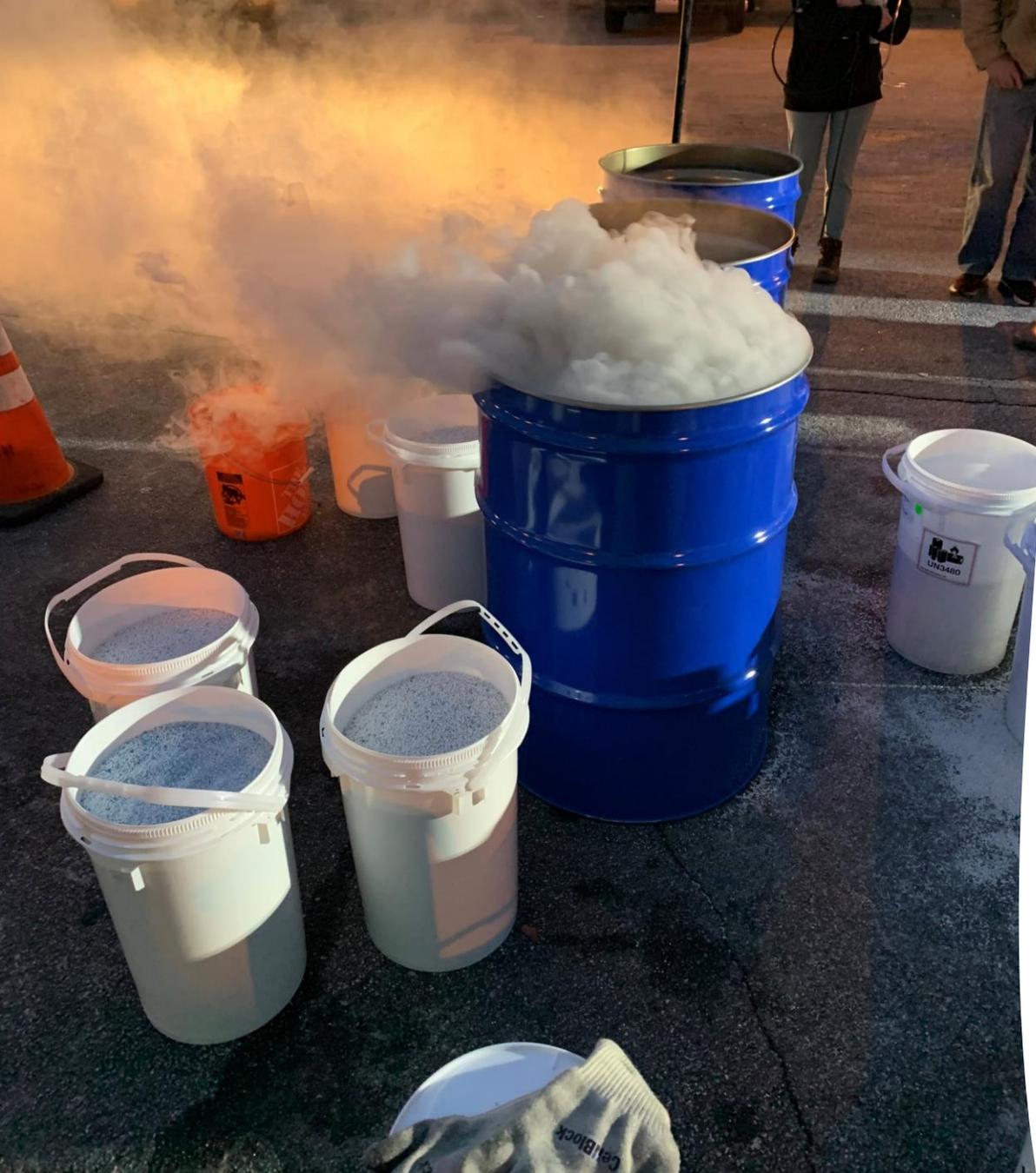


De-energizing Batteries

◆ Recycling facilities regularly mentioned that prior to shredding they “soak” the batteries in salt water prior to shredding TO REDUCE EXPLOSIONS during the shredding process.



Battery De-energizing Test

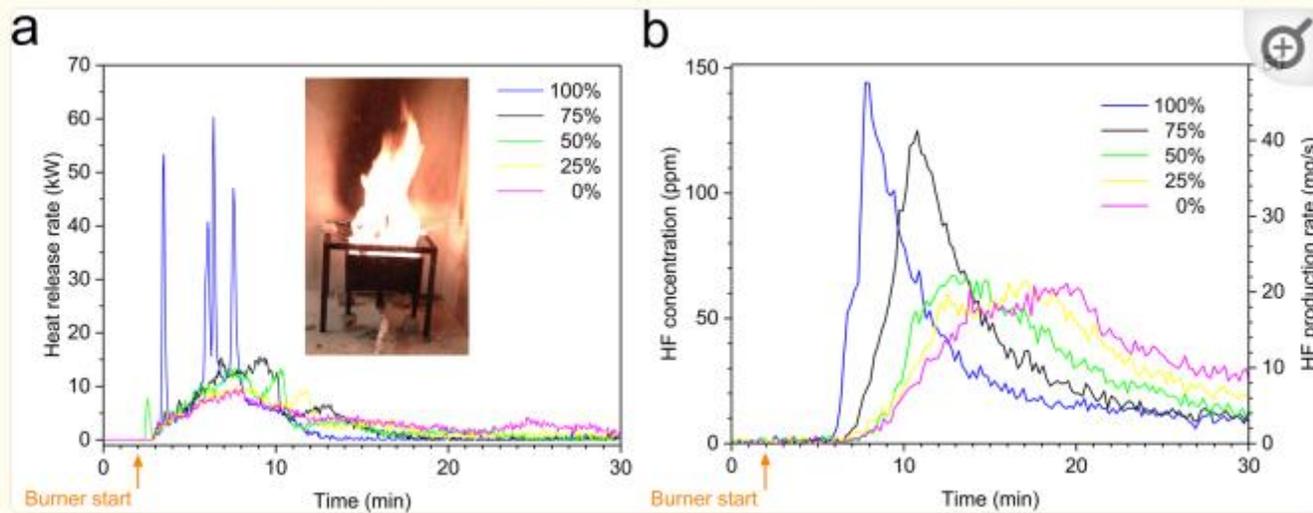


- ◆ Salt water solution – Approximately 0.5% NaCl
- ◆ 1 lb NaCl per 25 gallons water
- ◆ Soak from 3 days to 3 months
- ◆ Potentially HF, Cl₂, HCl, other gases similar to plastic fires released during combustion
- ◆ 24 hour results indicated full discharge of test batteries



Air Monitoring

- ◆ Toxic Vapors Released during battery fires include:
 - Hydrogen and Carbon Monoxide
 - Hydrogen Fluoride or Hydrogen Chloride
 - Hydrogen Cyanide and others compounds normally seen at a plastic fire



Asset Recycling Fire



Asset Recycling – Air Monitoring



- ◆ HF detections inside the downwind building approximately 0.5 ppm

Shipping – DOT Restrictions for DDR Batteries

- (f) *Damaged, defective, or recalled cells or batteries.* Lithium cells or batteries that have been damaged or identified by the manufacturer as being defective for safety reasons, that have the potential of producing a dangerous evolution of heat, fire, or short circuit (e.g., those being returned to the manufacturer for safety reasons) may be transported by highway, rail or vessel only, and must be packaged as follows:
 - (1) Each cell or battery must be placed in individual, non-metallic inner packaging that completely encloses the cell or battery;
 - (2) The inner packaging must be surrounded by cushioning material that is non-combustible, electrically non-conductive, and absorbent; and
 - (3) Each inner packaging must be individually placed in one of the following packagings meeting the applicable requirements of part 178, subparts L, M, P, and Q of this subchapter at the Packing Group I level:

DOT Involvement at Sites

◆ DOT Involvement at Batteries and Electronics Recycling Inc. (BERI, Mount Horeb)

- May 11, 2020: Initial by EPA OSC to discuss the site
- July 22, 2020: Follow-up contact by EPA OSC that raised red flags
- July 24, 2020: First site visit
- July 28, 2020: Second site visit
- August 06, 2020: Third site visit
- August 25, 2020: DOT Special Permit application submitted
- September 09, 2020: Last site visit
- October 16, 2020: DOT Special Permit issued

◆ DOT has been involved for several purposes

- Investigation of where the bad batteries came from
- Following up with EPA's procedure to make sure EPA is shipping appropriately

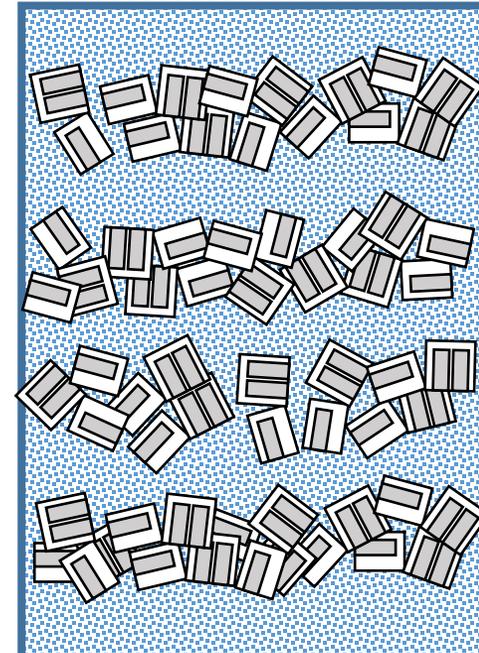
**Involve DOT EARLY
and OFTEN**

DOT Special Permits

- ◆ Allow for operations outside of the Hazardous Materials Regulations, providing a similar level of security can be met
- ◆ Require a submittal for approval and can take 7-90 days to be approved
- ◆ Can be issued to a company
 - CellBlock has special permits using special drums
 - These will be limited to certain circumstances/use cases
- ◆ Can be issued to a site
 - EPA R4 requested a permit that was site-specific at the Lakes Parkway Site

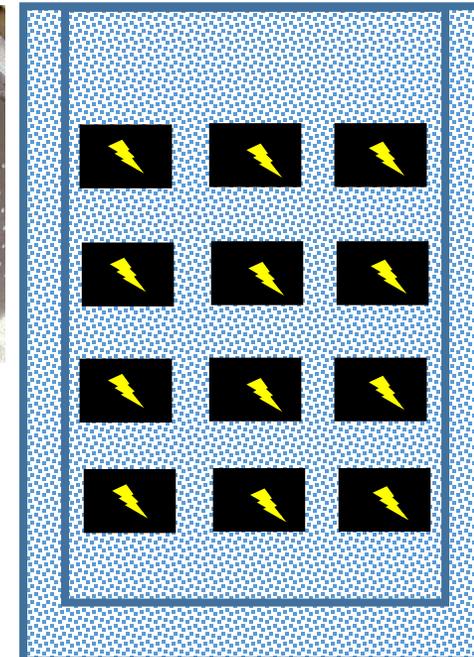
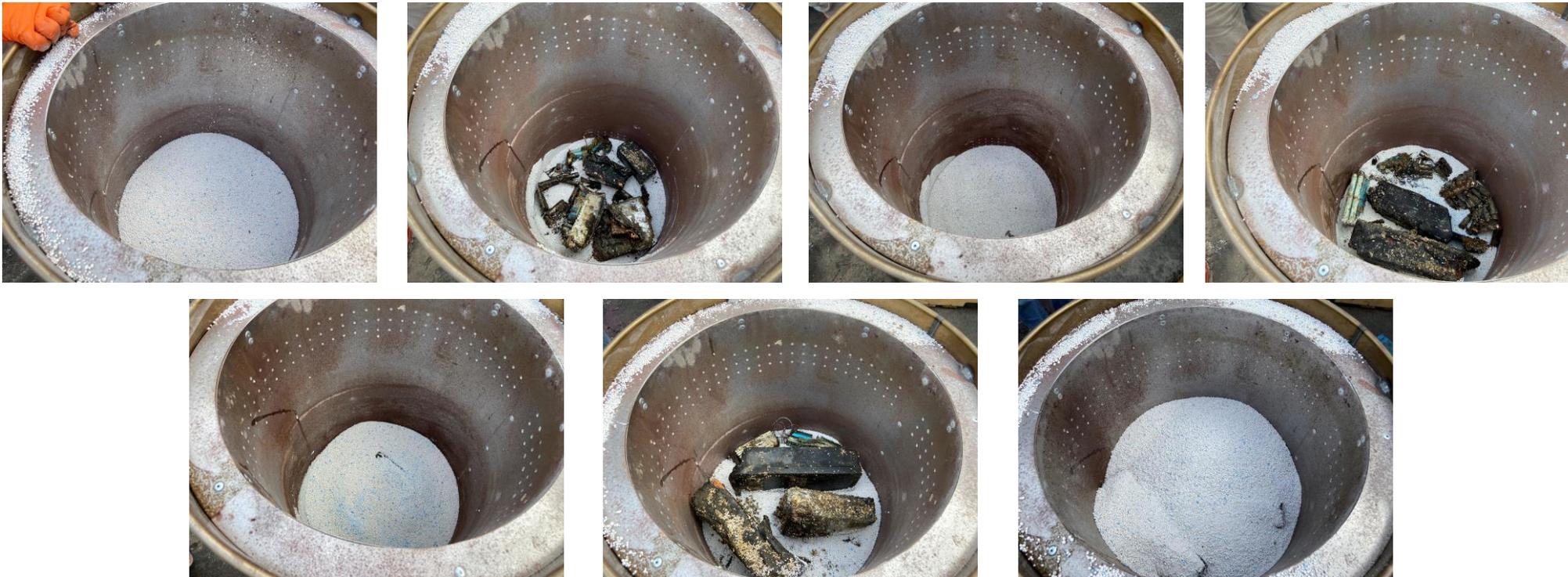
DOT SP-16532 – held by ER, not site specific

- ◆ Special Permit to package multiple “small” lithium ion batteries
 - Up to 400 lbs in a standard 55-gallon drum



DOT SP-21329 – held by R4, site specific

- ◆ Special Permit to package multiple “large” lithium ion batteries (>300Wh, 14 lbs)
 - Up to 180 lbs in a Call2Recycle drum (\$800 per drum)



Disposal

- ◆ End-Point Recycling Facilities over the best option for disposal

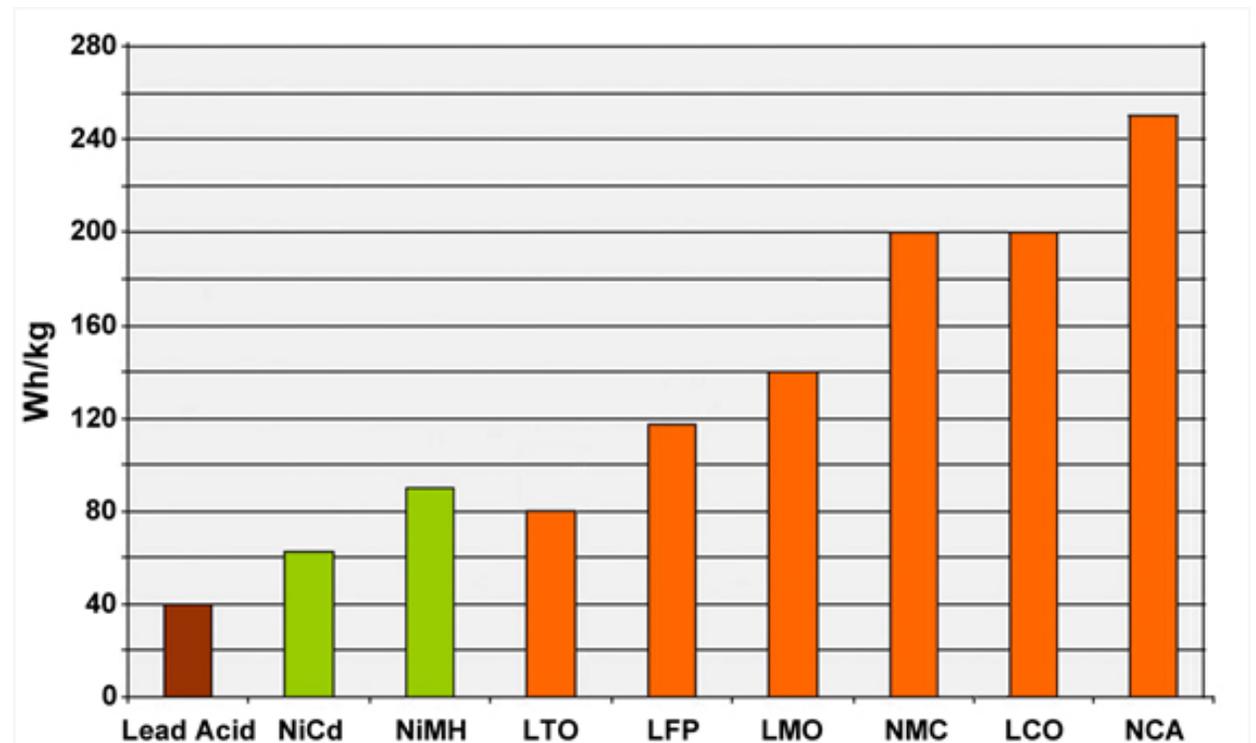


- ◆ Discharge battery (3 days in brine)
- ◆ Shred battery to 0.5" or less pieces
- ◆ Extract metals
- ◆ Dispose of remaining mash

Li-ion Battery Chemistries

- ◆ Lithium Cobalt Oxide(LiCoO_2) — LCO
- ◆ Lithium Nickel Cobalt Aluminum Oxide (LiNiCoAlO_2) — NCA
- ◆ Lithium Nickel Manganese Cobalt Oxide (LiNiMnCoO_2) — NMC
- ◆ Lithium Manganese Oxide (LiMn_2O_4) — LMO
- ◆ Lithium Iron Phosphate(LiFePO_4) — LFP
- ◆ Lithium Titanate (Li_2TiO_3) — LTO

Different chemistries cannot all be recycled together



Involve Recycling Facilities Early

- ◆ Tour the site
- ◆ Advise on potential chemistries
- ◆ Rent drums
 - \$100 to rent
 - \$800-1200 to buy new

- ◆ Do not try to do on-site shredding yet



Expertise and Guidance

- ◆ New and developing issue with little available guidance documents
- ◆ EPA Moving Forward
 - Update Air Monitoring Tables
 - Create an online course
 - Conduct outreach trainings
 - Other Ideas
- ◆ Few experts in the field to call
 - Gary Sharp – Hazard3
 - Steve Drueke – Environmental Restoration
 - Fire Chiefs from large metropolitan areas
 - Recycling Facilities
 - Cell Block

Region 4 Recycling Facilities

- ◆ Alabama – Li Cycle opened in October 2022
- ◆ South Carolina – Cirba Solutions opening a \$500M recycling facility in early 2024
- ◆ Georgia – 2 battery manufacturing facilities and 1 recycling facility being built





National Academies Oil in the Sea IV: *Inputs, Fates, and Effects*

Joint RRT-4/6 Meeting

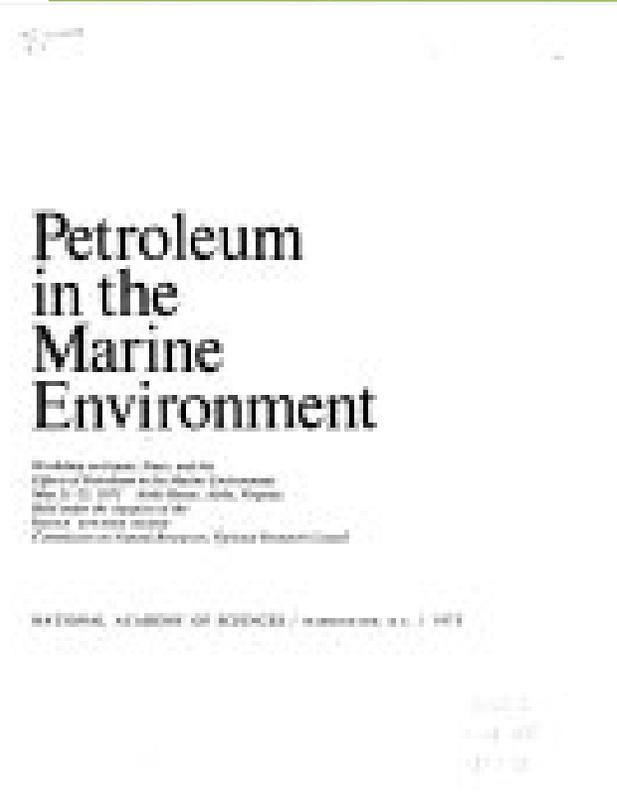
Dr. Victoria Broje, Shell Oil

Agenda

- 1 Project context and overview
- 2 Inputs of oil into the sea
- 3 Minimizing the inputs through source control and response
- 4 Fate of oil in the sea
- 5 Effects of oil in the sea
- 6 Overarching themes to advancing oil spill science
- 7 Key Takeaways
- 8 Q&A

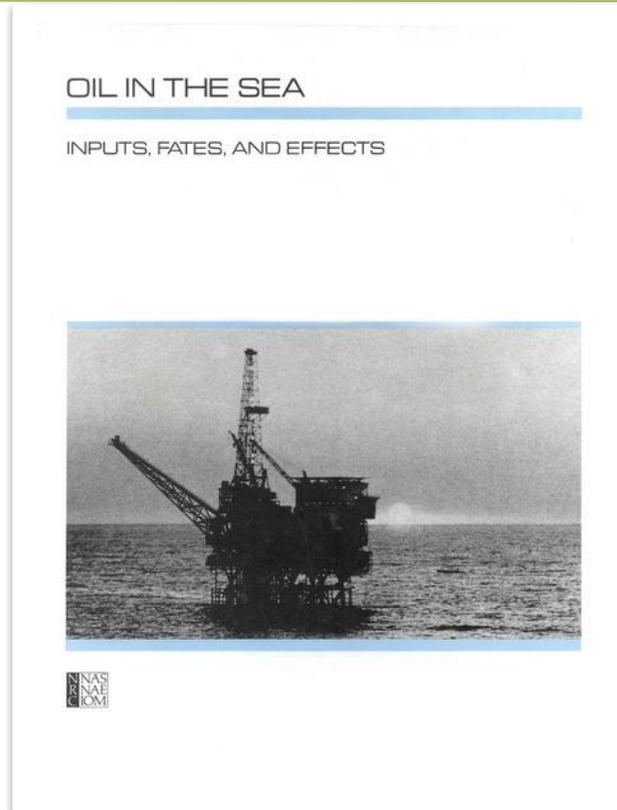
Oil in the Sea IV: Inputs, Fates, and Effects

Study Context

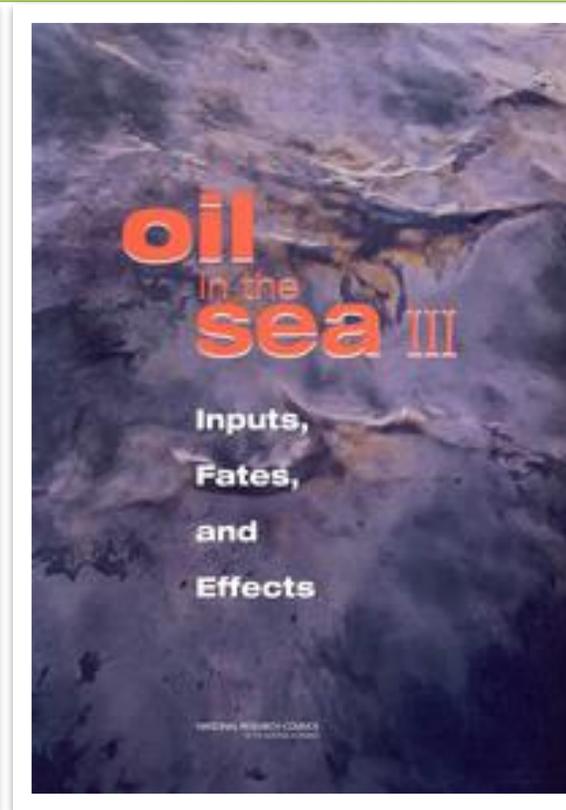


1975

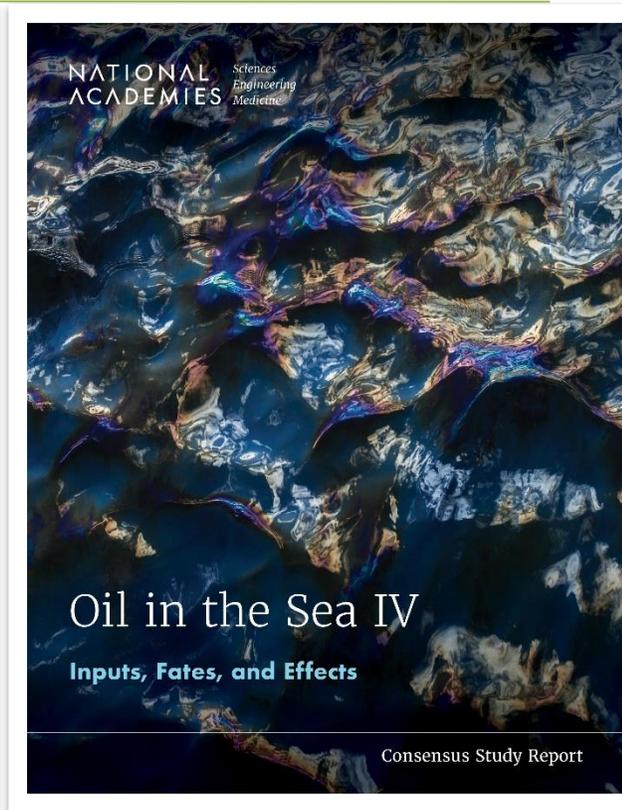
NATIONAL ACADEMIES
Sciences
Engineering
Medicine



1985



2003



2022

Study Overview

- 2-year consensus study (100% virtual)
- Sponsored by:
 - American Petroleum Institute
 - Bureau of Ocean Energy Management
 - Bureau of Safety and Environmental Enforcement
 - Gulf of Mexico Research Initiative
 - NASEM President's Circle Fund
 - Oceans and Fisheries Canada
- 17-member Committee
- Monthly meetings - input from: committee expertise, scientific literature, 58 invited speakers, and 3 consultant teams
- Resulting report peer reviewed by an additional 13 experts

Oil in the Sea IV: Inputs, Fates, and Effects

Committee

Kirsi Tikka (Chair)

Ed Levine (Vice-chair)

Akua Asa-Awuku

C.J. Beegle-Krause

Victoria Broje

Steve Buschang (through August, 2021)

Dagmar Schmidt Etkin

John Farrington

Julia Foght

Bernie Goldstein

Carys Mitchelmore

Nancy Rabalais

Jeff Short

Scott Socolofsky

Berrin Tansel

Helen White

Michael Ziccardi

Oil in the Sea IV: Inputs, Fates, and Effects

Report Structure



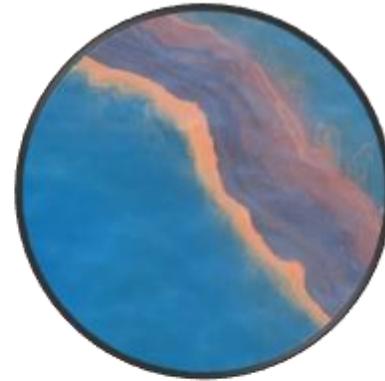
**What is Oil?
(Chapter 2)**



**Where does
oil in the sea
come from?
(Chapter 3)**



**What can
be done?
(Chapters
3 & 4)**



**Where does
the oil go?
(Chapter 5)**



**What harm
could the oil
do?
(Chapter 6)**

Ch. 2 Oil as a Complex Mixture

(a crude oil can be composed of over a thousand individual chemicals)

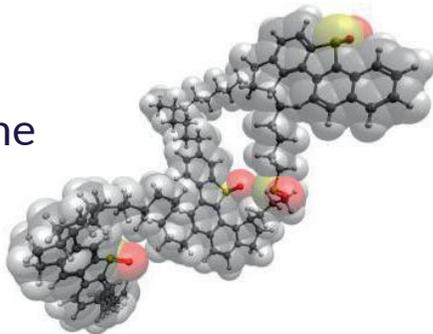
methane



phenanthrene



asphaltene

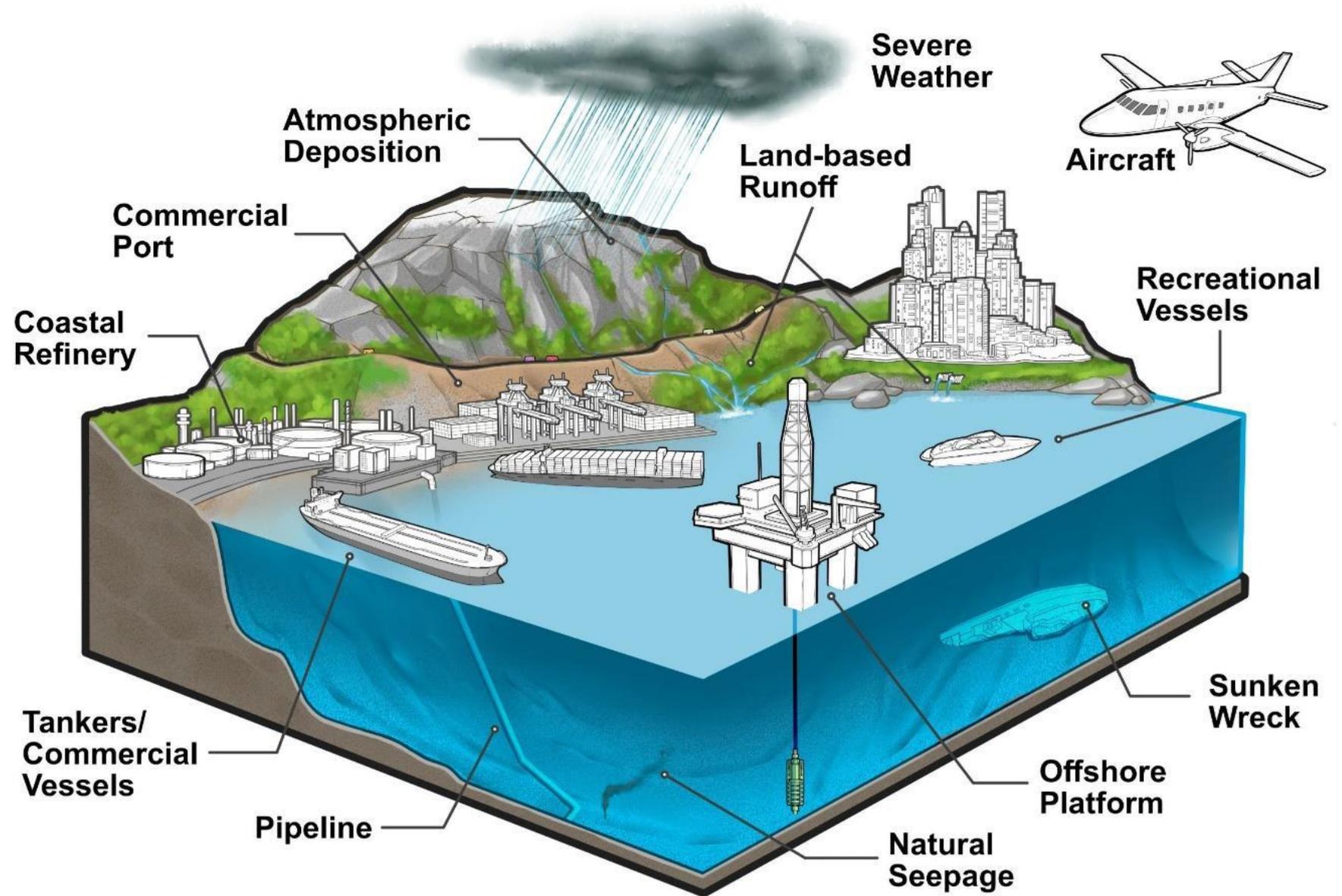


- Definitions and classifications
- Chemical compositions
- Sampling and in situ observations and analysis
- Phases and states of oil in the sea
- Thermodynamics of oil mixture
- Conclusions regarding analytical chemistry methodology, elemental composition, utilization of large databases, reporting of chemical composition, modeling, and new fuels

Oil in the Sea IV: Inputs, Fates, and Effects

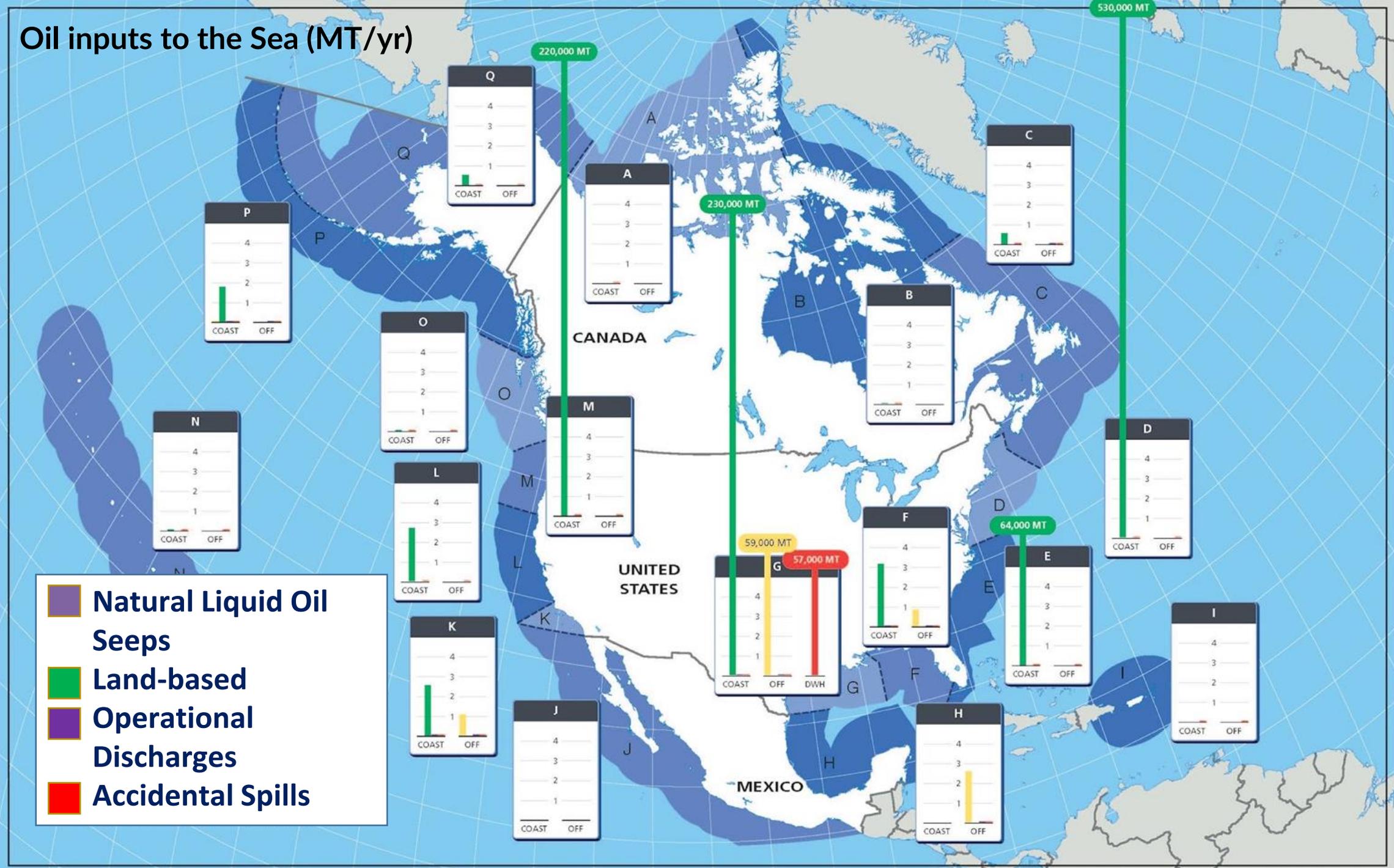
Ch. 3 Input

2010 – 2019



Oil inputs to the Sea (MT/yr)

- Natural Liquid Oil Seeps
- Land-based
- Operational Discharges
- Accidental Spills



Oil in the Sea IV: Inputs, Fates, and Effects

Ch. 3 Annual Inputs – Comparison between Decades

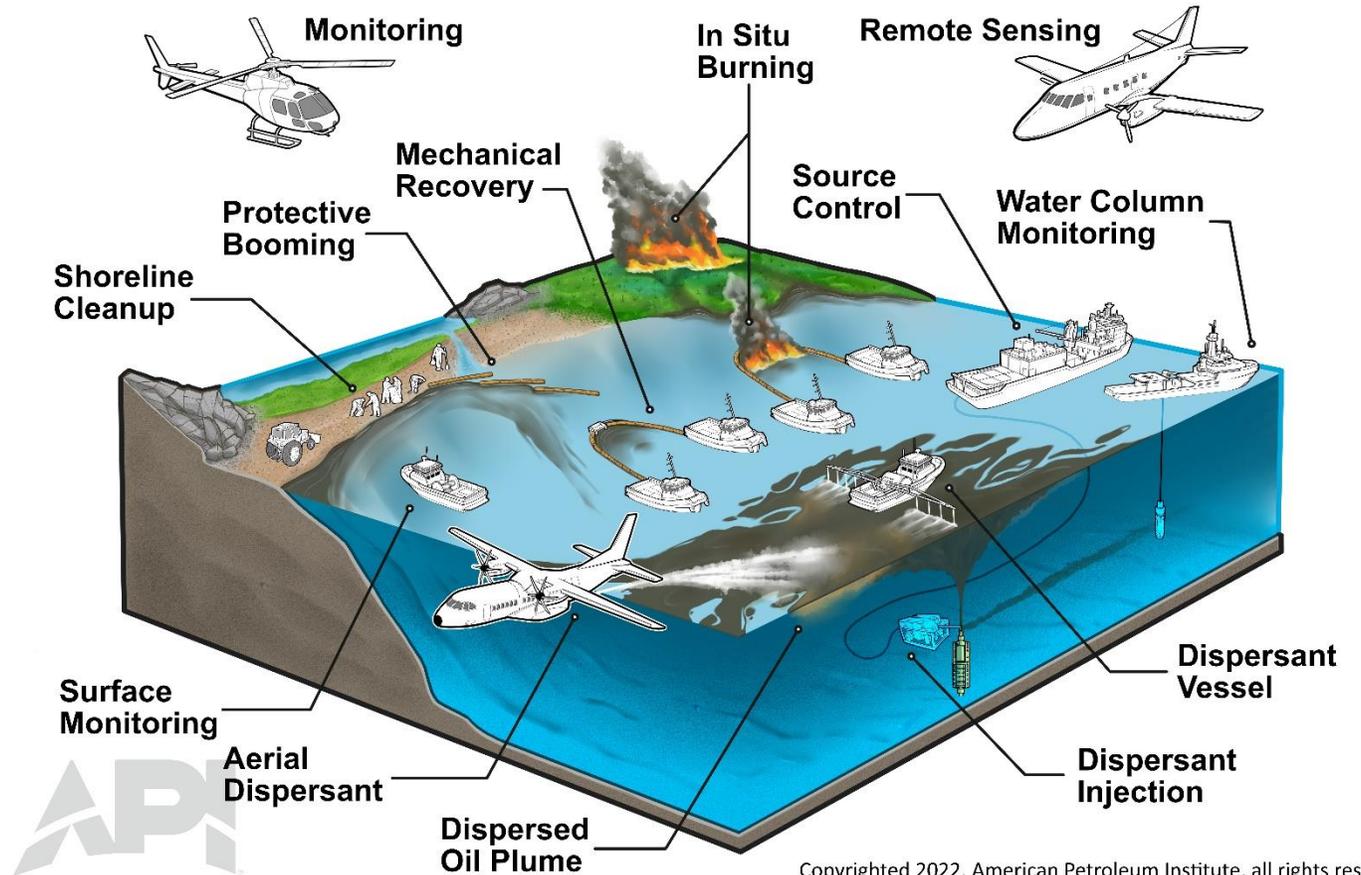
	Oil in the Sea IV (2010 – 2019) (MT/yr)	Oil in the Sea III (1990 – 1999) (MT/yr)
Natural Oil Seeps	 100,000	160,000
Extraction Including DWH	 67,000	3,000
Excluding DWH	10,000	
Transportation	 800	9,200
Consumption	 1,200,000	84,000
Total (Rounding to 2 significant digits)	1,400,000	260,000
Total (Excluding consumption)	170,000	170,000
Total (Excluding consumption, DWH)	110,000	170,000

Oil in the Sea IV: Inputs, Fates, and Effects

Ch. 4 Reduction of Inputs – Accidental Spill Mitigation



Image Credit: Oil Spill Response, Ltd.



Copyrighted 2022, American Petroleum Institute, all rights reserved

Ch. 4 Accidental Spill Mitigation – Advances

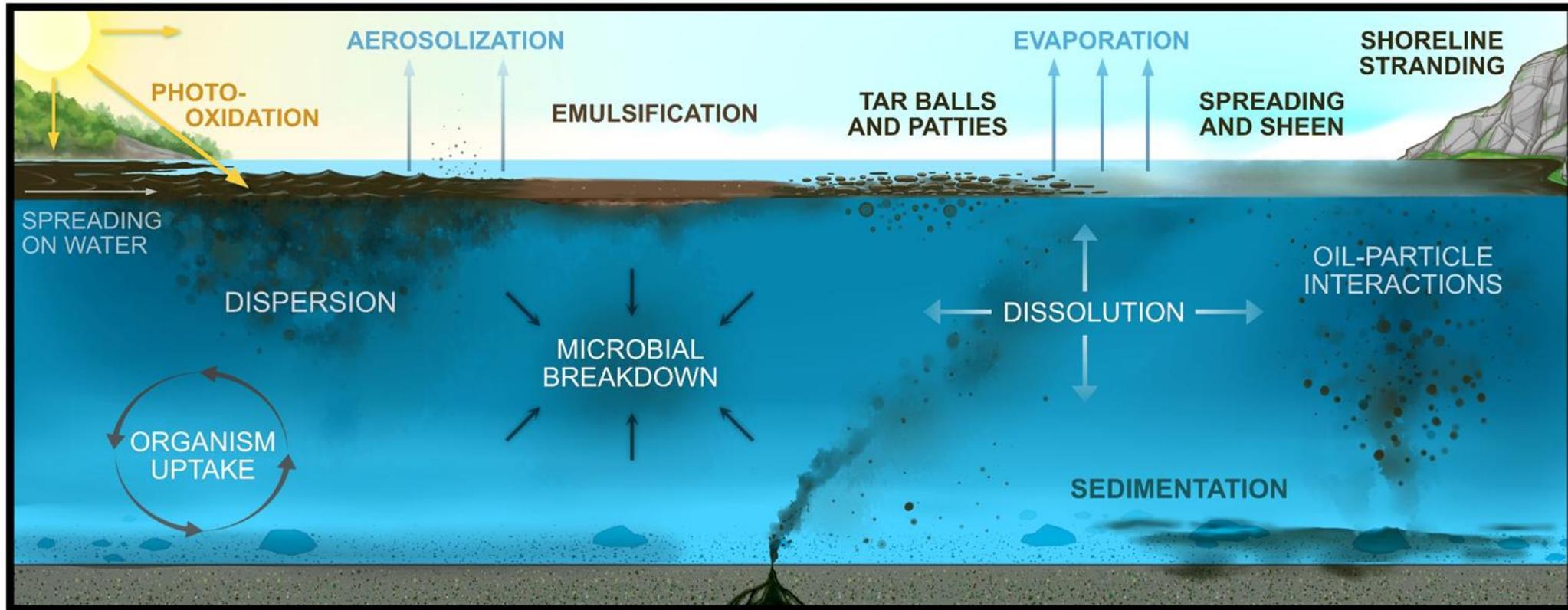
- Salvage operations as an important mitigation step.
- Advances in blowout prevention and source control technologies.
- Advances in pipeline integrity monitoring and leak detection.
- Incident Command System as the standard for emergency management.
- Response toolbox concept to optimize response efficiency and environmental protection.
- Development of risk assessment tools.
- Advances in oil spilling modeling, monitoring, analytical methods, and data management.
- Improved ability to monitor field activities and environmental impacts.
- Integration of oiled wildlife response with oil spill response efforts.

Ch. 4 Source Control & Response – Future Needs

- Field experimentation for improvement of response tools under realistic conditions.
- Understanding effectiveness of response tools on new fuel types.
- Life-cycle analysis of oil spills based on response scenarios.
- Understanding health and psychological risks to response professionals
- Improvements to response tools: mechanical recovery, in situ burning, chemical dispersants, arctic conditions.
- Research on long-term impacts to animals to inform oiled wildlife management.

Oil in the Sea IV: Inputs, Fates, and Effects

Ch. 5 Fates of Oil in the Sea



Ch. 5 Fates – Advances in Understanding

- Interactions of live oil and gas spilled within the ocean
- Prediction of gas bubble sizes and oil droplet breakup processes
- “Tip streaming”: effect of dispersant on droplets
- Advances in computational fluid dynamics modeling of oil spills in the oceans
- Importance of dissolution as a fate process for subsea oil spills
- Importance of oil droplet size distribution
- Importance of photo-oxidation in oil degradation
- Marine oil snow sedimentation and flocculant accumulation (MOSSFA)
- Fates of oil unique to cold water and sea ice

Ch. 5 Fates – Remaining Research Needs

Further understanding of the fundamental processes controlling:

- Physical interaction of oil with marine particles and suspended organic matter
- Photo-chemical reactions affecting the fates of oil
- Biological modification and degradation of oil, including understanding of biodegradation byproducts
- Behavior and fate of new or unconventional oils, such as very low sulfur fuel oils

Refining of modeling algorithms to predict oil behavior and fate, including new databases of oil properties.

Oil in the Sea IV: Inputs, Fates, and Effects

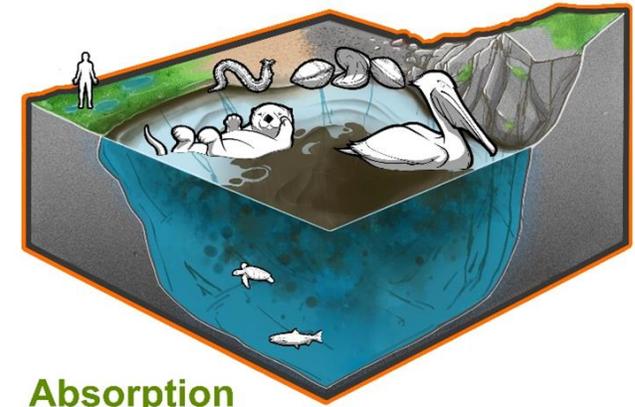
Ch. 6 Effects of Oil in the Sea

- Modes of Exposure
- Mechanisms of Toxicity
- Limitations and Challenges
- Effects on Populations, Communities, and Ecosystem
- Effects in the Arctic
- Effects on Humans
- Effects Modeling

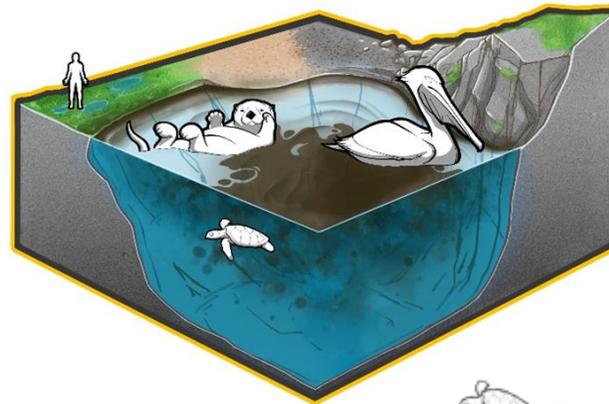
Physical Contact



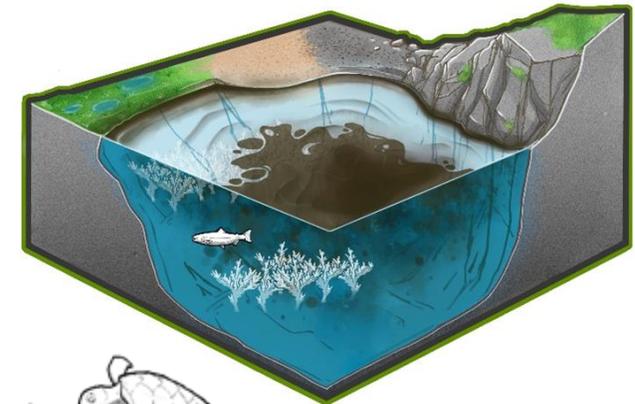
Ingestion



Inhalation



Absorption



Ch. 6 Effects – Advances in Understanding

- Predicting effects within a changing ecosystem and with multiple co-stressors
- Understanding longer-term effects on population and community levels
- Identification of some common misconceptions regarding the impact of oil in the marine environment
- Effects of oil release on human health, including mental and behavioral health
- Identification of important information gaps

Ch. 6 Effects – Remaining Research Needs

- Natural Seeps
- Marine Oil Snow
- Assessment Techniques
- Marsh Ecosystem Health
- Marine Vertebrates
- Corals
- Ecosystem-level Effects
- Shoreline Oiling Characterization
- Photo-oxidation
- Behavioral Effects of Oil Releases
- Toxicity Studies and Models
- Seafood Safety
- Coastal Community Response
- Follow-up of Epidemiological Studies
- Maternal and Child Health

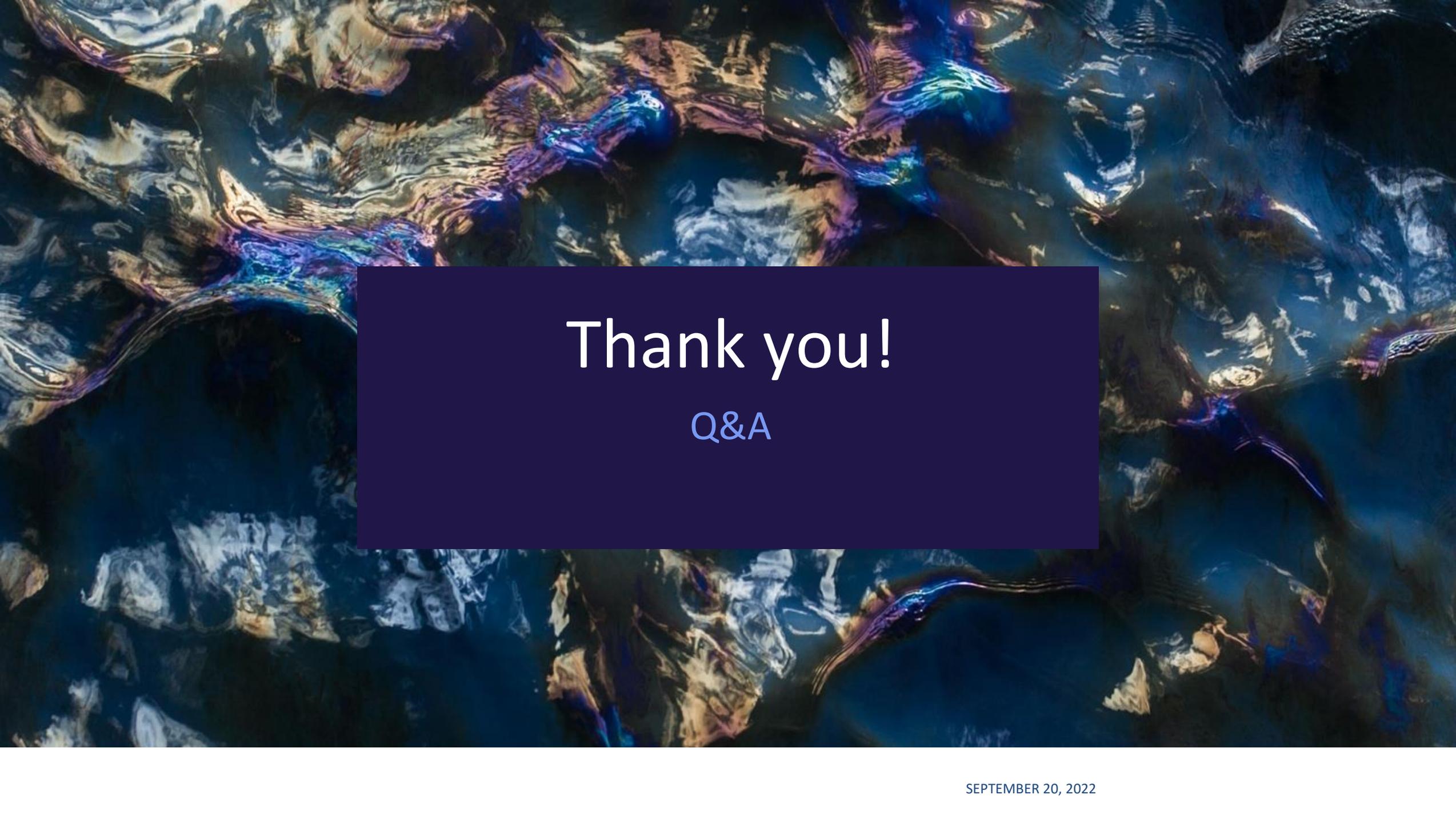
Ch. 7 Common Themes to Advance Oil Spill Science

1. Long-term funding
2. Human Health
3. Open Water Experimentation
4. Oil in the Arctic
5. New Fuels
6. Baseline Knowledge and Data
7. Big Data and Interdisciplinary Research



Key Takeaways

- Available data are inadequate for quantification of inputs.
- Estimates of land-based inputs, by far, outweigh all other sources.
- Future sources of oil in the sea may look different, e.g., intense weather, sea level rise, aging infrastructure, new shipping routes, new fuels. The greater oil spill community should be prepared for these new challenges.
- Unprecedented progress has been made in understanding oil spill science in the last two decades.
- Sustained funding is needed to continue progress and adapt to changing parameters.
- Many research gaps remain in understanding fates and effects of oil in the sea that, if filled, could inform more effective and efficient response.



Thank you!

Q&A

15 Minute Break!



DOI Orphaned Well Plugging Program

Susan Lee, DOI

Bipartisan Infrastructure Law:

Orphaned Wells Program Office

April 5, 2023 – RRT Presentation



What is the Orphaned Wells Program?

Bipartisan Infrastructure Law (BIL)

Infrastructure Investment and Jobs Act (IIJA)

Secretarial Order 3409 (Jan. 10, 2023)

Title VI – Methane Reduction Infrastructure

Section 40601: Orphaned Wells Site Plugging, Remediation,
& Restoration

- \$4.677 billion total
- Expires 9/30/2030

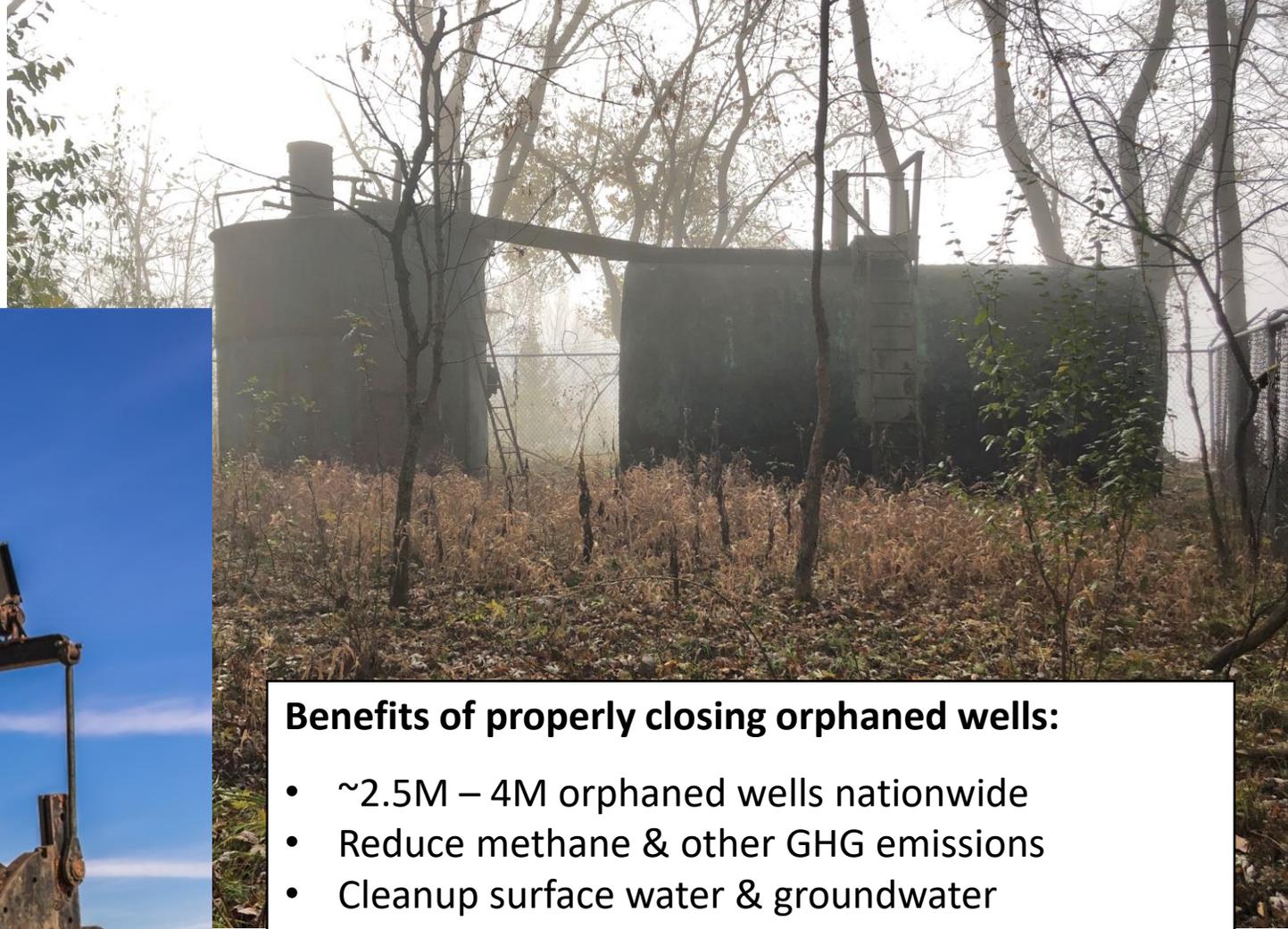
1. State and Tribal Grant Program – OEPC/OWPO

- \$4.3 billion for State and private lands [91.4%]
- \$150 million for work on Tribal lands [3.2%]

2. Federal Program – BLM/OEPC/OWPO

BLM, NPS, FWS, BSEE, USFS

- \$250 million



Benefits of properly closing orphaned wells:

- ~2.5M – 4M orphaned wells nationwide
- Reduce methane & other GHG emissions
- Cleanup surface water & groundwater contamination
- Remove health & safety hazards
- Restore habitat
- Create jobs, particularly in disproportionately burdened communities

Definitions – Orphaned Well

- with respect to **Federal land or Tribal land** = a well...
 1. that is not used for an authorized purpose, such as production, injection, or monitoring; and
 2. for which no operator can be located;
 3. the operator of which is unable—
 - a. to plug the well; and
 - b. to remediate and reclaim the well site; or
 - c. that is within the National Petroleum Reserve AK
- with respect to **State or private land** –
 1. has the meaning given the term by the applicable State; or
 2. if that State uses different terminology, has the meaning given another term used by the State to describe a well eligible for plugging, remediation, and reclamation by the State.

Eligible Uses of Funds

1. **Plug, remediate, & reclaim** orphaned wells
2. **Identify and characterize** *undocumented* orphaned wells
3. **Rank** orphaned wells based on factors including, public health / safety, potential environmental harm, & other land use priorities
4. Make information available on a **public website**
5. **Measure and track** –
 - emissions of **methane** and other gases associated with orphaned wells
 - **contamination** of groundwater or surface water
6. Remediate soil & **restore native species habitat** that has been degraded due to the presence of orphaned wells & associated pipelines, facilities, infrastructure
7. Remediate land adjacent to orphaned wells and decommission or remove associated **pipelines, facilities, infrastructure**
8. Identify and address any **disproportionate burden** of adverse human health or environmental effects of orphaned wells on communities of color, low-income communities, and Tribal & indigenous communities

State Grants

- Initial Grant (up to \$775M)
 1. Small-scale: up to \$5M - 2
 2. Large-scale: up to \$25M - 22
 - Lg-scale app deadline 5/13/22
 - Awards in August (24 states, \$560M)
 - Small-scale application period remains open (+3)
- Formula Grant (\$2B) - 26 States
 1. Job losses in O&G industry
 2. # documented orphaned wells
 3. Cost of plugging, reclamation, etc
 - State NOI deadline 12/31/21 (26)
 - State eligibility published 1/31/22
 - Draft guidance public comment period closed 2/24
 - Finalize guidance and open application period (phased awards)
- Performance Grants (\$1.5B)
 1. Matching Grants
 2. Regulatory Improvements Grants
 - Draft guidance underway
 - 4/1/23 Matching Grant guidance (?)

FY23 Tribal Well Options

\$50M cap

Direct Grant (5 years to obligate)

1. Implementation Grant
2. Program Development Grant (limit \$1M each)

or

In Lieu of a Grant

1. Request that DOI perform P&A on behalf of a Tribe
2. OEPC/OWPO & IESC

- Tribal listening sessions - Feb 2022
- Consultation - Sept 2022
- Final Guidance released – Nov 2022
- FY23 Deadline – 2/21/23 (30-day ext)
- Reviewing Applications now

Federal Program

- Federal Land = USDOJ & USDA
 1. BLM
 2. NPS
 3. FWS
 4. USFS
 5. BSEE/BOEM (off-shore)
- Technical Working Group (BLM & OEPC/OWPO)
 - Matrix, Methane, GW/SW, EJ subgroups
- FY22 funding
 - \$1.2M admin funds
 - \$33M project funds
 - 278 projects, 277 wells
 - BLM, NPS, FWS, USFS
- FY23 Data nominations due 1/20/23

Annual Report to Congress

1. Updated **inventory** of wells located on Federal, Tribal, State & private lands that are—
 - a. orphaned wells (OW) *or*
 - b. at risk of becoming OW
2. Estimate of the quantities of—
 - a. **methane** & other gases emitted from OW
 - b. emissions **reduced** as a result of plugging, remediating, and reclaiming OW
3. # **jobs** created, jobs saved through the plugging, remediation, & reclamation of OW
4. Acreage of **habitat** restored, with a description of the purposes for which that land is likely to be used

Region 5/7 OWPO Staff Assignments

Director – Kimbra Davis

Elizabeth Cherny/Hermain Joseph – Financial Specialist

State Program

Susan Lee, Division Chief

Yetunde Richardson, Grants Management
Specialist/GMS

Katherine Feiring, GMS

Whitney Anderson, Environmental Protection
Specialist/EPS (Indiana, Michigan, Missouri)

James Maio, EPS (Mississippi, Ohio)

Neil Ziemba, EPS (Illinois, Kansas, Nebraska)

Federal and Tribal Program

Brian Davis, Division Chief

Christine Arato, GMS

Amy Hughes, EPS

Michael Morden, EPS

Resources

- DOI Infrastructure Site

www.doi.gov/priorities/investing-americas-infrastructure

- State & Tribal Grants Program

Orphanedwells@ios.doi.gov

www.doi.gov/oepc/legacy-pollution-remediation-and-reclamation

- Federal Well Program

Orphanedwells@blm.gov

www.blm.gov/programs/energy-and-minerals/oil-and-gas/federal-orphaned-well-program

CLEAN BURNING OIL COMBUSTION: THE BSEE BURNER

Karen Stone
Chief, Response Research Branch

May 18, 2023

Bureau of Safety and Environmental Enforcement

Promoting Safety, Protecting the Environment and Conserving Offshore Resources



LOW-EMISSION SPRAY COMBUSTOR

“BSEE BURNER”



VIDEO

Advancing Oil Spill Response Technology through Technology Readiness Levels (TRLs)



TRL	SHORT DESCRIPTION
1	Basic principles observed
2	Technology concept and speculative application formulated
3	Technology proof of concept demonstrated
4	Technology prototype demonstrated in lab or model scenario
5	Technology prototype tested in relevant environments
6	Full-scale prototype demonstrated in relevant environments
7	Integrated technology tested on a large scale or in open water
8	Final integrated system tested in real or relevant environment
9	Final integrated system deployed in real spill environment



TRL	SHORT DESCRIPTION
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Advancing from a Proof of Concept to Prototype



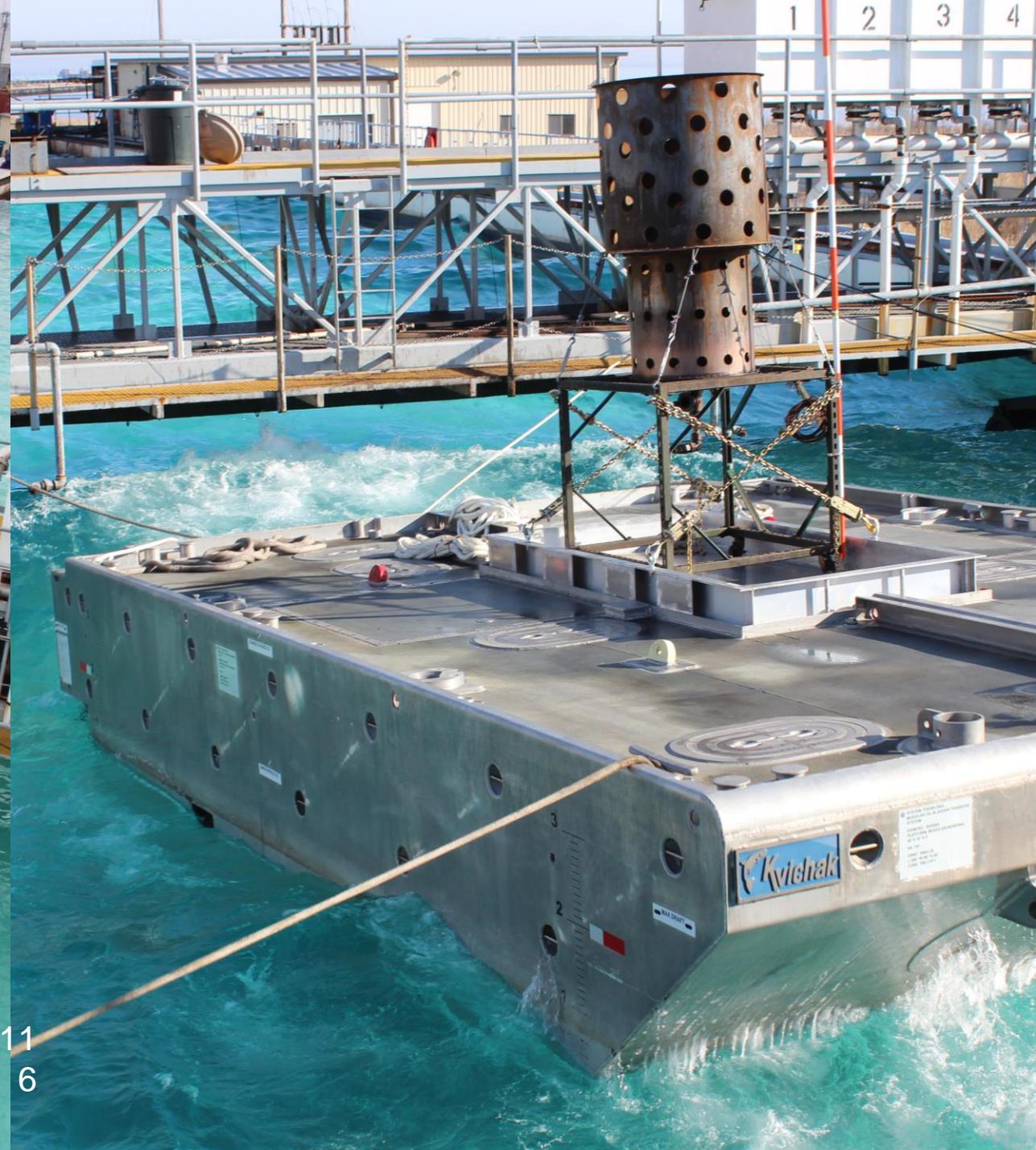
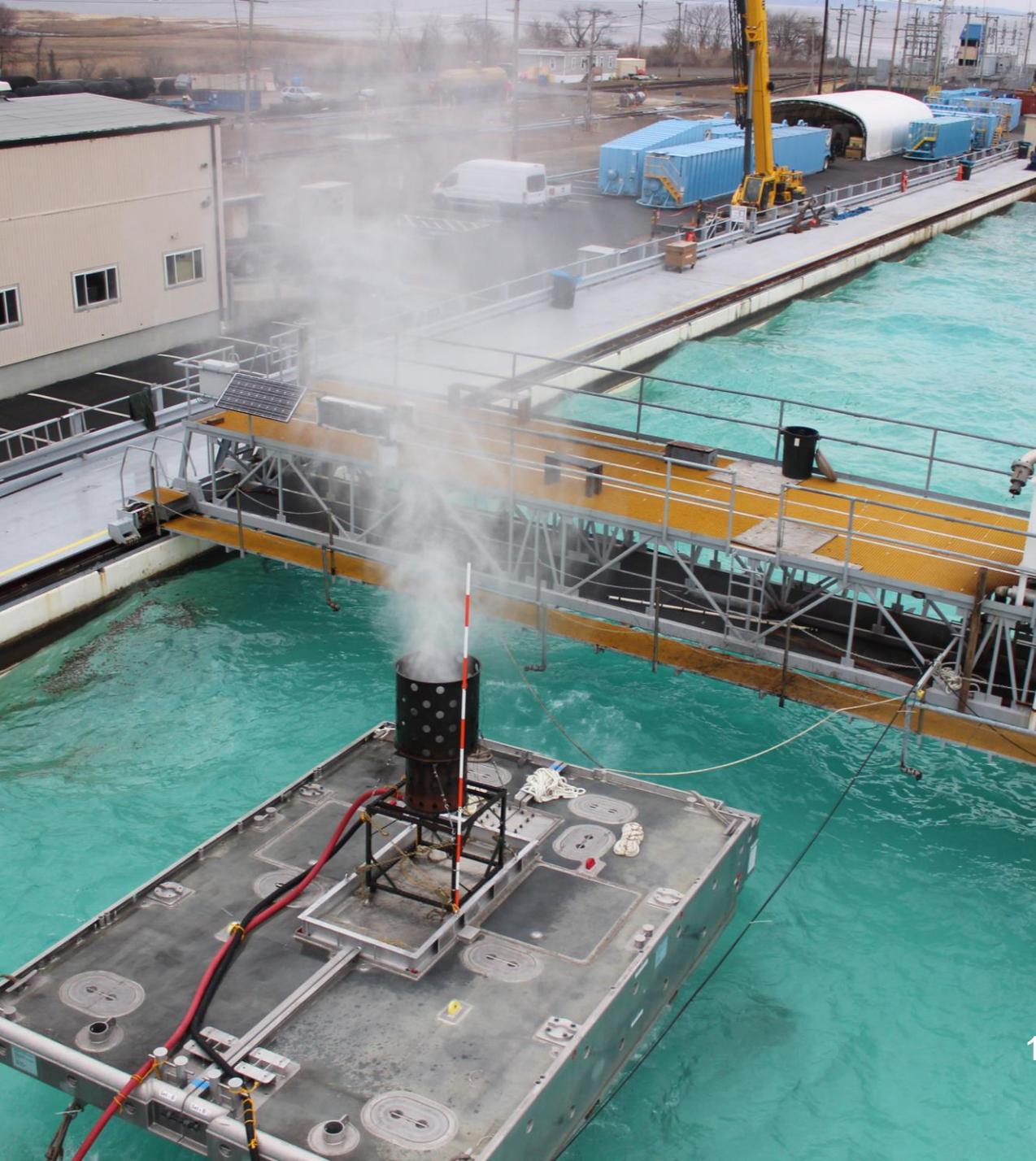
EPA Scientists sampled air emissions measuring: 2 ppm CO & 3 – 40 g particulates per kg of fuel





Ohmsett – National Oil Spill Response¹₅ and Renewable Energy Testing Facility

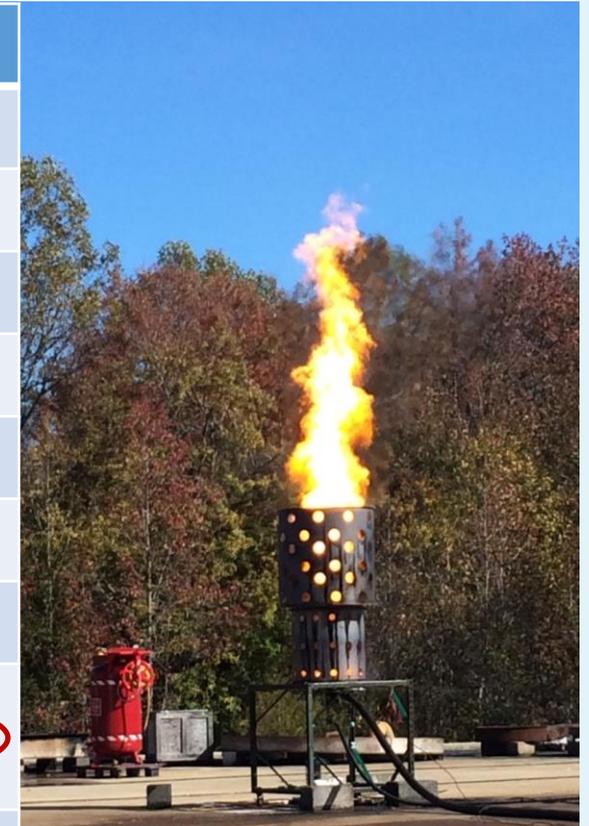




11
6

The BSEE Burner is ready for commercialization

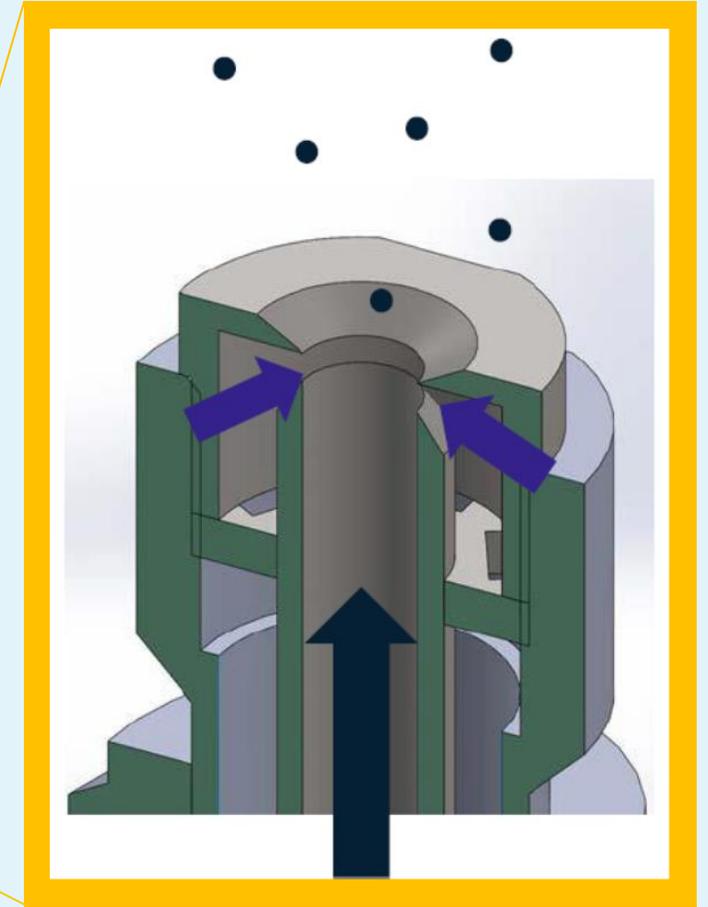
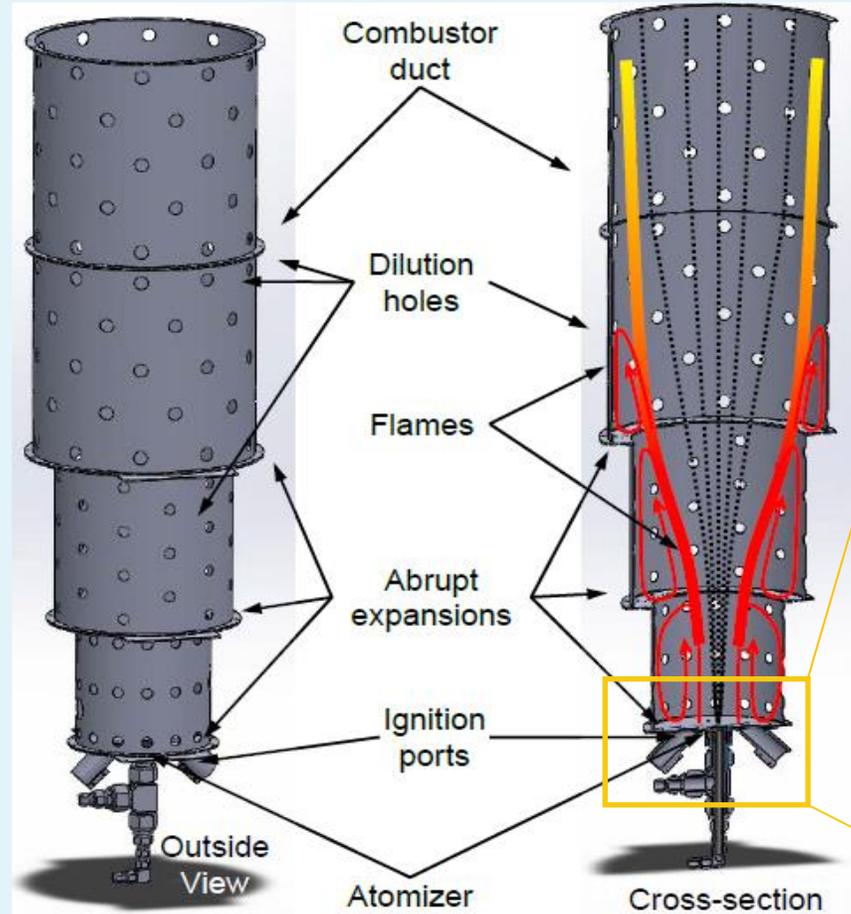
TRL	SHORT DESCRIPTION
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8	Final integrated system tested in real or relevant environment
9	Final integrated system deployed in real spill environment



OSRR 1106 Integrated system tested in $\frac{11}{7}$ real/relevant environment



Low-pressure air atomizes the oil/water spray



There are no moving parts and the burner only requires low pressure air and fuel



Auxiliary Equipment	
Air Compressor (min)	250 SCFM 45 psig
Fuel Pump (min)*	3 GPM 8 GPM**
Pilot Torch Fuel	0.2 SCFM Propane
Hoses, Air Regulator, Shut-Off valves *Viscosity requirements vary by oil type **Engineering scale tested at 8 GPM	

- Burn at variable flowrates
- Run multiple burners to address larger spills
- Burns 24/7

The BSEE Burner achieves over 99% combustion efficiency

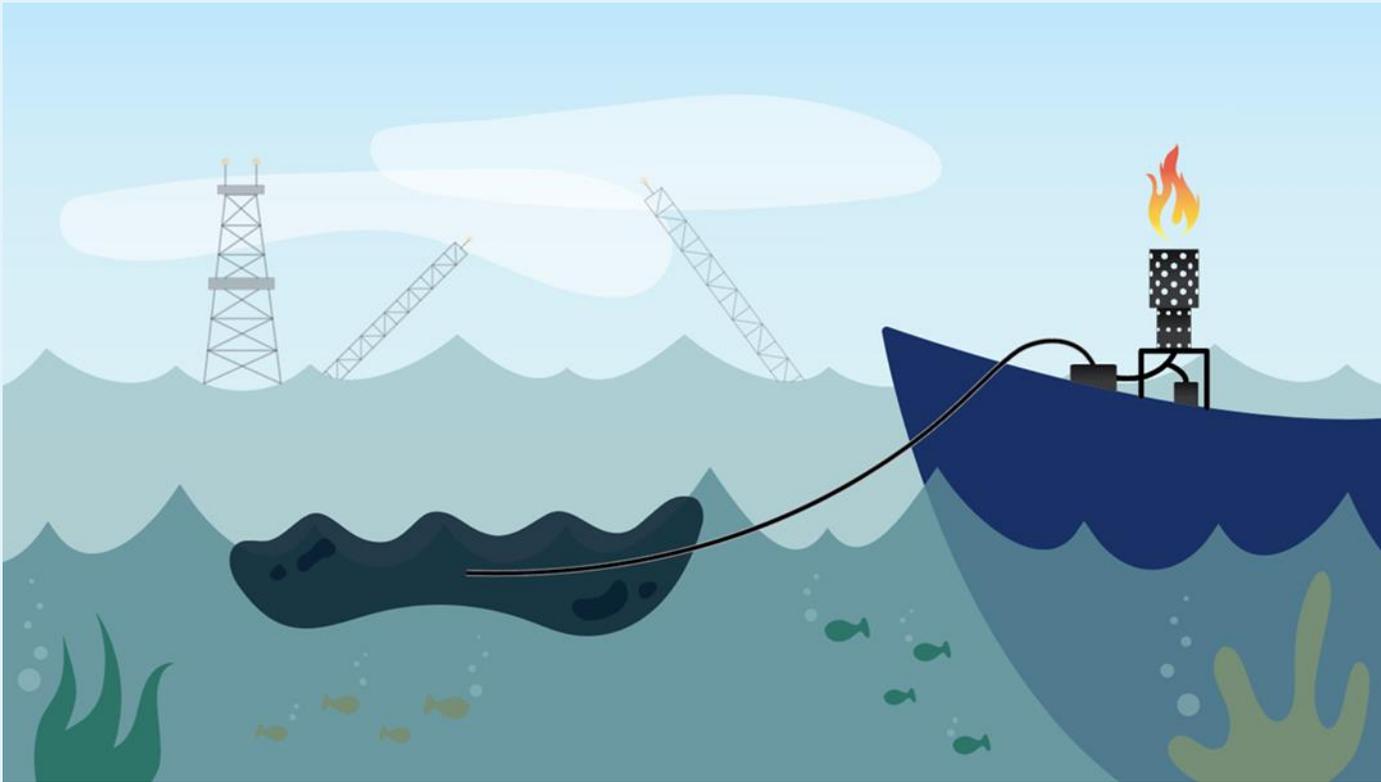


Burner Specifications	
Burner Weight (dry)	850 lbs
Burner Height	11 ft w/ stand
Max Water Content of Emulsions	40%
Test Conditions	Sea State 2
CO Emissions*	2 ppm
PM2.5 Emissions*	3-40 g/kg
Maximum Burn Rate	640 bbl/day

*Depends on water content and oil type

- Achieves over 99% combustion efficiency with very low CO, CO₂ and particulates
- 75% lower than ISB
- Reduces environmental burden of reprocessing captured fuel

The clean burning technology allows for multiple uses



- Small enough for transport by plane to Arctic
- Inland waterways
- Disable vessels with leaking fuel
- WWII Salvage
- Fast water
- Close to population centers
- 24/7 operations

To learn more about how to license the technology,
contact TechLink:

TechLink is the official, national technology transfer partnership intermediary for all laboratories of the U.S. Department of Defense (since 1999) and the U.S. Department of Veterans Affairs (since 2019).

TechLink's team of licensing professionals are well versed in the licensing process, regulations, and requirements and are available to assist you at no-cost.

TechLink

micaela.whalen@montana.edu
www.techlinkcenter.org



Karen Stone

karen.stone@bsee.gov

703-787-1810



BSEEWbsite:
www.bsee.gov



[@BSEEGov](https://twitter.com/BSEEGov)



[BSEEGov](https://www.youtube.com/BSEEGov)



[Bureau of Safety
and Environmental
Enforcement](https://www.linkedin.com/company/bureau-of-safety-and-environmental-enforcement)



[BSEEGov](https://www.facebook.com/BSEEGov)



Emulsification rapidly limits the window of opportunity to employ ISB

Rules of Thumb for Burning Efficiencies Related to Emulsions

Water Content	Burn Efficiency
0 - 12.5 % water	Little effect on Removal Efficiency
12.5 – 25% water	Noticeable decrease in Removal Efficiency
> 25% water	0 burn efficiency, ISB not an option

Emulsification Schedule

Time from Start of Spill	Emulsified Water Content
24 hours	33%
48 hours	50%
75 hours	75%

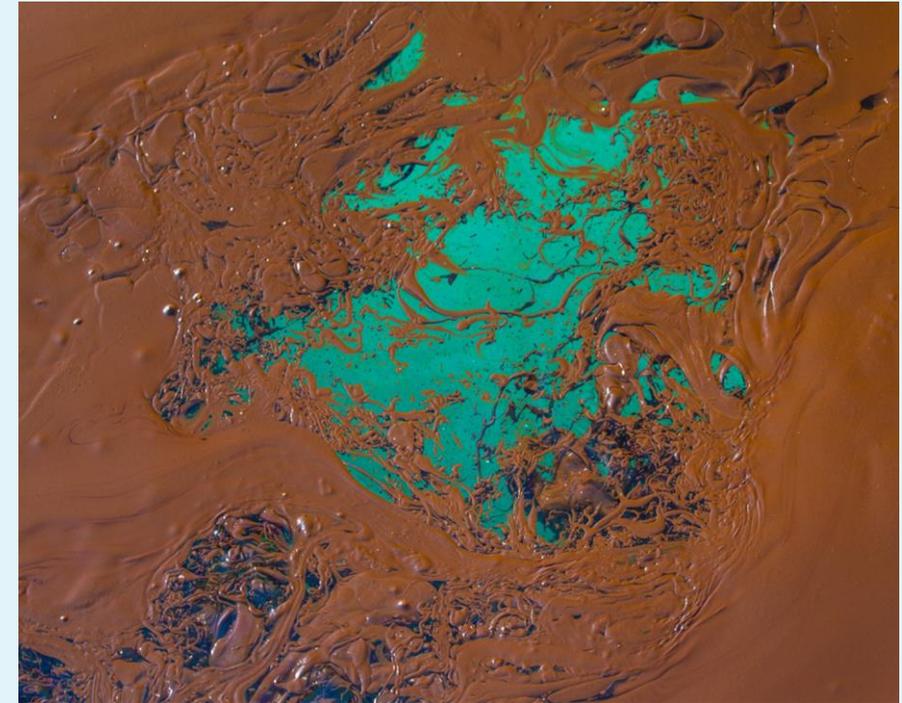


Photo Credit: BSEE, Karen Stone

In Situ Burning in Ice-Affected Waters: State of Knowledge Report, Joint Industry Programme, 24 October 2013; ASTM WK412247 New Test Method for Standard Test Method for Method for the Evaluation of the Stability of Water-in-oil Mixtures Formed from Crude Oil and Petroleum Products Mixed with Saline Water.

BSEE Source Control Support Coordinator (SCSC) Overview

James Fletcher, BSEE

Global Dispersant Strategy Overview – Manufacturing and Resupply

Angela Barrow

International Association of Oil and Gas Producers
(IOGP)

90-Minute Lunch

Coastal Scenario based Tabletop Exercise – Loss of well control in the Gulf of Mexico

Michael Sams, USCG D8

Coastal Scenario-based Tabletop Exercise



Michael Sams

Eighth Coast Guard District

Incident Management and Preparedness Advisor

RRT-6 Co-Chair

Purpose

To assess the adequacy of the Region 4 and 6 Regional Contingency Plans as they relate to addressing cross-regional coordination



Simulated Exercise Scenario Overview

- **What:**
 - Loss of Well Control -- uncontrolled at wellhead
 - Estimated discharge rate: 241,000 barrels of oil per day (bopd)
- **When:**
 - 17 May 2023 at 0700 CT
- **Where:**
 - 28° 1' 14.386" N / 90° 7' 36.897" W
 - 78 Miles south of Port Fourchon, LA
 - Water depth 1,633 ft

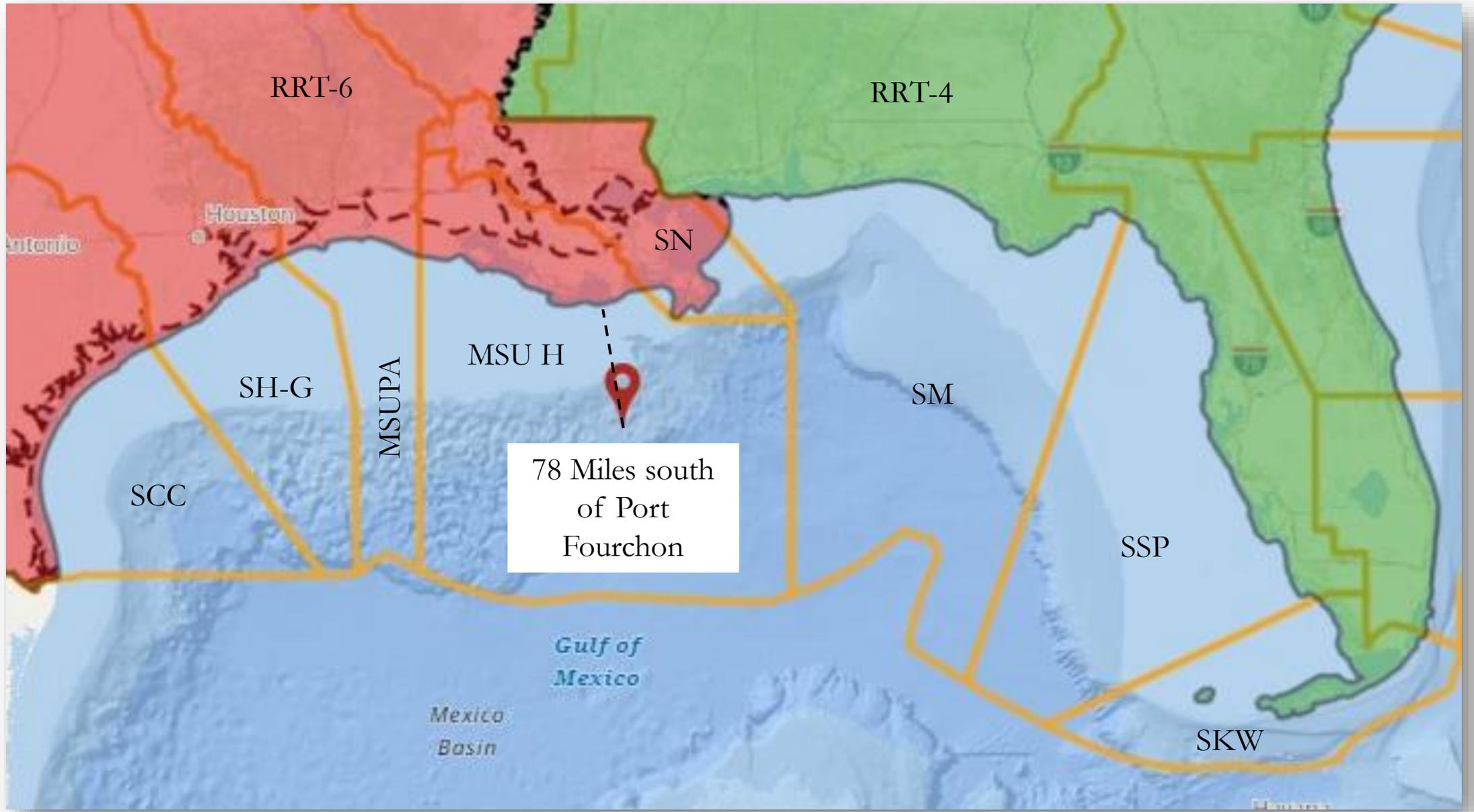
Simulated Exercise Scenario Overview

Other Facts:

- South Louisiana Crude Oil
- API Gravity 36.0

Trajectory:

- Movement throughout center GOM
- Likely shoreline impacts to LA, MS, AL, and FL (can't rule out TX)



SSDI Exercise History



SSDI Activation Summaries

Incident Specific Activation Report
 ConocoPhillips Gulf of Mexico 2013 Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Houston, TX



Regional Response Team 6
 Link
 April 3, 2013
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 4/1/13 at 12:00 PM, ConocoPhillips notified their annual facility self-inspection for Response Program (RP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 4/1/13 at 1:00 PM, the exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houston Federal On-Scene Coordinator (FOSC)) for review.
- On 4/2/13 at 10:00 AM, the exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houston Federal On-Scene Coordinator (FOSC)) for review.
- On 4/2/13 at 1:00 PM, the exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houston Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident Specific Activation Report
 HWCG-Forestport-McMoran Oil & Gas
 (HWCG-FYMOX) Gulf of Mexico 2014 Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team 6
 Link
 April 30 & May 1, 2014
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 4/29/14 at 10:00 AM, the exercise planners provided their annual Preparedness for Response Program (PRP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 4/30/14 at 10:00 AM, the exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.
- On 5/1/14 at 10:00 AM, the exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident Specific Activation Report
 BP Highline 2014
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team 6
 Link
 November 5, 2014
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 11/3/14 at 10:00 AM, the exercise planners provided their annual Preparedness for Response Program (PRP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 11/5/14 at 10:00 AM, the exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.
- On 11/5/14 at 1:00 PM, the exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident Specific Activation Report
 Chevron USA Inc. 2015
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team (RRT) 6
 Link
 August 19, 2015
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 8/18/15 at 10:00 AM, Chevron USA Inc. notified their annual facility self-inspection for Response Program (RP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact. The RRT was able to provide consultation on the SDIP during the actual exercise dates, however, agreed to hold it at a later date.
- On 8/19/15 at 10:00 AM, Chevron's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.
- On 8/19/15 at 1:00 PM, Chevron's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident-Specific Activation Report
 HWCG-LLOO 2016
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team (RRT) 6
 Link
 May 10, 2016
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 5/10/16 at 10:00 AM, HWCG-LLOO conducted their annual readiness for Preparedness for Response Program (PRP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500, FINAGAL OSE 11, and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 5/10/16 at 1:00 PM, HWCG-LLOO's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.
- On 5/10/16 at 4:00 PM, HWCG-LLOO's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident-Specific Activation Report
 APC 2016
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team (RRT) 6
 Link
 October 24, 2016
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 10/24/16 at 10:00 AM, APC conducted their annual readiness for Preparedness for Response Program (PRP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500, FINAGAL OSE 11, and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 10/24/16 at 1:00 PM, APC's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.
- On 10/24/16 at 4:00 PM, APC's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Morgan City Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident-Specific Activation Report
 Stone Energy 2017
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Houma, LA



Regional Response Team (RRT) 6
 Link
 August 2, 2017
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 8/1/17 at 10:00 AM, Stone Energy conducted their annual Preparedness for Response Program (PRP) exercise based on their oil spill response plan's worst case discharge (200,000 barrels of oil per day (BOPD)). As part of the exercise, they requested RRT consultation and consent to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 8/1/17 at 1:00 PM, Stone Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.
- On 8/2/17 at 10:00 AM, Stone Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident-Specific Activation Report
 Fieldwood Energy 2019
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Houma, LA



Regional Response Team (RRT) 6
 Link
 August 21, 2019
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 8/15/19, Fieldwood Energy conducted their annual Preparedness for Response Program (PRP) exercise. As part of the exercise, they requested RRT consultation and consent to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 8/21/19 at 10:00 AM, Fieldwood Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.
- On 8/21/19 at 1:00 PM, Fieldwood Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident-Specific Activation Report
 HWCG-Kossow Energy 2020
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Houma, LA



Regional Response Team (RRT) 6
 Link
 November 19, 2020
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 11/19/20 at 10:00 AM, HWCG-Kossow Energy conducted their annual Preparedness for Response Program (PRP) exercise. As part of the exercise, they requested RRT consultation and consent to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 11/19/20 at 1:00 PM, HWCG-Kossow Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.
- On 11/19/20 at 4:00 PM, HWCG-Kossow Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident-Specific Activation Report
 Chevron U.S.A. Inc. 2021
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Houma, LA



Regional Response Team (RRT) 6
 Link
 May 4, 2021
 (RRT-6 Activation Day)

Brief Timeline of Events:

- On 5/4/21 at 10:00 AM, Chevron U.S.A. Inc. notified their annual facility self-inspection for Response Program (RP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact. The request was to the USCG Federal On-Scene Coordinator (FOSC) who then requested consultation from the RRT.
- On 5/4/21 at 1:00 PM, Chevron's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.
- On 5/4/21 at 4:00 PM, Chevron's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

Incident-Specific Activation Report
 HWCG-Beacon Offshore Energy 2021
 Gulf of Mexico Exercise
 Simulated Major Oil Spill – Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Houma, LA



Regional Response Team (RRT) 6
 Link
 October 20, 2021
 (RRT-6 Activation Day)

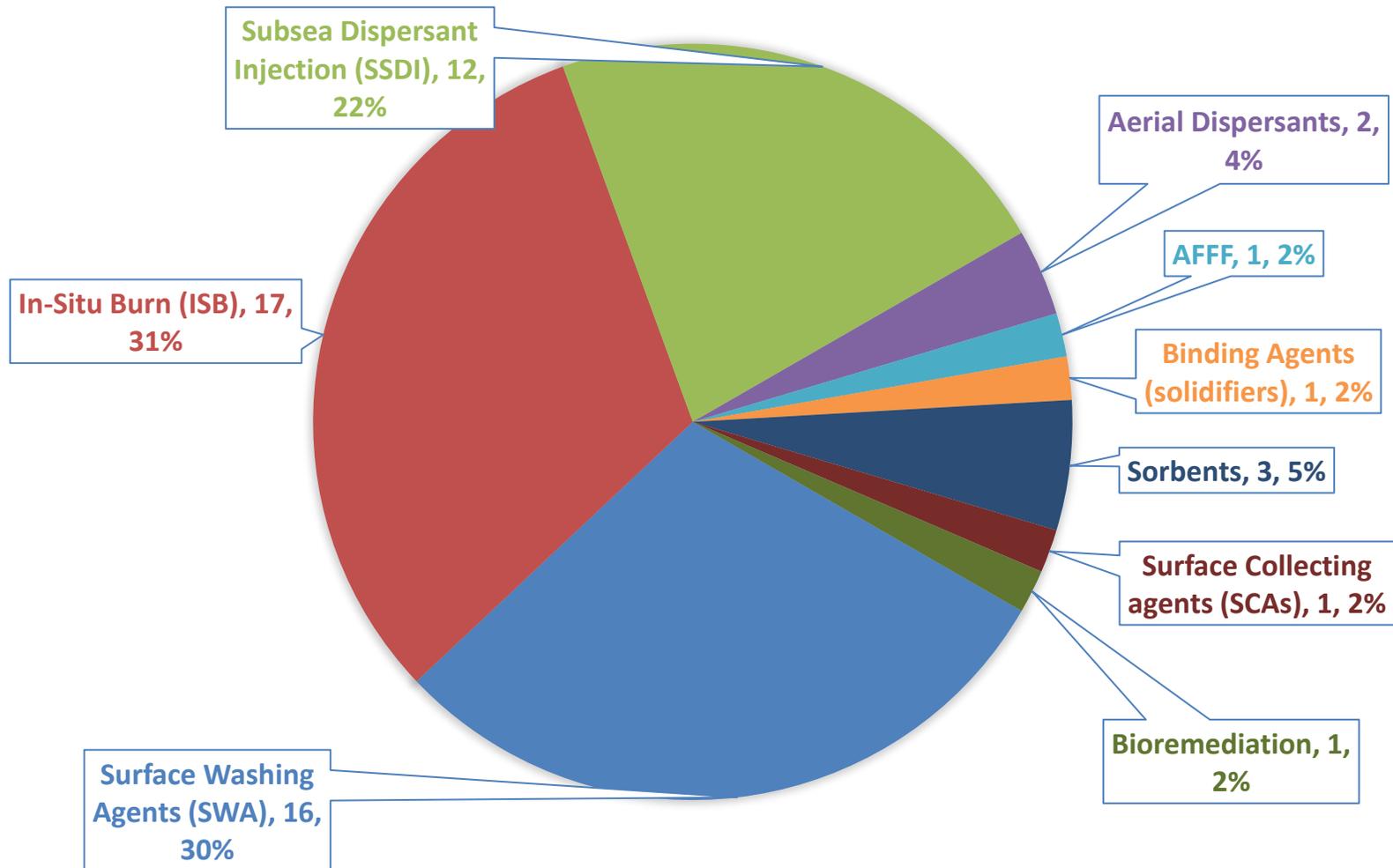
Brief Timeline of Events:

- On 10/20/21 at 10:00 AM, HWCG-Beacon Offshore Energy conducted their annual Preparedness for Response Program (PRP) exercise. As part of the exercise, they requested RRT consultation to use subsea dispersants, specifically COREST EC9500 and ACELL Clear DSD, as an effective means to minimize environmental impact.
- On 10/20/21 at 1:00 PM, HWCG-Beacon Offshore Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.
- On 10/20/21 at 4:00 PM, HWCG-Beacon Offshore Energy's exercise planners provided their subsea dispersant injection package (SDIP) to RRT-6 and MSHI (Houma Federal On-Scene Coordinator (FOSC)) for review.

Exercise Exercise Exercise

RRT-6 Website: https://www.epaosoc.org/site/site_profile.aspx?site_id=5083

RRT-6 Activations Since June 2012



Cumulative Total: 54

- Real-world: 42
- Exercises: 12

Region 6 RCP

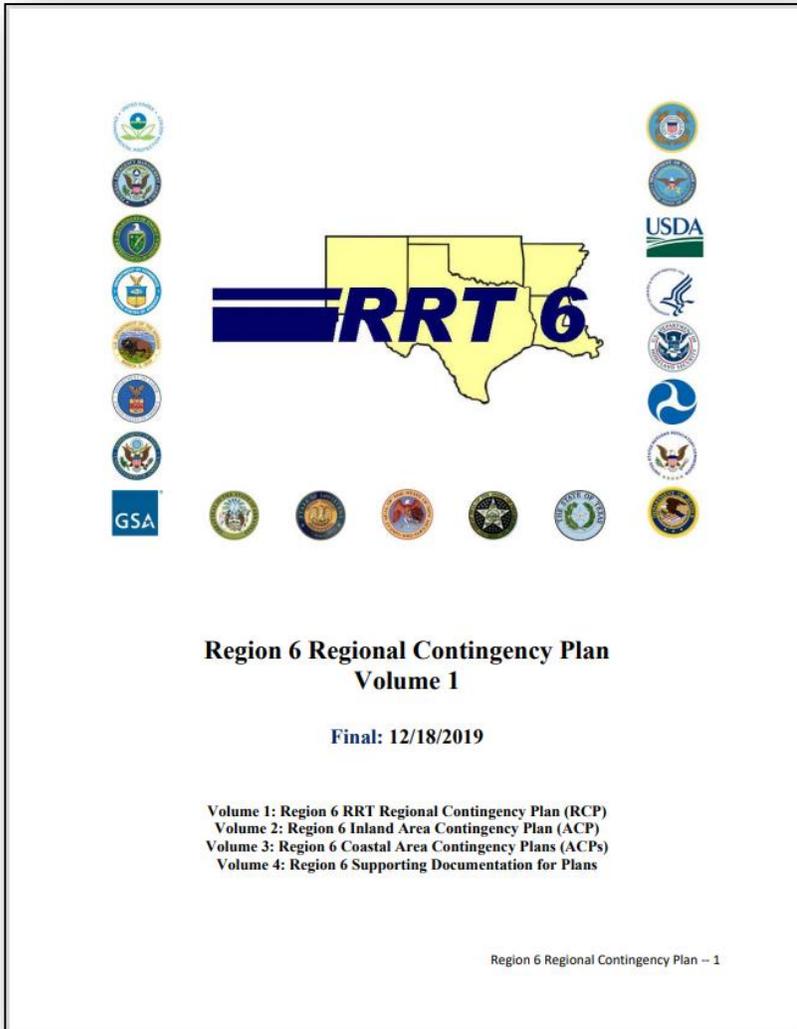
Section H. Relationships: Planning and Preparedness

Coordination With Other RRTs (page 26):

“The Region 6 RRT seeks to maximize its participation with its neighboring RRTs. As such, neighboring RRT Co-Chairs or their designees will be invited to attend all Region 6 RRT meetings and will be given agenda time for presentations upon request.

Periodically, the Region 6 RRT will seek to hold a joint meeting or exercise with a neighboring RRT. The Region 6 RRT will also, upon invitation from a neighboring RRT, provide a representative to attend their meetings as a means of facilitating inter-regional cooperation, building and strengthening useful relationships, and exchanging ideas.

In addition, EPA Region 6 and USCG District 8 have a Memorandum of Agreement (MOA) regarding boundaries for hazardous substance and oil incidents within Region 6 (Annex 5).”



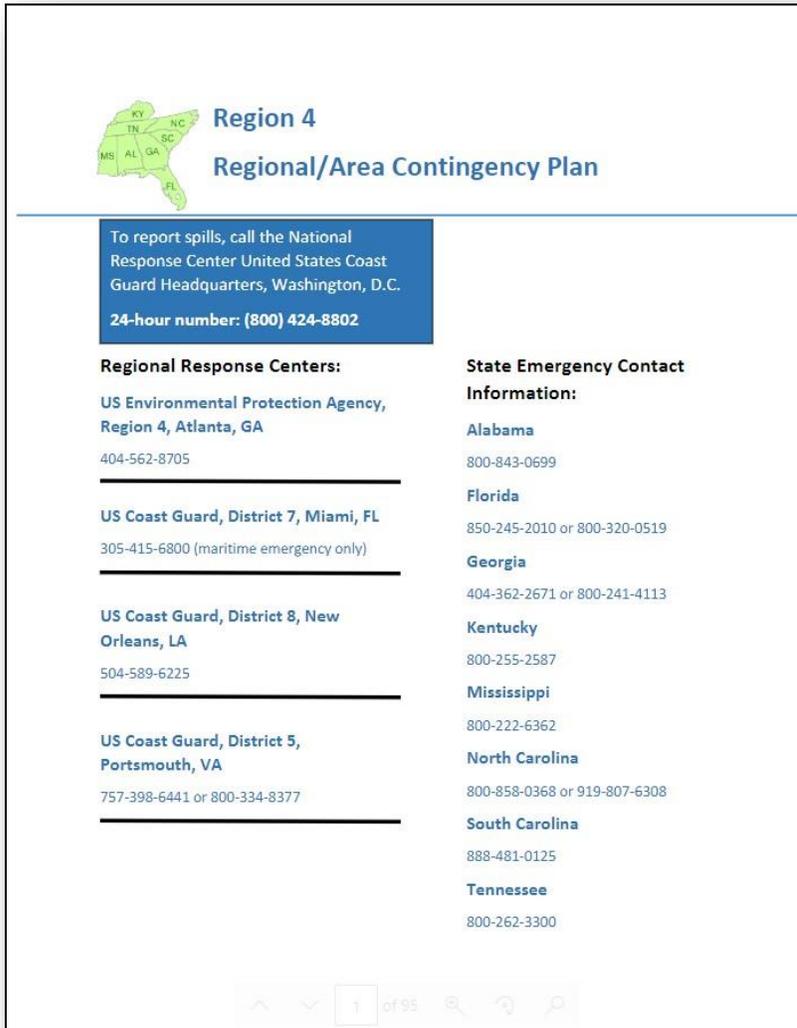
Region 4 RCP

2.2.4. Multi-Regional Response (page 23)

“If a discharge or release moves from the area covered by one RCP or ACP into another area, the authority for response actions should likewise shift. If a discharge or release affects areas covered by two or more RCPs or ACPs, the response mechanisms of each applicable plan may be activated. In this case, response actions of all areas concerned shall be fully coordinated as detailed in the RCPs and ACPs.

There shall be only one OSC at any time during the course of a specific response operation. Should a discharge or release affect two or more areas, EPA, USCG, DOD, DOE, or other lead agency, as appropriate, shall give prime consideration to the area vulnerable to the greatest threat in determining which agency should provide the OSC and/or RPM. The RRT shall designate the OSC if the RRT member agencies who have response authority within the affected area are unable to agree on the designation. The NRT shall designate the OSC if members of one RRT or two adjacent RRTs are unable to agree on the designation.

Where the USCG has initially provided the OSC for response to a release from hazardous waste management facilities located in the coastal zone, responsibility for response action shall shift to EPA or another Federal agency, as appropriate. The OSC shall be provided by the EPA Region within which the release occurs, or according to pre-established protocols.”



The slide features a map of the Southeastern United States (Alabama, Georgia, Florida, South Carolina, North Carolina, Tennessee, Mississippi, Louisiana) with state abbreviations. A blue box contains the 24-hour spill reporting number: (800) 424-8802. The slide is organized into two columns: Regional Response Centers and State Emergency Contact Information.

Regional Response Centers:	State Emergency Contact Information:
US Environmental Protection Agency, Region 4, Atlanta, GA 404-562-8705	Alabama 800-843-0699
US Coast Guard, District 7, Miami, FL 305-415-6800 (maritime emergency only)	Florida 850-245-2010 or 800-320-0519
US Coast Guard, District 8, New Orleans, LA 504-589-6225	Georgia 404-362-2671 or 800-241-4113
US Coast Guard, District 5, Portsmouth, VA 757-398-6441 or 800-334-8377	Kentucky 800-255-2587
	Mississippi 800-222-6362
	North Carolina 800-858-0368 or 919-807-6308
	South Carolina 888-481-0125
	Tennessee 800-262-3300

Regional Contingency Plan (RCP)

Volume 4 - Annexes

- Annex 20 – Activation Guidance for Poison Centers

	ACTIVATION GUIDANCE FOR POISON CENTERS	July, 2022 October, 2011 (original)
Region 6 Regional Response Team – Annex 20		
Introduction		
<p>Poison Centers (PCs), often called "poison control centers", have historically been unrecognized in the preparedness and response community as a major player in the role of protecting the health of our population during hazardous materials incidents or terrorist events. Functioning on a patchwork of limited local, state federal and private funding, PCs have provided vital health services to the general public and health care professionals for over 30 plus years. The PC provision of direct 24-hour patient care services to residential callers, health care professionals and institutions adds value to the services provided by many public health entities, health care providers and insurance carriers.</p> <p>Not only can the PCs provide medical evaluation and consultation, they also save the states substantial money by reducing the number of hospital ER visits because they can assess and often treat cases at home, saving the States hundreds of thousands of dollars each year.</p> <p>The Region 6 Regional Response Team (RRRT6), Co-Chaired by the US Environmental Protection Agency (EPA) and the US Coast Guard, is the federal component of the National Response System for the states of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.</p> <p>RRRT6 is composed of representatives from sixteen (16) federal departments and agencies and each of the five States. In addition, Region 6 shares its southern border with the country of Mexico.</p> <p>RRRT6 has recognized the potential value and contributions that PCs offer to the National Response System and developed this guidance document for use of PCs within its jurisdiction.</p>		
Case Study		
	<p>On October 3, 2011, a fire and explosion occurred at a chemical manufacturing, custom blending, and packaging facility in Waxahachie, Ellis County, TX, which served the agricultural, oil and gas, and other industries. The explosion occurred during a process of mixing/blending materials, with the fire smoldering for 3 days. A chemical inventory list provided by the company contained chemicals in multiple hazard classes in unknown quantities.</p> <p>A state highway was closed, as well as approximately 1,000 individuals were evacuated from a local college, elementary school, and two retirement centers. By the next day, three individuals had self-reported to the local hospital with unknown symptoms.</p> <p>The North Texas Poison Center (NTPC) notified the Agency for Toxic Substances and Disease Registry (ATSDR) and the Texas Poison Center Network (TPCN) of the incident. The TPCN received seven calls within the first 24 hours from individuals experiencing varying symptoms. Information on the fire plume was shared with all Poison Centers, ATSDR, and the Texas Department of State Health Services (DSHS).</p> <p>Daily summaries of calls received were provided to the local DSHS representative.</p> <p>On October 11, a community activist group placed information in the local newspaper regarding health effects from the fire and encouraged concerned citizens to contact poison center for further information.</p>	
Lessons Learned		
<ol style="list-style-type: none">1. The community went to FaceBook and other social media to discuss health concerns. The community activist groups used social media as a forum for discussion, as well as developing a map tracking health complaints.2. Once the public begins reaching out to the PC, there needs to be a consistent message from local officials and responders to provide to those with safety or health concerns.		
Region 6 RRT: Annex 20 – Activation Guidance for PCs 1 Page		

SETX and SWLA ACP Annex 5

Southeast Texas (SETX)
and
Southwest Louisiana (SWLA)
Area Contingency Plan

Environmental Health Support During
Emergency Response

Annex 5
July 2021

SETX and SWLA ACP
Environmental Health Support During Emergency Response, Annex 5

- **CDC** – lead federal health agency for Oil Discharges
- **ATSDR** – lead federal health agency for chemical spills

5100 Environmental Health

Environmental health is the science and practice of preventing human injury and illness and promoting well-being by:

- identifying and evaluating environmental sources and hazardous agents, and
- limiting exposures to hazardous physical, chemical, and biological agents in air, water, soil, food, and other environmental media or settings that may adversely affect human health.

5200 Environmental Health Professional or Specialist

An environmental health professional or specialist is a practitioner with appropriate academic education and training and registration or certification to:

- investigate, sample, measure, and assess hazardous environmental agents in various environmental media and settings;
- recommend and apply protective interventions that control hazards to health;
- develop, promote, and enforce guidelines, policies, laws, and regulations;
- develop and provide health communications and educational materials;
- manage and lead environmental health units within organizations;
- perform systems analysis;
- engage community members to understand, address, and resolve problems;
- review construction and land use plans and make recommendations;
- interpret research utilizing science and evidence to understand the relationship between health and environment; and
- interpret data and prepare technical summaries and reports. (<https://www.neha.org/about-neha/definitions-environmental-health>)

Questions?



Michael Sams

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Office: 504-671-2234

Michael.K.Sams@uscg.mil

NCP

40 CFR 300.910 (b)

For spill situations that are not addressed by the preauthorization plans developed pursuant to paragraph (a) of this section, the OSC, with the **concurrence** of the **EPA representative** to the RRT and, as appropriate, the **concurrence** of the RRT representatives from the states with jurisdiction over the navigable waters threatened by the release or discharge, and in **consultation** with the **DOC and DOI natural resource trustees**, when practicable, may authorize the use of dispersants, surface washing agents, surface collecting agents, bioremediation agents, or miscellaneous oil spill control agents on the oil discharge, provided that the products are listed on the NCP Product Schedule.

Inland Scenario- based Tabletop Exercise

- Jed Hewitt, EPA R4
- Bray Fisher, EPA R6



Exercise Objectives

- Determine capabilities of State/Federal resources to assume response operations of an event of this magnitude
- Determine the roles and responsibilities of each federal RRT agency in such an event, including assistance to the federal/state OSC

The Actual Incident



Figure 3. After-cooler



Figure 4. Compressor Discharge Pipe After the Incident

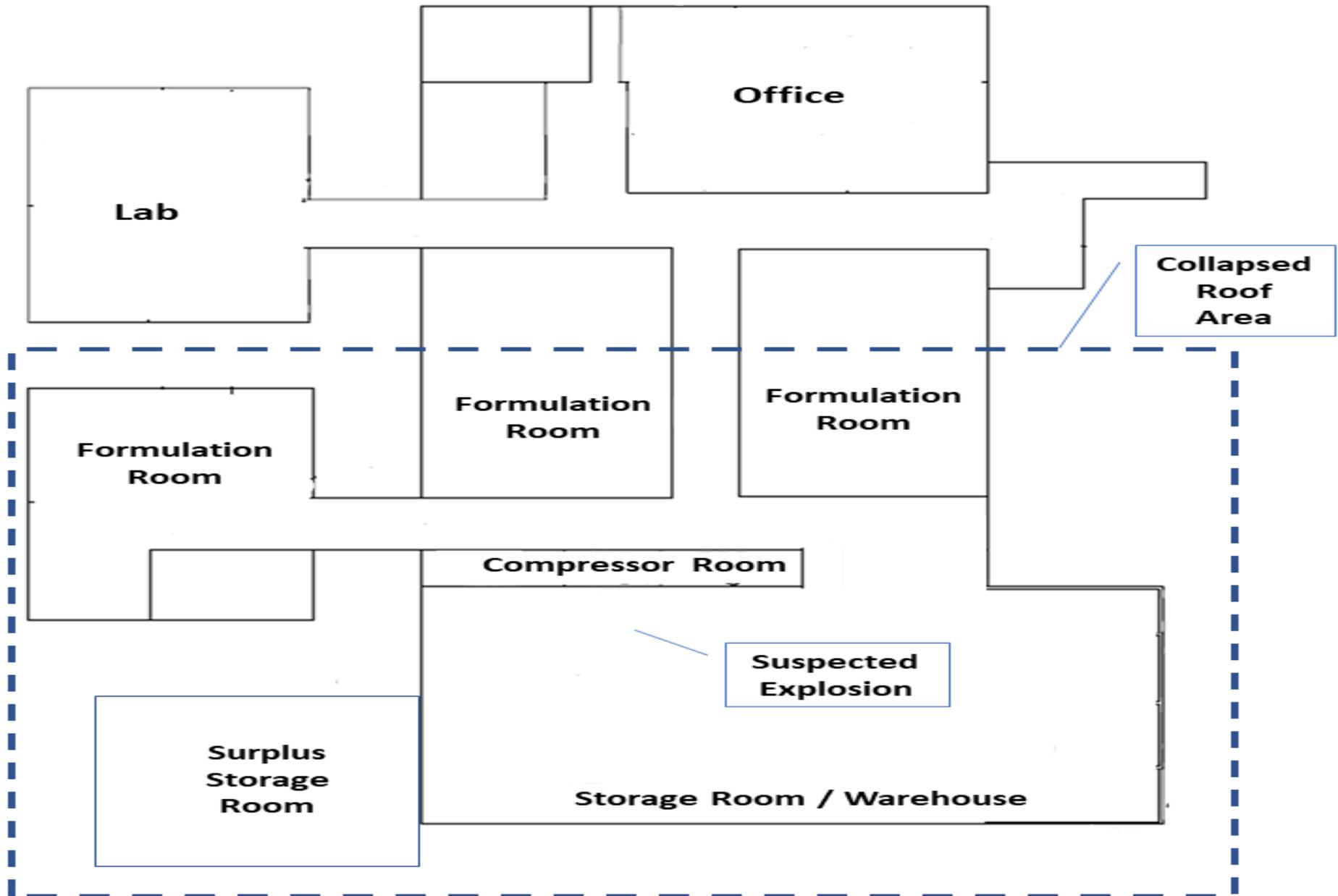




Scenario

- On May 27, 2023, at approximately 1400 hours, the county 911 operations center received a report of an explosion and fire at the Rid-a-Pest manufacturing facility, which is located outside the township limits of West Delta, in Eastern Arkansas.
- The cause of the explosion is unknown, but witnesses believe it occurred near a compressor unit within the formulation building, close to where a recent shipment of supersacks of pesticide ingredients was being stored.
- The explosion destroyed most of the building, with the roof collapsing down on much of the impacted area.
- Approximately 15 employees worked in the building. 12 were accounted for, with 7 seven receiving burns of various extents and most of the injured contaminated with either powder or liquid chemicals. 2 of the unaccounted employees include the Health, Safety, and Environmental (HSE) officer, as well as the plant manager, who were in the area of the explosion investigating a complaint of unknown origin.

Formulation Building Layout



Scenario

- The town's fire department responded to the incident, which is composed primarily of volunteer fire fighters. The department does have a paid chief; all of the firefighters have received HAZWOPER Awareness training; the chief and two others have Technician level training. The town only has 1 ambulance, and a small medical center without the capabilities to handle the injuries encountered. A hospital with a burn center is approximately 2 hours away.
- A plume of very dark smoke is reported from the facility, drifting northwest toward the east side of the town. Students at the elementary and junior high schools could be affected by this plume.
- Current weather conditions: Partly cloudy, temperature 84 degrees Fahrenheit (°F), winds from SE at 4 miles per hour (mph), humidity 40%. Large rainfall over the past 2 days has saturated the ground, and waterways are flowing. Wind direction is expected to vary between from SE to SW over next several days.

DISCUSSION POINT

- When does the State expect they would be notified of the event?
- Approximately how long would it take for a State On-Scene Coordinator (OSC) to arrive on scene?

Scenario (continued)

Once the State OSC arrives, the OSC receives a briefing on the current situation from the fire chief and county emergency manager.

Fire fighting efforts are very limited, as various employees have reported several of the chemicals located in the facility may be water reactive, which would actually worsen the ongoing fire.

Complete chemical inventories are stored on a computer in the office in the formulation building, which is currently inaccessible.

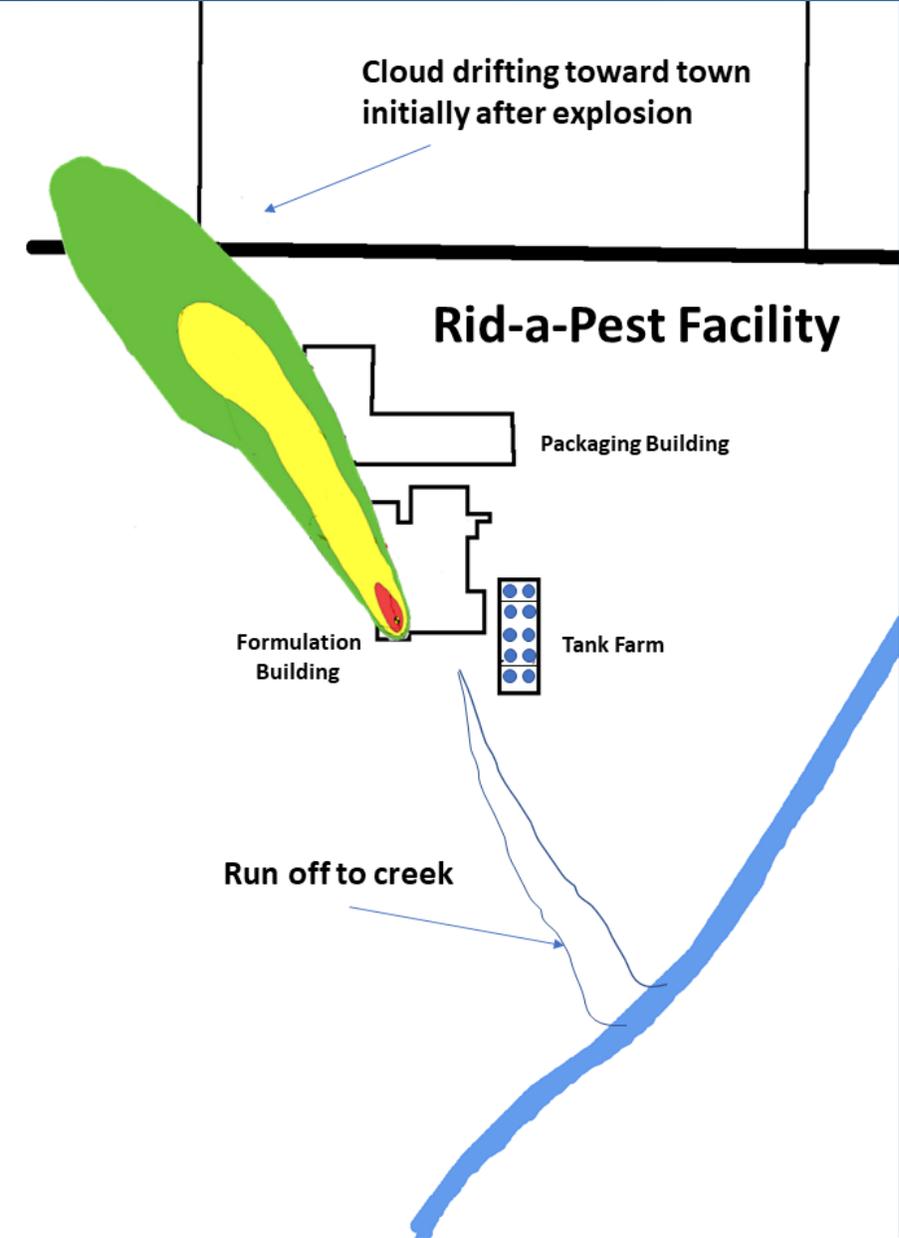
Employees have provided the fire chief with a partial list of all the active ingredients and other chemicals presently located in the formulation building.

Scenario (continued)

Fire water is being used on the perimeter of the building to keep flames from spreading from the main packaging building. Water, with a heavy sheen, is running from the building and downhill.

A tank farm adjacent to the formulation building received extensive damage from the initial explosion. Most of the tanks were damaged from shrapnel, or flowlines separated. The containment wall was also severely damaged. Product, which includes kerosene, diesel fuel, and a few pesticides, is flowing out of the containment area.

During a walk around the outside perimeter of the facility, the State OSC observed a large amount of water and product flowing down to a creek which borders the company's property. The creek ultimately reaches the Mississippi River downstream close to the Arkansas / Tennessee border.



Scenario (continued)

After the perimeter walk, the fire chief concedes to the State OSC his department simply does not have the resources or hazmat training to fight the chemical fire.

The owner of the facility, who has now arrived on-scene, admits he does not have the financial backing to pay for private contractors for air monitoring, water sampling, fire fighting, or cleanup after the fire. He has reached out to his insurance company, but they do not sound too promising.

DISCUSSION POINT:

Can the State bring in the appropriate assets to fight the fire and contain the run-off water, movement of injured personnel to the appropriate medical facilities (including decontamination), as well as possibly assist with evacuation / shelter in place of the community if needed?

At what point would the State ask for federal assistance from EPA in conducting these response operations?

Scenario (continued)

The federal OSC (EPA) arrives approximately 4 hours after the initial explosion.

The State and local OSC request EPA resources be deployed, and that EPA take over overall command of the response.

DISCUSSION POINT:

The Federal and State OSCs should discuss what the response objectives for this event would be.

What actions would the federal and state OSC take as their first priority?

For the federal agencies present at the meeting, what are their responsibilities under the NCP for an event such as this?

REGION 6 RRT – STATE AGENCIES

Arkansas Department of Energy & Environment	Oklahoma Department of Emergency Management
Arkansas Department of Health	Oklahoma Department of Environmental Quality
Louisiana Department of Environmental Quality	Oklahoma State Department of Health
Louisiana Department of Health, State Health Officer	Oklahoma University Health Sciences Center / Oklahoma Poison Control Center
Louisiana Governor's Office of Homeland Security and Emergency Preparedness	Texas -- Central Texas Poison Control Center
Louisiana LSUHSC, Dept of Emergency Medicine, Section of Clinical Toxicology	Texas -- Southeast Texas Poison Control Center
Louisiana Oil Spill Coordinator's Office	Texas -- West Texas Poison Control Center
Louisiana Poison Control	Texas Commission of Environmental Quality
Louisiana State Police	Texas Department of Public Safety / GDEM
New Mexico -- University of NM -- Poison Control & Drug Center	Texas Department of State Health Services
New Mexico Environment Department	Texas General Land Office -- Oil Spill Prevention & Response
New Mexico Office of Homeland Security & Emergency Management	Texas Parks and Wildlife Department
	Texas Railroad Commission

REGION 6 RRT – FEDERAL AGENCIES

U.S. Department of Agriculture / Animal-Plant Health Inspection Service	U.S. Department of Justice
U.S. Department of Agriculture / Forest Service	U.S. Department of Labor / OSHA
U.S. Department of Commerce / NOAA	U.S. Department of State
U.S. Department of Defense / Navy Region Southeast	U.S. Department of the Interior / BIA
U.S. Department of Defense / U.S. Army DCE	U.S. Department of the Interior / BSEE
U.S. Department of Defense / USACE	U.S. Department of the Interior / Office of Environmental Policy & Compliance
U.S. Department of Energy / Radiological Assistance Program	U.S. Department of the Interior / U.S. Fish & Wildlife Service
U.S. Department of Energy / Strategic Petroleum Reserve	U.S. Department of Transportation / PHMSA
U.S. Department of Health & Human Services (ATSDR)	U.S. Environmental Protection Agency / Response & Removal Branch
U.S. Department of Homeland Security / CISA	U.S. General Services Administration
U.S. Department of Homeland Security / FEMA	U.S. Nuclear Regulatory Commission
U.S. Department of Homeland Security / TSA	
U.S. Department of Homeland Security / USCG 8th District	

DISCUSSION POINT:

What assistance can the agencies offer to the State and EPA OSC once they are in place?

As more product and firefighting water leaves the facility and enters the creek, which ultimately arrives to the Mississippi River, what actions need to be taken?

If the creek affected tribal lands, what additional actions would need to be taken?

DISCUSSION POINT:

As the air plume changes direction to the NE, and tracks along the Mississippi River, and then crosses over into Tennessee, how is the State of Tennessee and Region 4 EPA brought into the response?

International Coordination:

- MEXUSGULF update and activities – Mike Sams
- CUBUS update and activities – Rich Lavigne

MEXUSGULF

Update and Activities



Michael Sams
Eighth Coast Guard District
Incident Management and Preparedness Advisor
RRT-6 Co-Chair
MEXUSGULF Regional Chair

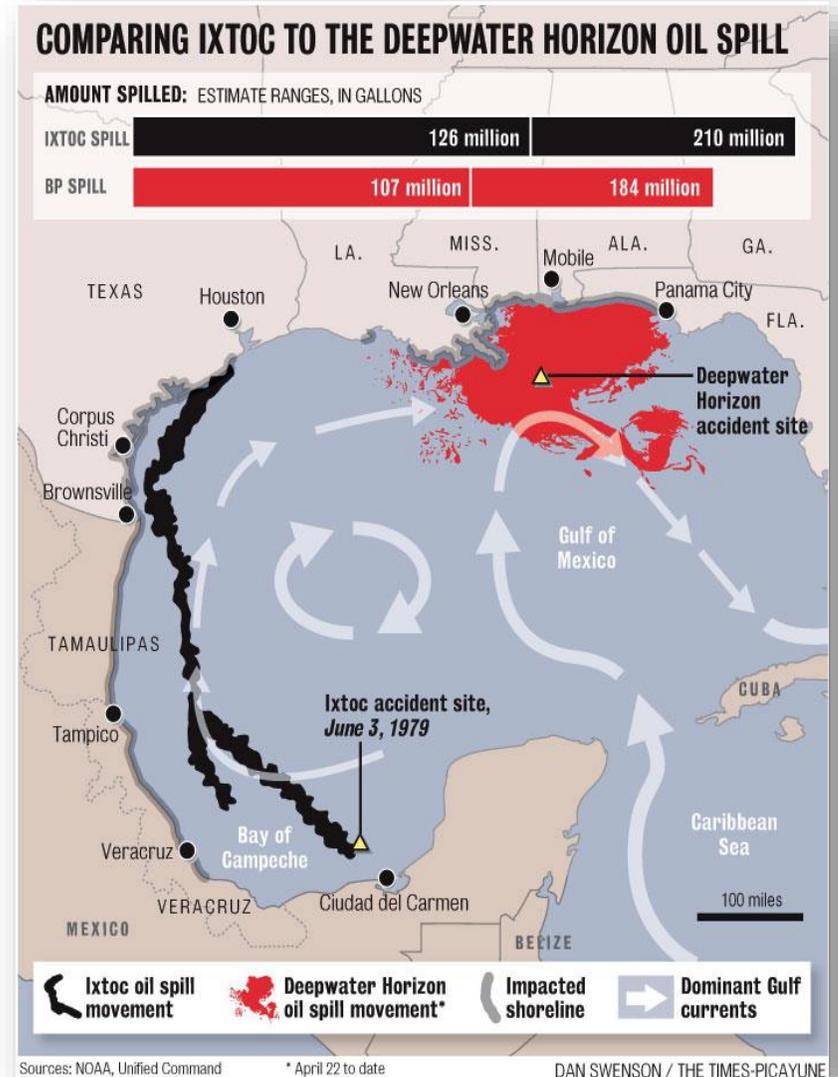
History



Ixtoc I
June 3, 1979



Deepwater Horizon
April 20, 2010



Evolution of the MEXUS Plan



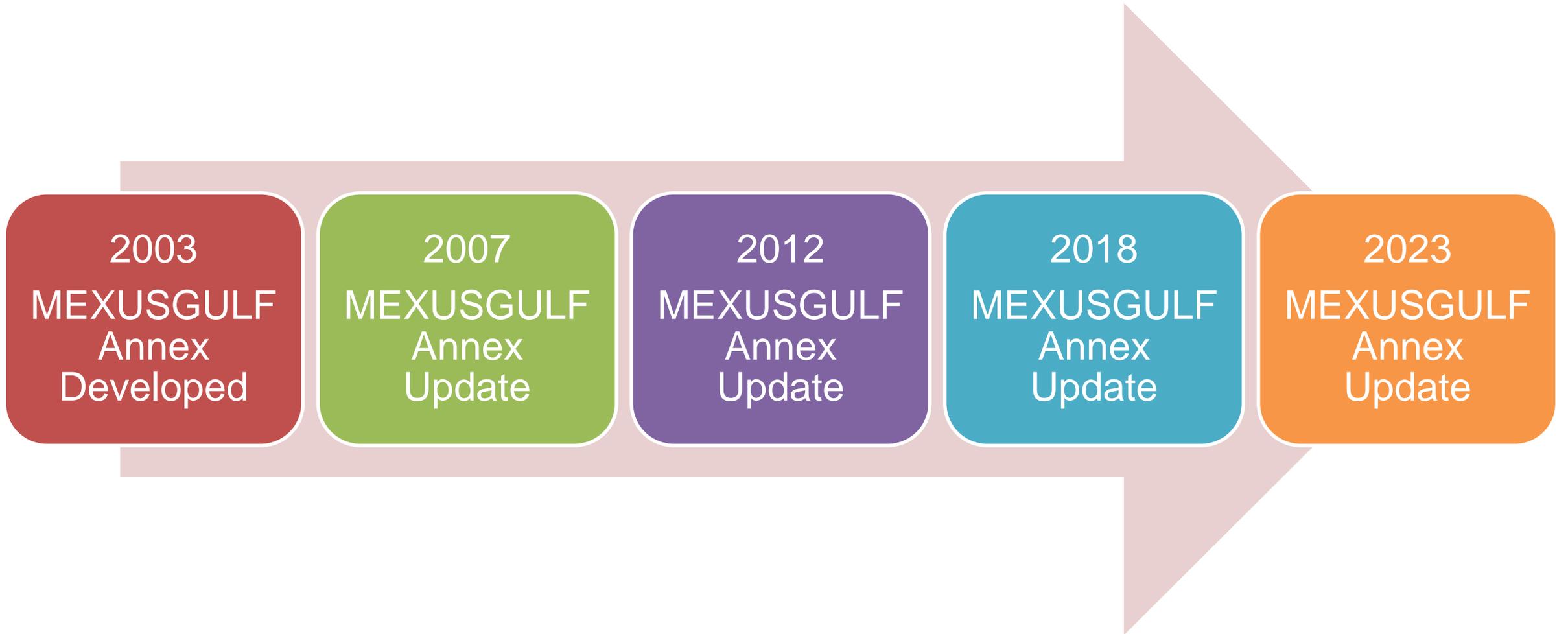
MEXUS Plan 2022 Update

- **Administrative and content updates including:**

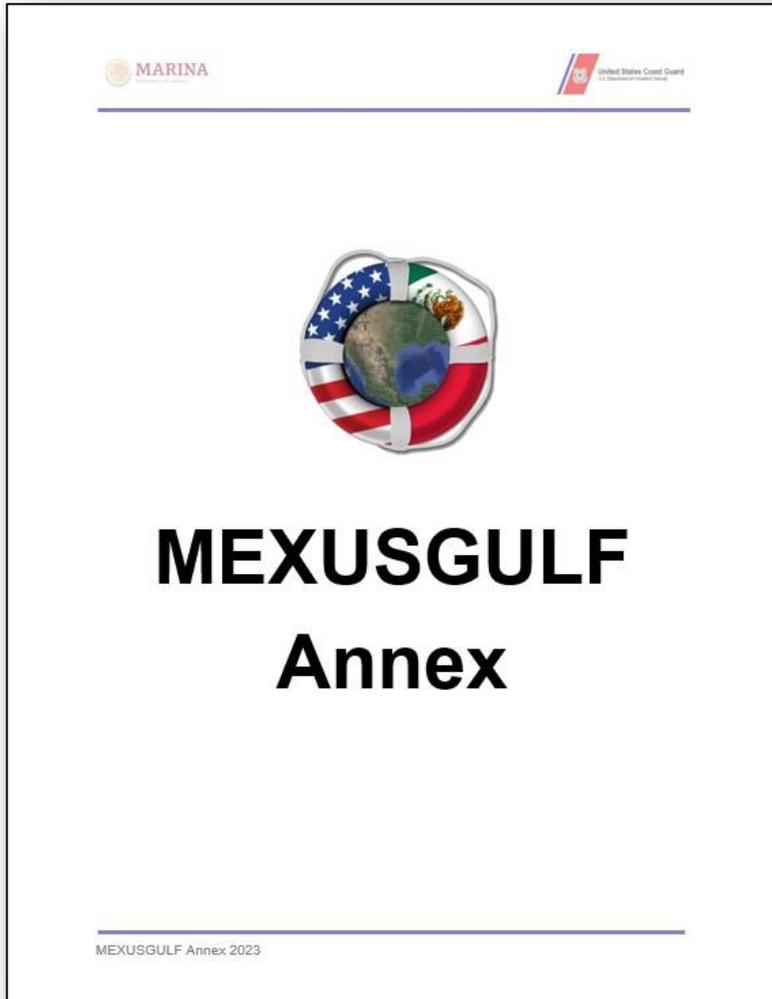
- Formatting
- Resources and contact information
- Clarification of roles
- Enhanced coordination and collaboration
- Defined review process



MEXUSGULF Annex Timeline



MEXUSGULF Annex 2023 Update



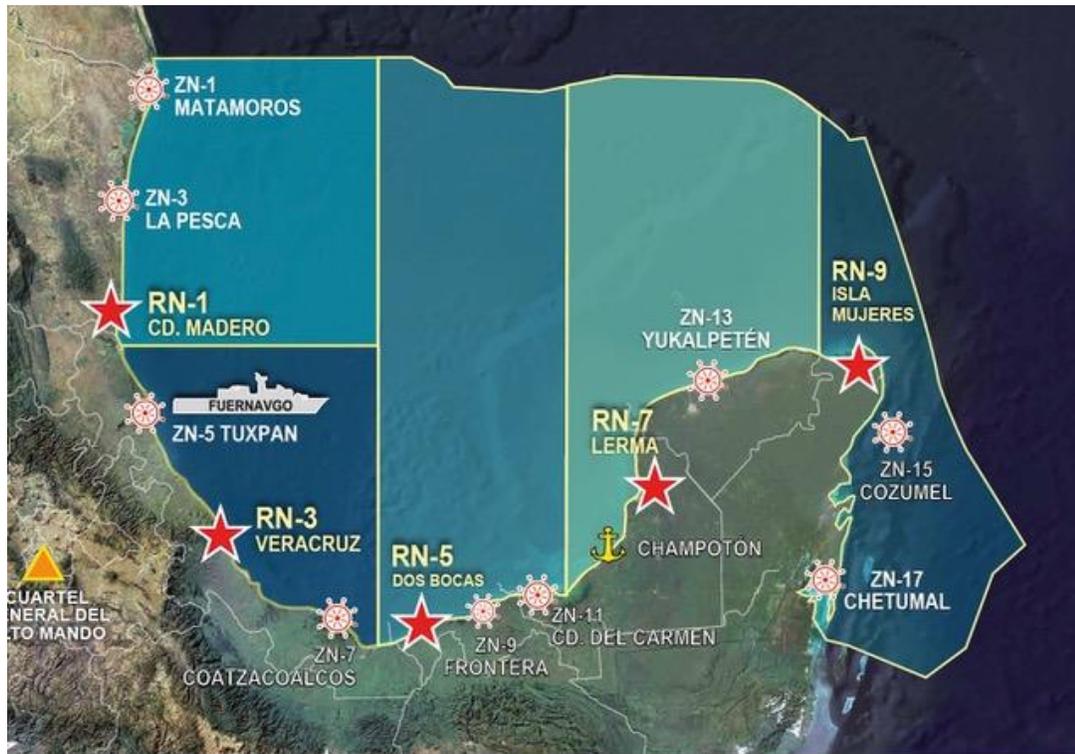
Administrative and content updates including:

- Updated MEXUSGULF positions from SEMAR ZN-1 to RN-1
- Updated SEMAR logo in header of both versions (English and Spanish)
- Updated position/office nomenclature
- Trimmed redundant language
- Updated/validated/added hyperlinks
- Updated/validated/added definitions in Appendix (1) Glossary
- Updated/validated Appendix (2) National and Regional Contacts
- Updated/validated Appendix (3) Bilingual MEXUS Spill Notification Form

2023 MEXUSGULF Annex Signing

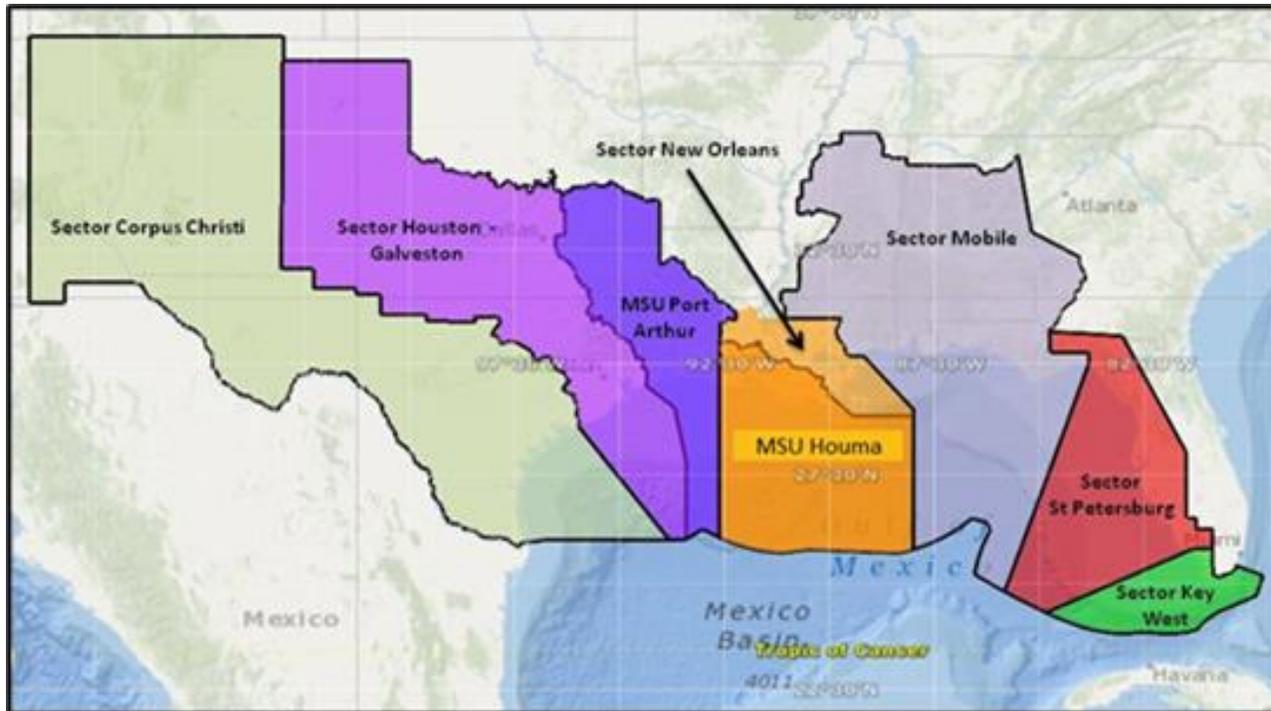


Mexico – Area of Responsibility



Regional Chair	
SEMAR	Commander, SEMAR RN-1 (VADM Pablo González)
Regional Coordinator	
SEMAR	RN-1, the Chief of the Department of Coordination of Programs Against Sea Pollution. (Tte. Frag. SIA. I. Quim. Teresa Alejandra "Guadarrama" Mendoza)

U.S. – Area of Responsibility



Regional Chair

USCG Commander, USCG Eighth District
(**RADM Richard Timme**)

Regional Chair Delegation

USCG Eighth District, Incident Management and Preparedness Advisor
(**Michael Sams**)

Regional Coordinator

USCG Eighth District, the MEXUSGULF Coordinator is also the Regional Response Team Coordinator
(**Todd Peterson**)

Appendix (3)

Bilingual MEXUS Spill Notification Form

MARINA SECRETARÍA DE ECONOMÍA		United States Coast Guard	
MEXUS Spill Notification Notificación de derrames			
<input type="checkbox"/> Notification Notificación		<input type="checkbox"/> Request for Consultation Solicitud de consulta	
1. Incident Information Información de incidente			
1.a. Date Submitted Enviado el	1.d. Reference Number Número de referencia		
1.b. Time Submitted Enviada a las	1.e. Initiating Country País de origen		
1.c. Incident Name Nombre de incidente	1.f. Number of Pages Número de páginas		
2. Contact Information Información de contacto			
2.a. From (Country/Agency) De (País/Agencia)	2.e. To (Country / Agency) Para (País/Agencia)		
2.b. Name/Position Nombre/Puesto	2.f. Name/Position Nombre/Posición		
2.c. Fax /Telephone Número de fax o teléfono	2.g. Fax /Telephone Número de fax o teléfono		
2.d. Email/Correo electrónico	2.h. Email/Correo electrónico		
3. Incident Specifics Detalles del incidente			
3.a. Type of Incident (Primary Cause/ Secondary) Tipo de incidente (Causa primaria/secundaria)			
3.b. Incident date/time Fecha/hora de incidente			
3.c. Product Type Tipo de contaminante	3.e. Source of Pollution Origen de contaminación		
3.d. Volume Released (bbls) Volumen derramado	3.f. Max Potential (bbls) Máximo potencial		
3.g. Is Source Secured? ¿Se contuvo el derrame?		If Yes -Date/Time/Method Used to Secure En caso afirmativo- Fecha / Hora / Método usado para contener:	
<input type="checkbox"/> Yes SI <input type="checkbox"/> No		If No - Mitigation Measures Currently in Place / Si No - Medidas de mitigación actualmente en uso:	
3.h. Geographic Location of Incident (Port/ Body of Water) Ubicación geográfica de incidente (Puerto/Cuerpo de agua)			
3.i. Position Posición	Latitude Latitud	Longitude Longitud	
3.j. Potential for transboundary impacts? ¿Potencial de impactos transfronterizos?			
<input type="checkbox"/> Yes SI <input type="checkbox"/> No			
4. Acknowledgement of Notification Received Acuoso de recibo			
4.a. Date/Time Acknowledged Fecha/Hora de recibido	4.b. Name/Agency Nombre/Agencia		
4.c. Signature Firma			
4.d. Comments (optional) Comentarios (opcional)			
<small>Note: The notifying party should, at a minimum, send Page 1 of this form when making a notification for informational purposes only, marking the "Notification" box at the top. If transboundary implications are present, mark the "Request for Consultation" block and provide additional information (in subsequent pages of this form). Receiving Party should acknowledge receipt and return to Notifying party. Nota: La parte notificante debe como mínimo enviar la Página 1 de este formato al hacer una notificación sólo para información, marcando la caja de "Notificación" en el título. Si hay implicaciones transfronterizas, marque el bloque "Solicitud de consulta" y provea información adicional (en páginas posteriores de este formato). La parte receptora debe garantizar el acuse de recibo y devolver a la parte notificante.</small>			

MARINA SECRETARÍA DE ECONOMÍA		United States Coast Guard	
5. Incident Command Information Información del centro de comando de incidente			
5.a. Lead Agency Agencia encargada			
5.b. Command Post location La ubicación del centro de comando del ICS			
5.c. Request Advisory and Liaison Coordinator deployment? ¿Es necesario intercambiar un Coordinador, Asesor y Enlace?		<input type="checkbox"/> Yes SI <input type="checkbox"/> No	
6. Situation Assessment Evaluación de la situación			
6.a. Current Assessment Situación Actual		6.b. Complicating Factors Factores de complicación	
		6.c. Mitigating Factors Factores atenuantes	
		6.d. Additional Factors Factores adicionales	
7. Primary Source Information Información de la fuente primaria			
7.a. Name of Vessel/Facility Nombre del buque/instalación	7.f. Length of Vessel Eslora del buque		
7.b. Flag Bandera	7.g. Draft of Vessel Calado del buque		
7.c. Owner/Operator Propietario/Operador	7.h. Document/Official Number Documento/número oficial		
7.d. Cargo Type/Amount El tipo de carga/cantidad	7.i. Last Port of Call Último puerto		
7.e. Fuel Type/Amount Tipo de combustible/cantidad	7.j. Next Port of Call Próximo puerto		
7.k. Vessel aground? ¿Está el buque varado?		<input type="checkbox"/> Yes SI <input type="checkbox"/> No <input type="checkbox"/> Not Applicable No aplica	
7.l. Additional vessel(s) or facility(ies) involved? If so, please list them in block 11 of this form. ¿Otros buque(s) o estructuras involucrada(s)? En caso afirmativo favor de anotarlo en el espacio 11 de esta forma.			
8. Pollutant Information Información sobre el contaminante			
8.a. Type of Pollutant Tipo de contaminante	8.d. Amount Spilled Cantidad derramada		
8.b. Potential Amount/Capacity Cantidad potencial/capacidad	8.e. Sheen/Slick Length & Width Brillo/ largo y ancho de la mancha		
8.c. Direction of Movement Dirección del movimiento	8.f. Color		
9. On-Scene Weather Conditions Condiciones climáticas en la escena			
9.a. Air Temperature Temperatura del aire	9.d. Sea State Condiciones de mar		
9.b. Wind Direction Dirección del viento	9.e. Wind Speed Velocidad del viento		
9.c. Precipitation Type Tipo de precipitación	9.f. Visibility Visibilidad		
10. Response Contractor Information Información de contratista de respuesta			
10.a. Has the responsible party retained a contractor? ¿La parte responsable ha empleado a un contratista?		10.b. Contractor Name Nombre del contratista	
<input type="checkbox"/> Yes SI <input type="checkbox"/> No		10.c. Contractor Capabilities/Resources requested Capacidades del contratista/Recursos solicitados	

MARINA SECRETARÍA DE ECONOMÍA		United States Coast Guard	
11. Other Information Otra información			
Additional comments/Information (e.g., cause of incident, areas impacted, immediate implications, trajectories, maps, charts, forecast weather conditions, etc.) Comentarios adicionales / información (por ejemplo: causa del incidente, áreas impactadas, implicaciones inmediatas, trayectorias, mapas, cartas de navegación, pronóstico del tiempo, etc.):			
12. Secondary Source Information (if needed) Información de fuente secundaria (si es necesario)			
12.a. Name of Vessel/Facility Nombre del buque/instalación	12.f. Length of Vessel Eslora del buque		
12.b. Flag Bandera	12.g. Draft of Vessel Calado del buque		
12.c. Owner/Operator Propietario/operador	12.h. Document/Official Number Documento/número oficial		
12.d. Cargo Type/Amount El tipo de carga/cantidad	12.i. Last Port of Call Último puerto		
12.e. Fuel Type/Amount Tipo de combustible/cantidad	12.j. Next Port of Call Próximo puerto		
12.k. Vessel aground? ¿Está el buque varado?		<input type="checkbox"/> Yes SI <input type="checkbox"/> No <input type="checkbox"/> Not Applicable No aplica	

Electronic Access

The screenshot shows the EPA OSC On-Scene Coordinator RRT-6 Homepage. The page features a navigation bar with links for Environmental Topics, Laws & Regulations, Report a Violation, and About EPA. Below this is a sub-navigation bar with Profile, Notices, Images, Documents, Links, and Login. The main content area is titled 'RRT-6 Homepage' and contains a 'Documents' section with a list of 314 documents. The list is organized into categories, with 'MEXUS PLAN' and 'MEXUSGULF Annex' highlighted in green and yellow respectively. A callout box on the left side of the page points to these two categories.

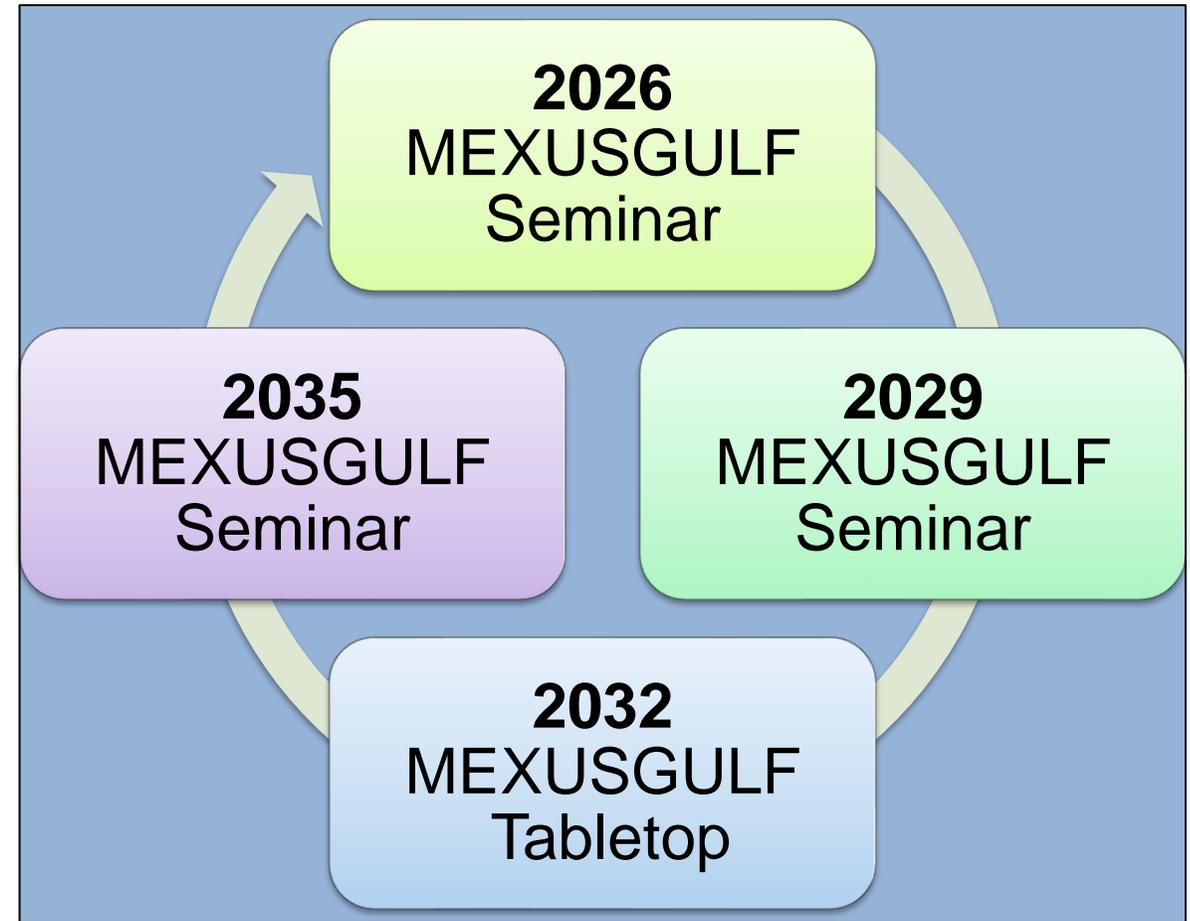
File Name	Description	Category	Uploaded	Size	Download
Dispersant Bioassessment -- 1994.pdf	Dispersant Bioassessment	Preauth-Approvals	10/17/2015	393 KB	Download
rrt_semi_annual_meeting_summary_2015_May.pdf	Summary 05/2015	Meet Summary	10/17/2015	75 KB	Download
rrt_semi_annual_meeting_summary_2014_November.pdf	Summary 11/2014	Meet Summary	10/17/2015	124 KB	Download
rrt_semi_annual_meeting_summary_2014_May.pdf	Summary 05/2014	Meet Summary	10/17/2015	205 KB	Download
rrt_semi_annual_meeting_summary_2013_may.pdf	Summary 05/2013	Meet Summary	10/17/2015	296 KB	Download
rrt_semi_annual_meeting_summary_2013_December.pdf	Summary 12/2013	Meet Summary	10/17/2015	313 KB	Download
rrt_semi_annual_meeting_minutes_January2006.pdf	Summary 01/2006	Meet Summary	10/17/2015	63 KB	Download
rrt_semi_annual_meeting_minutes_January_2009.pdf	Summary 01/2009	Meet Summary	10/17/2015	191 KB	Download
rrt_semi_annual_meeting_minutes_January_2008.pdf	Summary 01/2008	Meet Summary	10/17/2015	35 KB	Download
rrt_semi_annual_meeting_minutes_2012_july.pdf	Summary 07/2012	Meet Summary	10/17/2015	135 KB	Download
rrt_semi_annual_meeting_minutes_2012_december.pdf	Summary 12/2012	Meet Summary	10/17/2015	99 KB	Download
rrt_semi_annual_meeting_minutes_2011_november.pdf	Summary 11/2011	Meet Summary	10/17/2015	159 KB	Download
rrt_semi_annual_meeting_minutes_2011_june.pdf	Summary 06/2011	Meet Summary	10/17/2015	251 KB	Download

- MEXUS PLAN
- MEXUSGULF Annex

https://response.epa.gov/site/doc_list.aspx?site_id=5083

Proposed Path Forward

- Develop protocols for dispersant use in/near the transboundary region; results included as Appendix 5 to MEXUSGULF Annex
- SEMAR RN-1 and USCG D8 continue frequent discussions; in-person meetings every three years





2023 Workshop

Questions?



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Wrap-up

Closing Remarks by Co-Chairs



Craig Carroll, U.S. EPA



Michael Sams, USCG

Adjourn
