

Oil Spill Response Plans

David Lehman
Office of Pipeline Safety



Increasingly, we are being asked...



You approved my plan last time, why did I get a Letter of Correction this time?



Plan Reviews and Approvals Are Not Discretionary

The CWA states that the approving official, “shall ... approve any plan that meets the requirements of 33 USC 1321.”

49 CFR 194.119(d) states, “... OPS will approve the response plan if OPS determines that the response plan meets all requirements of this part.”



Approximately **470** Facility Response Plans
have been submitted to PHMSA

160 Plan Reviews in FY15 in which
approximately **50%** needed corrections
before they could be approved



Top 5 Recurring Errors

60% Worst Case Discharge

25% Response Resource Availability

25% Qualified Individual

15% Federal, State, and local contacts

15% Environmentally Sensitive Areas



Worst Case Discharge

Calculations and Methodology



Worst Case Discharge

49 CFR Part 194 requires operators to compare

Historical Discharges

Breakout Tank Capacities

Pipeline Calculation

During a review we check all of these components to verify that the calculated volumes are correct **and** all three were taken into consideration.



Historical Discharge

Provide the largest discharge that has occurred in the past. For example:

June 6, 1993 – 260 bbls of crude oil discharged from line section #24 in Cushing, OK.

or

There are no historical discharges associated with this pipeline.

We check incident report records to verify information provided is correct.



Historical Discharge

If you list all the discharges associated with the pipeline, please **highlight** or list first the volume being used to determine the WCD.

The historical discharge is associated with the pipeline not the operator.



Breakout Tanks

Provide the largest capacity breakout tank and the prevention credit being applied.

For example:

BOT #5 – 150,000 bbl capacity, 70% prevention credit reduces volume to 45,000 bbl WCD.

or

There are no breakout tanks associated with this pipeline.



Breakout Tanks

You may include a table for simplicity to show applicable credits.

Prevention Measure	Credit (%)	Applicable
Secondary containment > 100%	50	✓
Built/repaired to API standards	10	✓
Overfill protection standards	5	✓
Testing/cathodic protection	5	✓
Tertiary containment/drainage/treatment	5	
	70	Total applicable prevention credit applied to breakout tank capacity



Breakout Tanks

If you list all the breakout tanks associated with the pipeline, please **highlight** or list first the one being used to determine the WCD.

Do not provide a discussion on breakout tanks if there are no breakout tanks. Simply say there are no breakout tanks.



Calculating the Pipeline WCD

$$WCD \text{ (bbls)} = [(RT + ST) \times FR] + DDV$$

Response Time (hours) ↓

Flow Rate (bbls per hour) ↓

Shutdown Time (hours) ↑

Drain Down Volume (bbls) ↑



Pipeline

Calculate Drain Down Volume (bbls)

Internal Radius (inches) Section Length (inches) Converts value from cubic inches to gallons

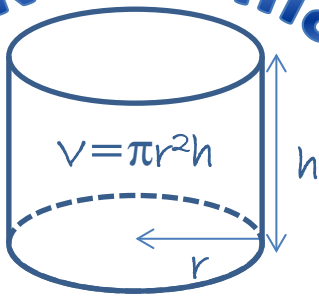
$$\pi r^2 \times l \times 0.004329$$

$$DDV (bbls) = \frac{\pi r^2 \times l \times 0.004329}{42 \text{ gal} / \text{bbl}}$$

$$42 \text{ gal} / \text{bbl}$$

Converts value from gallons to barrels

Look Familiar?



Pipeline

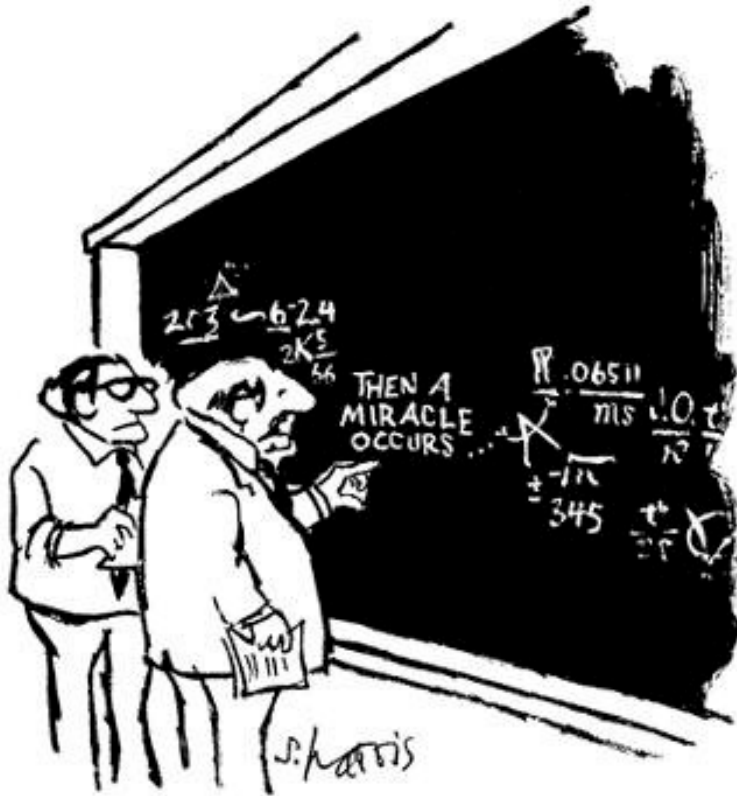
If you list all the pipeline section volumes, please **highlight** or list the one being used to determine the WCD first.

Response time and shutdown times less than *10 minutes* raises red flags!

You may be asked to provide evidence of flowrate and shutdown times during an inspection.



Pipeline



"I think you should be more explicit here in step two."

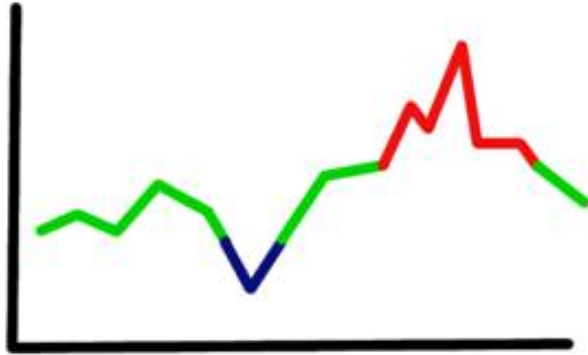
Show your *values*.

Show your *work*.

We need to follow your calculations to verify accuracy.



Pipeline



What if we use an oil spill risk analysis model to determine worst case discharge?

This is *acceptable*

You must still provide a discussion on how the model works, variables considered, and the values associated with the calculation (i.e., pipeline diameter, total length, response and shutdown times).



Example WCD

Historical Discharge

June 6, 1993 – 260 bbls of crude oil discharged from Line Section #24 in Cushing, OK.

Breakout Tank

Breakout Tank #5 (Cushing, OK Tank Farm)– 150,000 bbl capacity, 70% prevention credit reduces volume to 45,000 bbl WCD

Pipeline

Diameter (Internal) = 35.5 inches

Length = 1.24 miles

Flow Rate = 450 bph

Response Time = 20 min

Shutdown Time = 5 min

$$DDV \text{ (bbls)} = \frac{\pi 17.75^2 \times 78566.4 \times 0.004329}{42 \text{ gal/bbl}} = 8015 \text{ bbls}$$

$$WCD \text{ (bbls)} = [(0.333 + 0.083) \times 450] + 8015 = 8203 \text{ bbls}$$

DOT/PHSMA WCD is 45,000 bbls of crude oil from BOT #5 in Cushing, OK.



Response Resources

Locations & Timeframes



First, let's clarify what a response zone is.

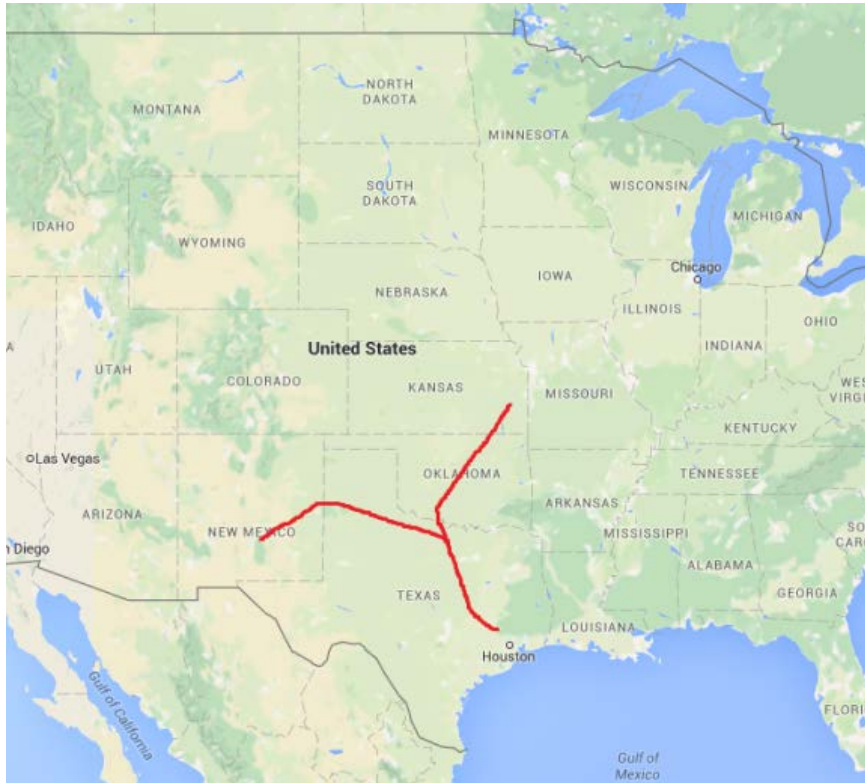


Response Zone

Geographic area either along a length of **pipeline** or including multiple pipelines, containing one or more **adjacent line sections**, for which the operator must plan for the deployment of, and **provide spill response capabilities** (the size of the zone is determine by the operator after considering available capability, resources, and geographic characteristics).



Single or Multiple Response Zones?



Is it okay to have multiple response zones in a one plan?

YES!!!

But you must determine WCD and the correct response resources for each response zone.



What are response resources?



Response Resources

Response resources include all personnel, equipment, supplies, and other resources necessary to contain and remove oil from water and shorelines, temporarily store and dispose of recovered oil, and other actions necessary to minimize or mitigate damage to the environment.





Response Resources

USCG Classified OSRO

- Classified WCD1 by USCG for Rivers and Canals
- Correct COTP/ACC
- Response times within 6hr/12hr
- *Provide evidence of current contract or agreement*

Non-classified OSRO/CO-OP/Company Owned

- Response times within 6hr/12 hr
- Contract or other proof of contract
- *Provide detailed equipment lists*



Equipment List

The list must show the daily effective recovery rate so a reviewer can verify there is enough equipment available.

We use 33 CFR 154 Appendix C to verify whether there is sufficient equipment to respond to a WCD.



Response Times

Response times are calculated by using mileage between the response resource location site and the worst case discharge.

$$\text{Time (hours)} = \frac{\text{Distance}}{\text{Speed}}$$

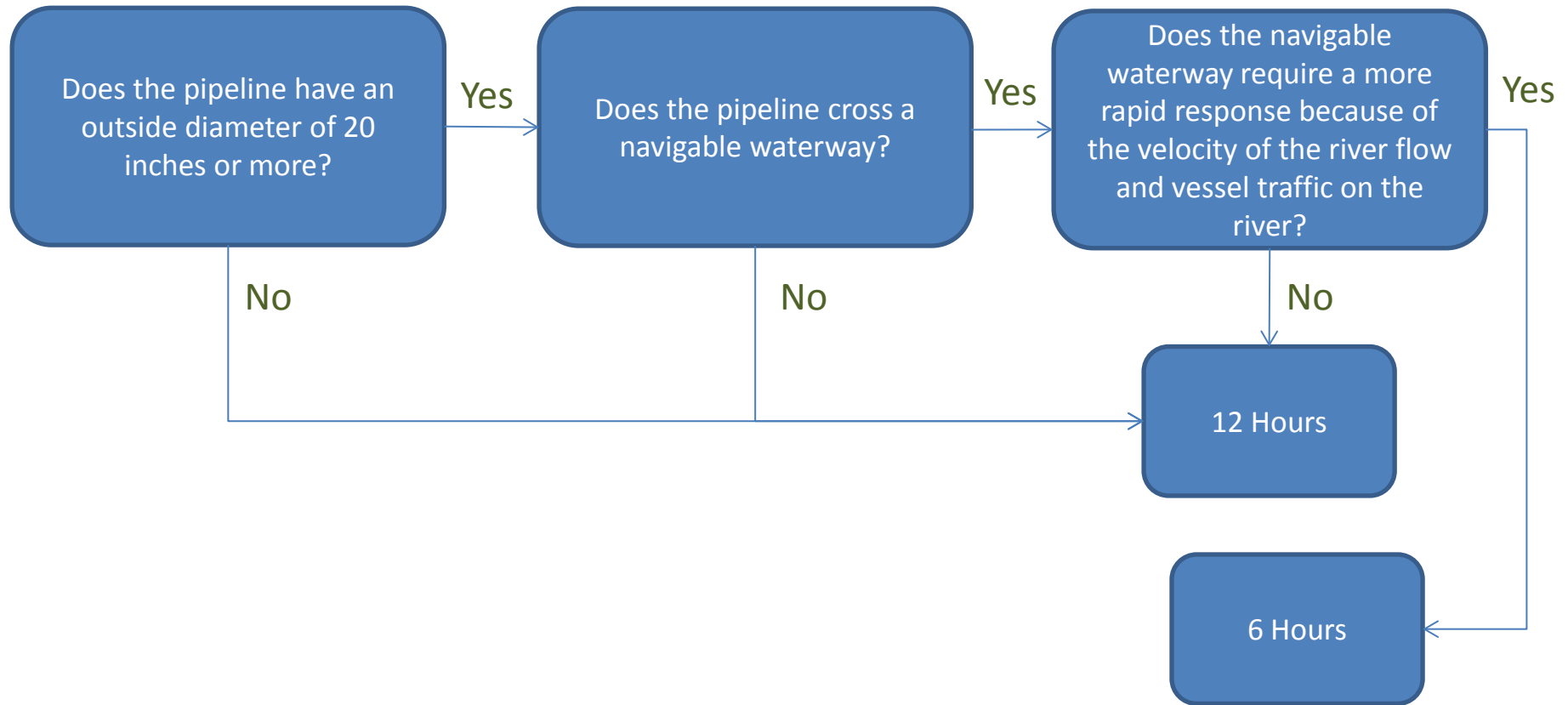
Land Speed
Distance (miles)
Speed= 35 mph

Water Speed
Distance (nautical miles)
Speed= 5 knots

Air Speed
Distance (nautical miles)
Speed= 100 knots



Response Times



Response Times

An oil spill can occur anywhere along the pipeline infrastructure!

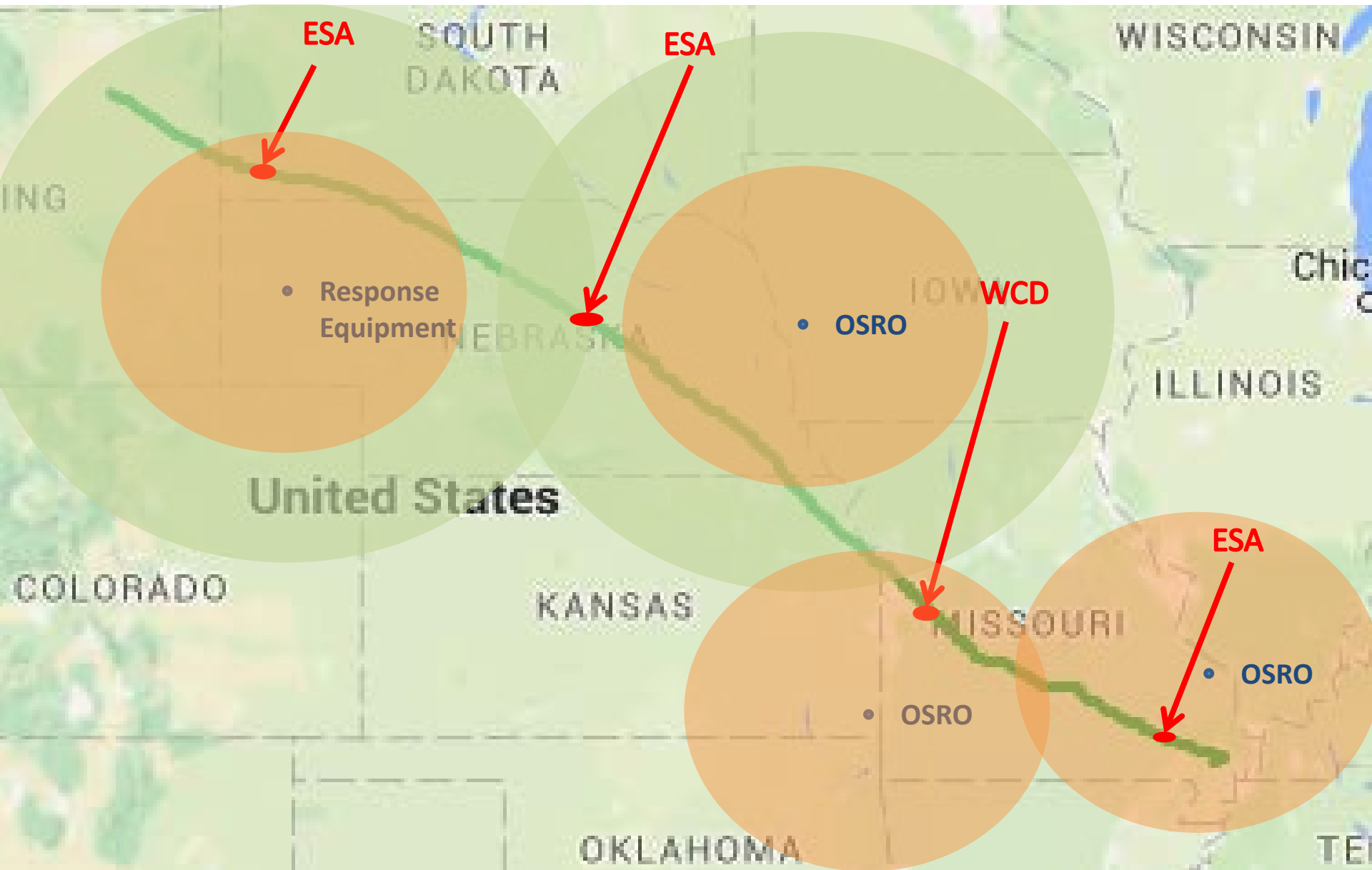
Appropriate response resources must be identified for all pipeline sections in the response zone and must respond within the appropriate timeframe.



Is this a concern?



Best Practice



Qualified Individual

...and Alternates



Qualified Individual

- ✓ English-speaking
- ✓ Located in United States
- ✓ 24-hour availability
- ✓ Full authority to...
 - Activate and contract with OSROs
 - Activate personnel & company owned equipment
 - Act as liaison with Federal On Scene Coordinator
 - Obligate funds



Qualified Individual

PHMSA requires at a minimum

ONE Qualified Individual and

ONE Alternate Qualified Individual.

The names/titles and a 24-hour phone number must be listed in the Information Summary.



Federal, State, and Local Contacts



Federal, State, and Local Contacts

Agencies to include are those that are expected to have pollution control responsibilities or to provide support during a response.

The best number is a 24-hour number.



ADB-2012-09

Ensure the call to the appropriate Public Safety Access Point (PSAP) is made promptly, and to as many jurisdictions as is necessary. A direct-inbound ten-digit number must be used for the specific PSAP, since a call to 9-1-1 would be routed only to the PSAP for the caller's location.



Federal, State, and Local Contacts



What is the most important Federal number to provide?

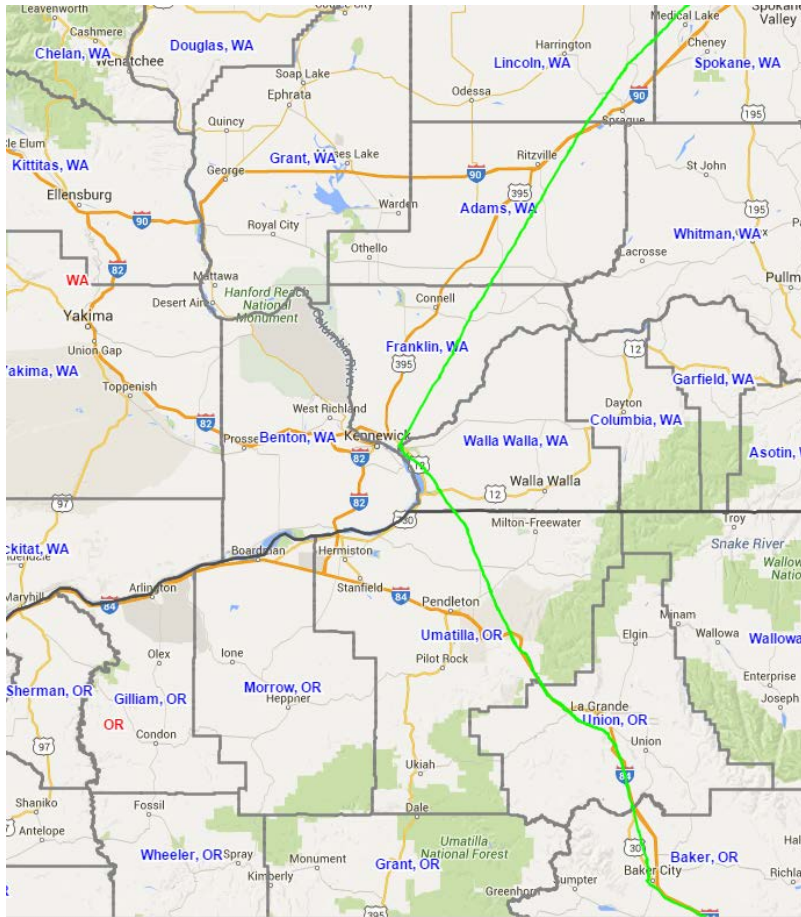
1-800-424-8802

Why?

The National Response Center (NRC) is able to simultaneously notify Federal Agencies.



Federal, State, and Local Contacts



You must also list at a minimum

ONE contact per **STATE** and

ONE contact per **COUNTY** in which the pipeline is located.



Environmentally Sensitive Areas

“Identify environmentally and economically sensitive areas”

MAPS
Legible
Legend

LISTS

WEBSITE LINKS
Working



Environmentally Sensitive Areas

Habitat

(marshes, swamps, riverines)

Management Areas

(wildlife refuges, Federal/State designated ecosystems)

Biological

(spawning grounds, nesting areas, migratory pathway)

Economically sensitive Areas

Water dependent commercial areas

(drinking water intakes, marinas, locks & dams)

Water dependent recreational areas

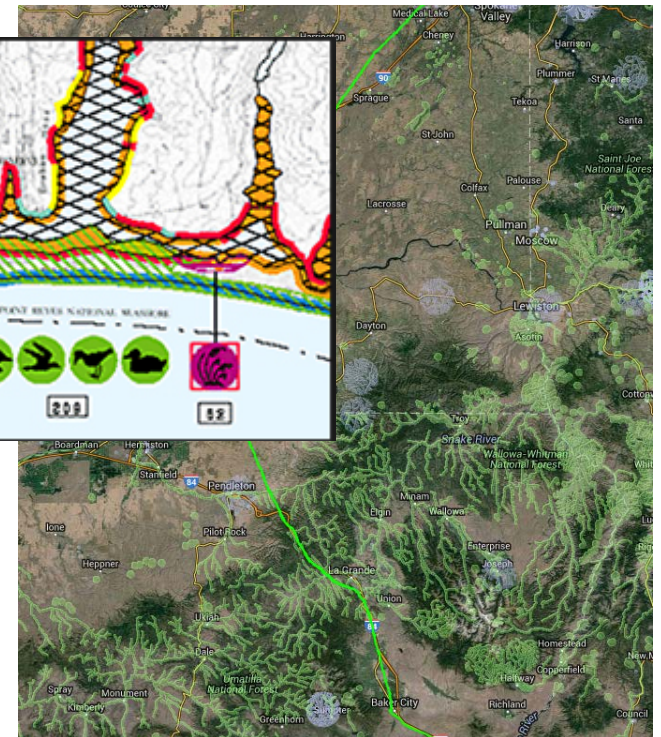
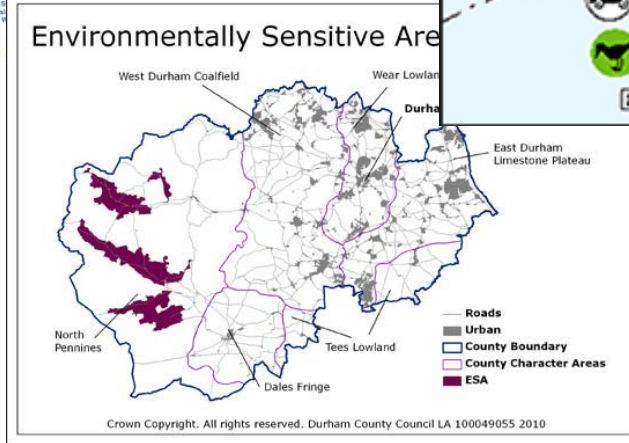
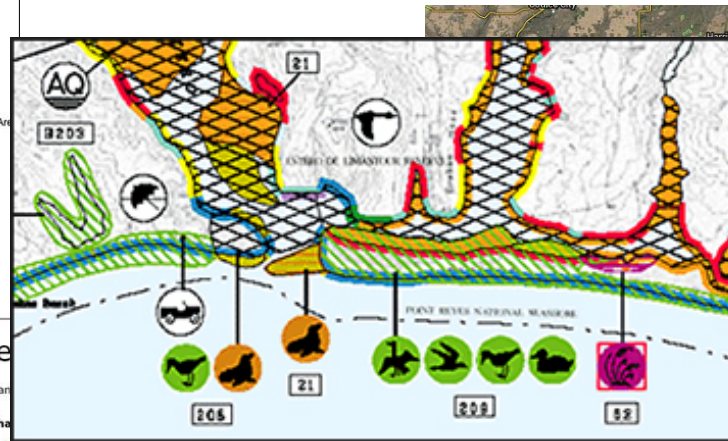
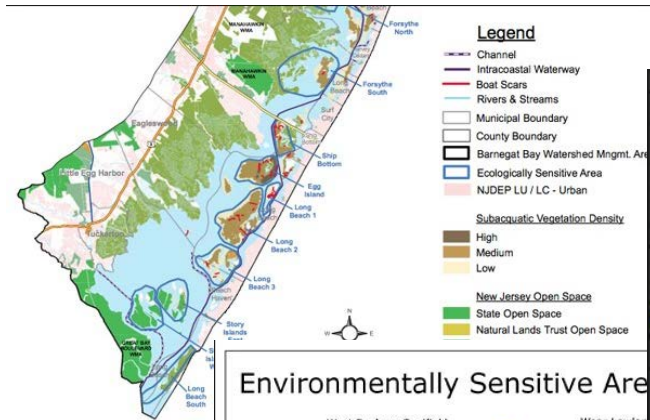
(National seashore or lakeshore recreational areas)

Anthropological areas

(Native lands, historic landmarks and sites)



Environmentally Sensitive Areas



Environmentally Sensitive Areas

Where can I find this
information?

Area Contingency Plans
Regional Contingency Plans

National Pipeline Mapping System can also
be a valuable resource



Submission Requirements

Kimberly Jackson



Plan Submission



**SECURE
FILE
TRANSFER
(FTP)**



U.S. Postal Service
CERTIFIED MAIL[®] RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com.

OFFICIAL USE	
Postage \$	Postmark Here
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	

Sent To _____
"Street," Apt. No.,
or PO Box No. _____
City, State, ZIP+4 _____

PS Form 3800, August 2005 See Reverse for Instructions



Why not through the U.S. mail?



*U.S. Postal Service
security measures
damage or destroy
electronic media*



Office of Pipeline Safety (Attn: Response Plan Review)
David K. Lehman, Director
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
PHP-5, East Building, 2nd Floor, E22-321
1200 New Jersey Avenue, SE
Washington, DC 20590

PHMSA.OPA90@dot.gov



It is extremely important that mailing addresses are updated and correct!



Incorrect mailing addresses result in delayed correspondence and delinquent Operator responses to a Letter of Correction.



National Preparedness Response Exercise Program (PREP)

Eddie Murphy



MER-MSIB 08-16: Release of 2016 National Preparedness for Response Exercise Program (NPREP) Guidelines

The purpose of this Bulletin is to announce the release of the new 2016 National Preparedness for Response Exercise Program (NPREP) guidelines. This revision to the guidelines will be published to the Federal Register under docket number USCG-2011-1178. Additionally, the guidelines are currently posted on the USCG Homeport site at <https://Homeport.uscg.mil/exercises> (select the "Port Level Exercises" link).

The NPREP was developed to establish a workable exercise program that meets the intent of section 4202(a) of the Oil Pollution Act of 1990 (OPA 90). The NPREP was designed to provide a mechanism for compliance with the exercise requirements, while being economically feasible for the Government and the oil industry to adopt and sustain. NPREP is a unified Federal effort that satisfies the exercise requirements of the U.S. Coast Guard (USCG), the Environmental Protection Agency (EPA), the Pipeline and Hazardous Materials Safety Administration (PHMSA), and the Bureau of Safety and Environmental Enforcement (BSEE). Completion of the exercises described in the NPREP Guidelines is one option for maintaining compliance with OPA 90-mandated Federal oil pollution response exercise requirements. **Some noteworthy points include:**



- The NPREP guidelines are a conglomeration of OPA-90 exercise requirements and associated policies consolidated into one guidebook. PREP clarifies OPA-90 exercise objectives and provides a methodology for evaluating compliance with federal regulations. The NPREP Guidelines describe the minimum expectations for ensuring adequate response preparedness.
- The 2016 revision is the first in over a decade. This revision modernizes the NPREP Guidelines to better align policy with the existing regulations and improve interagency consistency. The new guidelines incorporate salvage, marine fire fighting and non-tank vessel requirements. Additionally, spill countermeasure topics are better addressed, including deep well discharge scenarios.
- These guidelines are co-owned/co-authored by the four agencies (USCG, BSEE, EPA and PHMSA). These agencies comprise the PREP Compliance, Coordination and Consistency Committee, or PREP 4C for short. PREP 4C assumes all the functions of the former NPREP National Scheduling Coordination Committee.
- The PREP Guidelines address 37 different exercise types which test six different response plans overseen by the four PREP4C agencies.
- Over the past year, approximately 1000 comments were derived through a public comment and interagency comment periods. PREP4C adjudicated and documented all comment responses.
- NPREP does not mandate a given exercise design process. Plan holders are free to design exercises that meet the NPREP objectives as well as their own internal ones.
- If Government, industry, or plan holders desire to expand their exercise programs beyond the NPREP Guidelines, they are highly encouraged to do so.

It is recommended that all stakeholders in the environmental response community do the following:

- Acquire a copy of the new NPREP guidelines for familiarization.
- Continue to review and be familiar with your specific plans.
- Ensure familiarity with Area Contingency Plans.
- Participate in your local Area Committee.
- Reach out to your local Coast Guard Incident Management or Planning staff for assistance.

Questions regarding this should be forwarded to the Coast Guard Office of Marine Environmental Response, NPREP Program manager, Mr. Jonathan Smith at **202-372-2675** or by email at Jonathan.R.Smith@uscg.mil.



**2016 NATIONAL PREPAREDNESS
FOR
RESPONSE EXERCISE PROGRAM
(PREP)
GUIDELINES**

**DEPARTMENT OF HOMELAND SECURITY
U.S. Coast Guard**



ENVIRONMENTAL PROTECTION AGENCY



**DEPARTMENT OF TRANSPORTATION
Pipeline and Hazardous Materials Safety Administration**



**DEPARTMENT OF THE INTERIOR
Bureau of Safety and Environmental Enforcement**



2.3.4 Incident Management Team Exercises

For USCG, EPA, PHMSA, and BSEE-regulated plan holders, the owner or operator identifies an IMT in the response plan. The IMT conducts an annual exercise, in accordance with the PREP Guidelines. The response plan is used in the exercise to ensure that the IMT is familiar with the plan and is able to use it effectively to conduct a response, including all response countermeasures described in the plan. For any chemical or biological countermeasure or in-situ burning cited in the response plan, the IMT must demonstrate the ability to prepare and submit a request, usage, and monitoring plan. Each specific countermeasure listed in the plan will be exercised during the triennial cycle. **At least one IMT exercise in a triennial cycle must involve a WCD scenario. The exercise design team may use alternative WCD scenarios that are representative of a worst-case scenario (e.g., exercise of a pipeline line segment WCD) for environmental impact purposes.** One or more plan holder representatives must participate in each exercise.

If a response plan lists different types of IMTs for varying sizes of incidents (for example, a local IMT for small incidents, a regional team for larger incidents, and a national team for major incidents), each team identified is required to participate in an annual IMT exercise.

It is recommended that the IMT actions and documentation include, at a minimum:

1. ICS forms 201, 204, and 207;
2. Incident Action Plan (IAP); and
3. Health and Site Safety.



2.3.9.6 Railroad Tank Cars and Motor Vehicle Tank Trucks

Section 5 of these Guidelines (DOT/PHMSA-Regulated Facilities and Pipelines) is suitable for certain transportation-related facilities located landward of the coastline. For additional information on response planning requirements for railroad tank cars and motor vehicle tank trucks transporting oil, see 49 CFR § 130. A railroad tank car or a tank truck that transfers oil to or from certain vessels may be considered to be a mobile MTR facility and may be subject to the response planning requirements in 33 CFR § 154. The loading and offloading of railroad tank cars and tank trucks at certain non-transportation-related facilities may be covered by response plans prepared by a facility owner or operator subject to the requirements contained in 40 CFR § 112.



5.2	TTX: Incident Management Team Exercise
Applicability:	Plan holder IMT.
Frequency:	As indicated by the response plan and, at a minimum, consistent with the triennial cycle (annually).
Initiating Authority:	Plan holder.
Participating Elements:	Designated spill emergency response team members. Plan holders are encouraged to notify their DOT/PHMSA regional office at least one month in advance of conducting their PREP exercises. When possible, DOT/PHMSA will participate and evaluate their exercise.
Scope:	Exercise the IMT's organization, communication, and decision-making in managing a response.
Objectives:	Exercise the IMT in a review of: A. Knowledge of the response plan; B. Proper notifications; C. Communication system; D. Ability to access an OSRO; E. Coordination of internal organization personnel with responsibility for response; F. Annual review of the transition from a local team to a regional, national, and international team as appropriate; G. Ability to effectively coordinate response activity with the NRS infrastructure (If personnel from the NRS are not participating in the exercise, the IMT should demonstrate knowledge of response coordination with the NRS); H. Ability to access information in ACP for location of sensitive areas, resources available within the area, unique conditions of area, etc.; and I. Minimum of one IMT exercise in a triennial cycle would involve simulation of a WCD scenario.
Certification:	Self-certification as indicated in response plan or as defined in the "Guiding Principles" section of this document, whichever is more stringent. Each plan should have a written description of the company's certification process.
Verification:	Verification by DOT/PHMSA; records must be available upon request.
Records Retention:	Three years.
Records Location:	Plan holder shall retain records as indicated in response plan.
Evaluation:	Self-evaluation.
Credit:	Plan holder may claim credit for this exercise when conducted in conjunction with other exercises, as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit may be claimed for an actual response when these objectives are met, the response is evaluated, and a proper record is generated.



5.2	TTX: Incident Management Team Exercise
Applicability:	Plan holder IMT.
Frequency:	As indicated by the response plan and, at a minimum, consistent with the triennial cycle (annually).
Initiating Authority:	Plan holder.
Participating Elements:	Designated spill emergency response team members. <u>Plan holders are encouraged to notify their DOT/PHMSA regional office at least one month in advance of conducting their PREP exercises. When possible, DOT/PHMSA will participate and evaluate their exercise.</u>
Scope:	Exercise the IMT's organization, communication, and decision-making in managing a response.
Objectives:	Exercise the IMT in a review of: A. Knowledge of the response plan; B. Proper notifications; C. Communication system; D. Ability to access an OSRO; E. Coordination of internal organization personnel with responsibility for response; F. Annual review of the transition from a local team to a regional, national, and international team as appropriate; G. Ability to effectively coordinate response activity with the NRS infrastructure (If personnel from the NRS are not participating in the exercise, the IMT should demonstrate knowledge of response coordination with the NRS); H. Ability to access information in ACP for location of sensitive areas, resources available within the area, unique conditions of area, etc.; and I. Minimum of one IMT exercise in a triennial cycle would involve simulation of a WCD scenario.
Certification:	Self-certification as indicated in response plan or as defined in the "Guiding Principles" section of this document, whichever is more stringent. Each plan should have a written description of the company's certification process.
Verification:	Verification by DOT/PHMSA; records must be available upon request.
Records Retention:	Three years.
Records Location:	Plan holder shall retain records as indicated in response plan.
Evaluation:	Self-evaluation.
Credit:	Plan holder may claim credit for this exercise when conducted in conjunction with other exercises, as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit may be claimed for an actual response when these objectives are met, the response is evaluated, and a proper record is generated.





Regional Offices

Region	HAZMAT Office	Pipeline Office
Central	901 Locust Street, Suite 480 Kansas City, MO 64106 (816) 329-3800	901 Locust Street, Suite 480 Kansas City, MO 64106 (816) 329-3800
Southwest	8701 S. Gressner Rd., Suite 900 Houston, TX 77074 (713) 272-2820	8701 S. Gressner Rd., Suite 900 Houston, TX 77074 (713) 272-2859
Western	3401 Centrelake Dr., Suite 550B Ontario, CA 91761 (909) 937-3279	12300 W. Dakota Av., Suite 110 Lakewood, CO 80228 (720) 963-3160
Southern	233 Peachtree St. NE, Suite 602 Atlanta, GA 30303 (404) 832-1140	233 Peachtree St. NE, Suite 602 Atlanta, GA 30303 (404) 832-1147
Eastern	820 Bear Tavern Rd., Suite 306 West Trenton, NJ 08628 (609) 989-2277	820 Bear Tavern Rd., Suite 103 West Trenton, NJ 08628 (609) 989-2171



The updated Guidelines is published in the Federal Register today with an effective date of June 10, 2016.

<https://www.federalregister.gov/articles/2016/04/11/2016-08215/national-preparedness-for-response-exercise-program-prep-guidelines>

I am the DOT/PHMSA point of contact. Please do not hesitate to contact me if you have any questions.



Eddie Murphy
Office of Pipeline Safety
Training & Exercise Specialist

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
1200 New Jersey Avenue SE
Washington, DC 20590

202-366-7043 Office
202-734-9122 Cell

eddie.murphy@dot.gov



Questions?

