RRTIII Conference Call

March 2, 2016
0900-1103

Co-Chairs Welcome

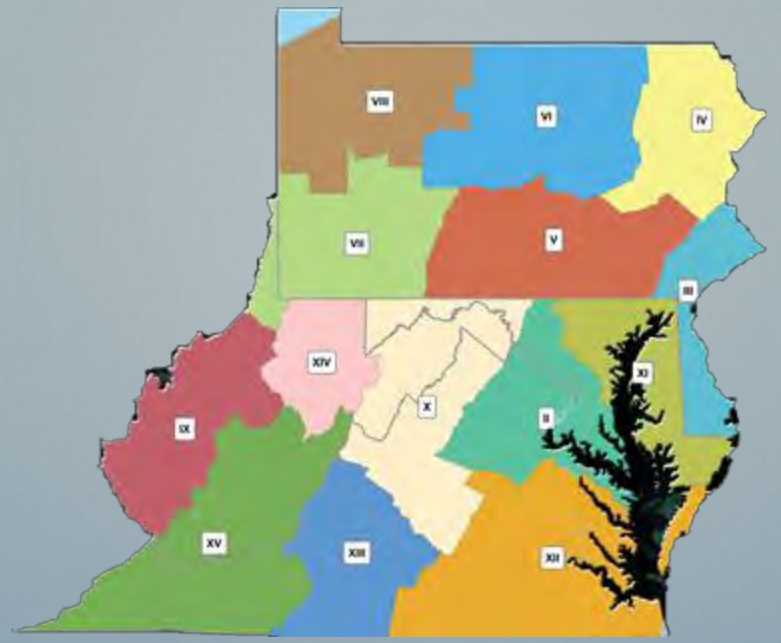
- EPA Co-Chair – Kevin Boyd
- USCG Co-Chair – David Ormes

- [Attendee List provided in Attachment 1]

Welcome to our LEPC Partners

- Rich Fetzer, EPA OSC and Chair of the RRT3 Inland Area Committee
- *See presentation beginning next slide*

  - Inland Area Committee Website - https://www.epaosc.org/site/site_profile.aspx?site_id=2037
  - EPA Region 3 OSC Planning Dashboard: https://www.eparm.net/R3IACP/Default.aspx



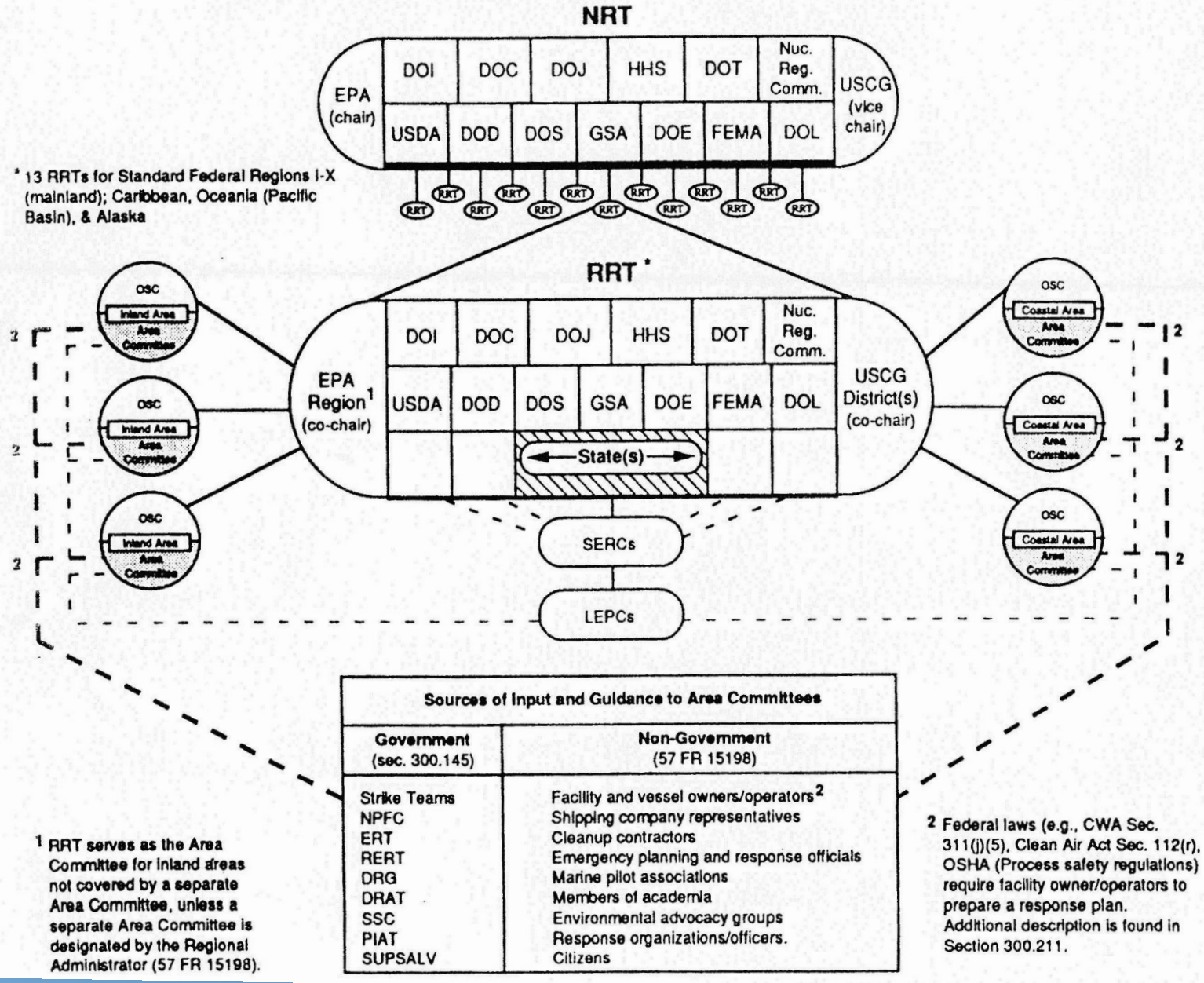
RRT Introduction

March 2, 2016

RRT3 Interim Conference Call

Figure 1b

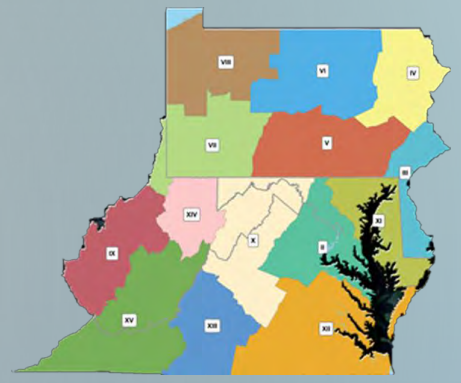
National Response System Concepts: Planning



Sources of Input and Guidance to Area Committees	
Government (sec. 300.145)	**Non-Government** (57 FR 15198)
Strike Teams	Facility and vessel owners/operators [2]
NPFC	Shipping company representatives
ERT	Cleanup contractors
RERT	Emergency planning and response officials
DRG	Marine pilot associations
DRAT	Members of academia
SSC	Environmental advocacy groups
PIAT	Response organizations/officers.
SUPSALV	Citizens

[1] RRT serves as the Area Committee for inland areas not covered by a separate Area Committee, unless a separate Area Committee is designated by the Regional Administrator (57 FR 15198).

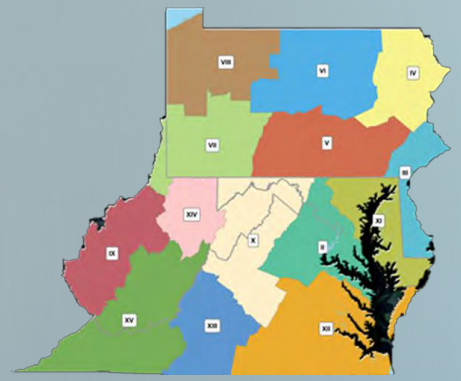
[2] Federal laws (e.g., CWA Sec. 311(j)(5), Clean Air Act Sec. 112(r), OSHA (Process safety regulations) require facility owner/operators to prepare a response plan. Additional description is found in Section 300.211.



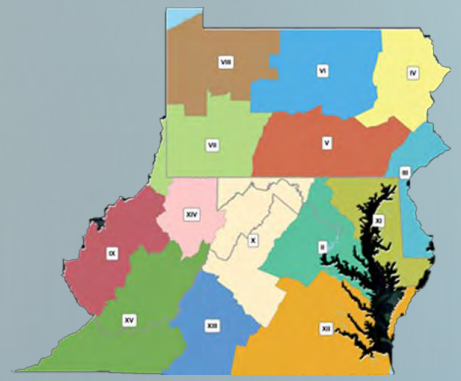
The RRT provides:

(1) The appropriate regional mechanism for development and coordination of preparedness activities before a response action is taken and for coordination of assistance and advice to the OSC/RPM during such response actions; and

(2) Guidance to Area Committees, as appropriate, to ensure inter-area consistency and consistency of individual ACPs with the RCP and NCP.

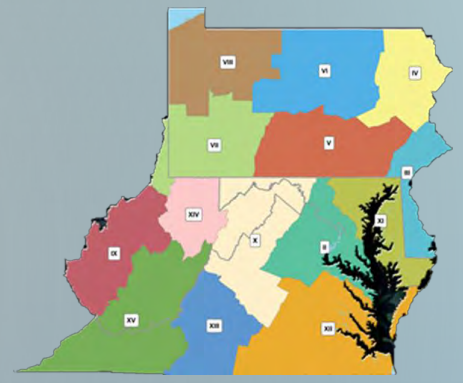


(b) The two principal components of the RRT mechanism are a standing team, which consists of designated representatives from each participating federal agency, state governments, and local governments (as agreed upon by the states); and incident-specific teams formed from the standing team when the RRT is activated for a response. On incident-specific teams, participation by the RRT member agencies will relate to the technical nature of the incident and its geographic location.



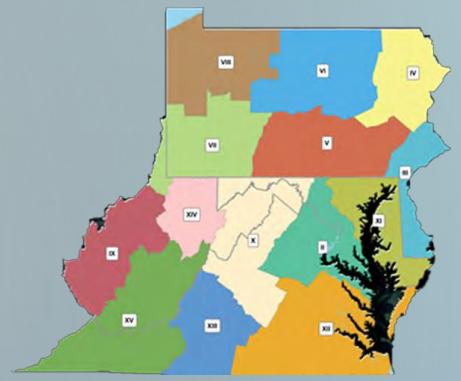
(c) The representatives of EPA and the USCG shall act as co-chairs of RRTs except when the RRT is activated. When the RRT is activated for response actions, the chair shall be the member agency providing the OSC/RPM.

(d) Each participating agency should designate one member and at least one alternate member to the RRT.

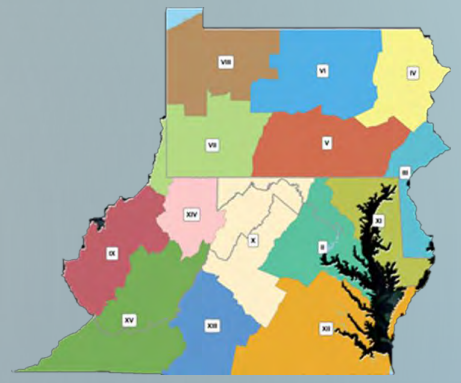


(e), (f) – (paraphrased) RRT members should designate agency participants in either incident-specific RRTs or their agency representatives to assist OSC/RPMs with technical issues.

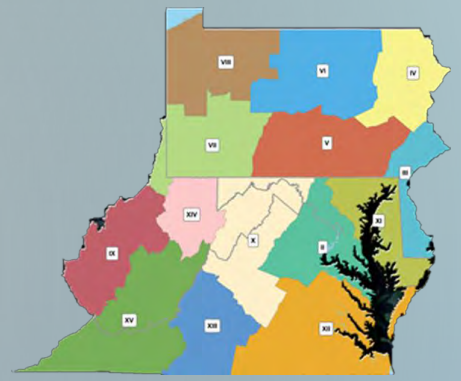
(g) RRT members should nominate appropriately qualified representatives from their agencies to work with OSCs in developing and maintaining ACPs.



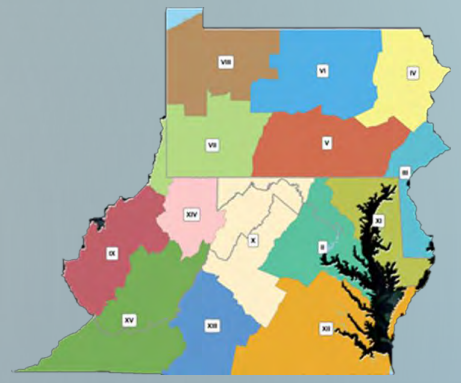
(h) Affected states are encouraged to participate actively in all RRT activities. Each state governor is requested to assign an office or agency to represent the state on the appropriate (*incident-specific*) RRT; to designate representatives to work with the (*standing)* RRT in developing RCPs; to plan for, make available, and coordinate state resources; and to serve as the contact point for coordination of response with local government agencies, whether or not represented on the (*standing*) RRT.



(h) Continued - The state's RRT representative should keep the State Emergency Response Commission (SERC), described in § 300.205(d), apprised of RRT activities and coordinate RRT activities with the SERC. Local governments are invited to participate in activities on the appropriate RRT as provided by state law or as arranged by the state's representative. Indian tribes are also invited to participate in such activities.

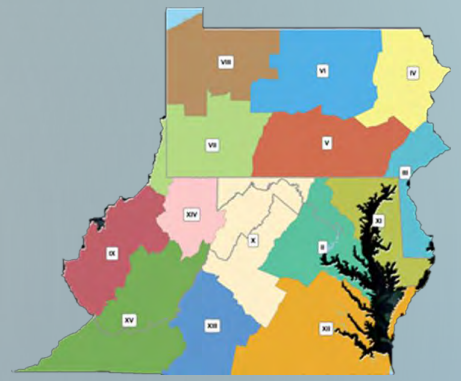


(i) The standing RRT shall recommend changes in the regional response organization as needed, revise the RCP as needed, evaluate the preparedness of the participating agencies and the effectiveness of ACPs for the federal response to discharges and releases, and provide technical assistance for preparedness to the response community.



The RRT should:

(1) Review and comment, to the extent practicable, on local emergency response plans or other issues related to the preparation, implementation, or exercise of such plans upon request of a local emergency planning committee;



(2) Evaluate regional and local responses to discharges or releases on a continuing basis, considering available legal remedies, equipment readiness, and coordination among responsible public agencies and private organizations, and recommend improvements;

PRESENTATION 1

- Frank Csulak, NOAA SSC:
- PRESENTATION: “Bakken Oil Response Guide”
  - Provided as Attachment 2 - Bakken Oil Response Guide.pdf (dated Feb. 19, 2016).
  - Comments / suggestions due to Frank Csulak by **Friday, March 4, 2016** Frank.Csulak@noaa.gov

PRESENTATION 2

- Dr. Madeline Schreiber, Professor of Hydrogeosciences at Virginia Tech
- PRESENTATION: "Is there a role for academic scientists in emergency response? Providing science support without getting in the way" *See next slide set*.
  - Contact for Dr. Madeline Schreiber mschreib@vt.edu for more information.

IS THERE A ROLE FOR ACADEMIC SCIENTISTS IN EMERGENCY RESPONSE?

Providing Science Support without Getting in the Way

Perspectives from one academic scientist:

Dr. Madeline Schreiber
Department of Geosciences
Virginia Tech

DEPARTMENT OF geosciences AT VIRGINIA TECH

INTERFACES OF GLOBAL CHANGE

Academic researchers have expertise and problem-solving skills in wide-ranging areas

- Academic scientists and engineers are often an untapped resource for information and assistance during emergency response
- Expertise in many facets of
  - Natural hazards – earthquakes, tsunamis, fires, landslides, tsunamis, El Nino, droughts, etc.
  - Human-sourced hazards – spills/leaks, explosions, other crises, etc.

What can academic researchers offer in response to environmental contamination?

- Fundamental knowledge of scientific processes
- Local knowledge of geographic area
- Local knowledge of community groups, people
- Novel analytical or modeling expertise
- Results from academic labs can help improve response, evaluate short and long term impacts, and build better preparation for the next spill
- Example: During the Deepwater Horizon (DWH) response, four scientific teams created were "*highly successful in trouble-shooting, designing solutions, analyzing and synthesizing data, and evaluating options.*... *An important element of these teams was the inclusion of outside experts.*" *(Lubchenco et al, 2012).*

Getting involved without getting in the way

"*During a crisis, scientists must respect that the priority needs of the response must come before acquisition of new knowledge when the two are in direct conflict.*" (Lubchenco et al., 2012)

- Academic researchers may have expectations for site access and/or sample collection that may not be in tune with emergency response.
  - Example: Deepwater Horizon: Academic and other scientists wanted access to the well site, but their presence had strong potential to interfere with response operations (Lubchenco et al. 2012).

- Academic researchers may need to be educated about the details and importance of the Incident Command System during a response

What do academic scientists need to contribute to a response?

- Depends on the event… but in the case of spills, there may be requests for information
  - When, what, how much, how long…
  - Available baseline data
  - Chemical characteristics (sometimes not available, academic scientists can help figure these out)
  - Other information, specific to the question/problem
- Site access for measurements
  - Samples of material, water, solids
  - Time series?
  - Spatial?
- Much of this information or request for site access is time sensitive

"… *Responders must support gathering new data, unless those activities interfere with the response*" (Lubchenco et al., 2012)

A note about funding…

- Academic scientists are often supported through federal funding streams
- Timeline for regular proposal review can be > 1 year
  - RFP => Deadline => Review => Decision => Funds transfer
- Normal timeline does not work for critical events!
- NSF created the RAPID program to accommodate science conducted during a crisis
  - This program funds proposals "*having a severe urgency with regard to availability of or access to data, facilities, or specialized equipment, including quick response research on natural or anthropogenic disasters and similar unanticipated events*" (Cooper, 2014)
- However, these funds are limited both in terms of funding and in scope.

Example: Elk River MCHM Spill, Jan 2014

- Elk River spill
  - Freedom Industries chemical storage tank leak
  - > 10,000 gallons of coal processing liquid, contained crude MCHM

- NSF RAPID program funded three Elk River projects

  Dr. Andrea Dietrich, Virginia Tech – environmental fate of MCHM

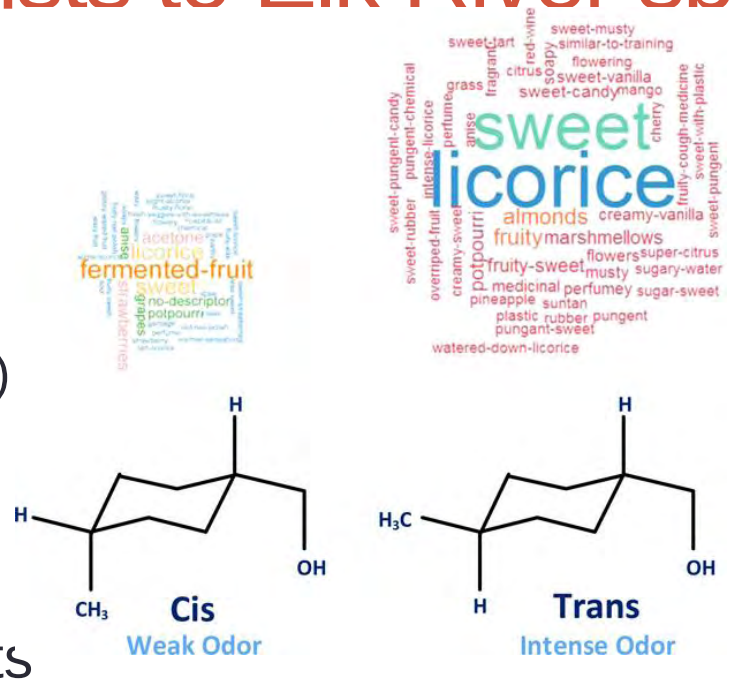
  Dr. Jennifer Weidhaas, West Virginia University – extent of contamination

  Dr. Andrew Whelton, U. South Alabama (now Purdue) – MCHM adsorption and removal from water pipes

  Dr. William Alexander, University of Memphis – computational modeling

Contributions of academic scientists to Elk River spill

- Odor threshold of MCHM isomers
  - Gallagher et al., 2015
- Fate and transport properties of MCHM
  - Dietrich et al. 2015 (W. Alexander co-author)
- Exposure and toxicity
  - Sain et al. 2015
  - Lan et al., 2014
- Perceptions, water quality, health impacts
  - Whelton et al. 2014
- Biodegradation
  - Yuan et al., 2016
- Note that a USGS team (Foreman et al., 2015) developed analytical method for measuring MCHM – there was no established method before the spill



Gallagher et al., 2015

Example: Dan River coal ash spill, Feb 2014

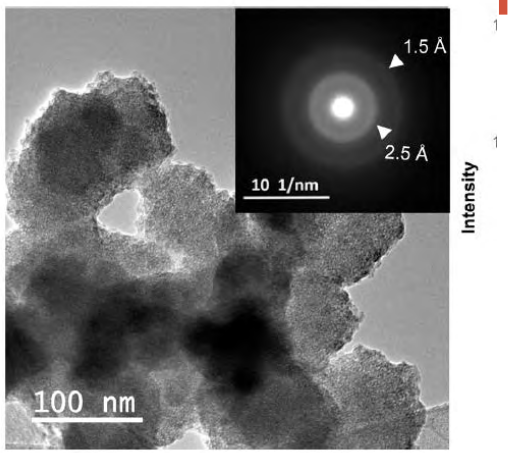
- Coal ash retention basin leaked, released 39,000 tons of coal ash and 27 million gallons of water into Dan River (NC)

- NSF RAPID program funded several projects
  - Dr. Lou Derry (Cornell)/Dr. M. Schreiber, Dr . B Gill, Dr. M Michel (VT) – geochemical tracers of coal ash
  - Dr. April Gu (Northeastern U) – toxicity
  - Dr. Mustafa Altinakar (U Mississippi) – sediment transport/modeling
  - Dr. Andrew Heyes (U MD) -- Mercury

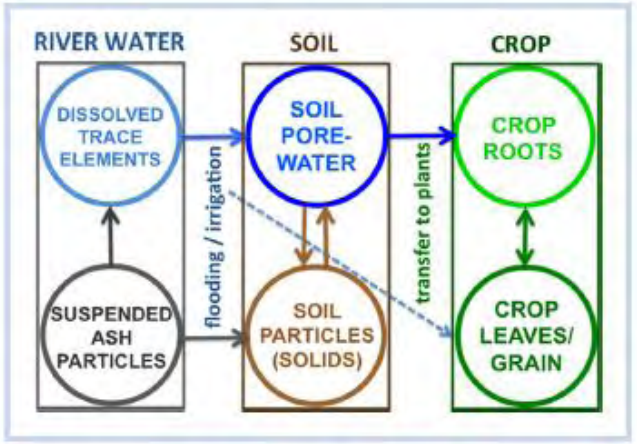
Contributions of academic scientists to Dan River spill

- Nanoparticle transport
  - Yang et al. 2015
- Impacts of agricultural use of water
  - Hesterberg et al. 2015
- Economic impacts
  - Lemly 2015

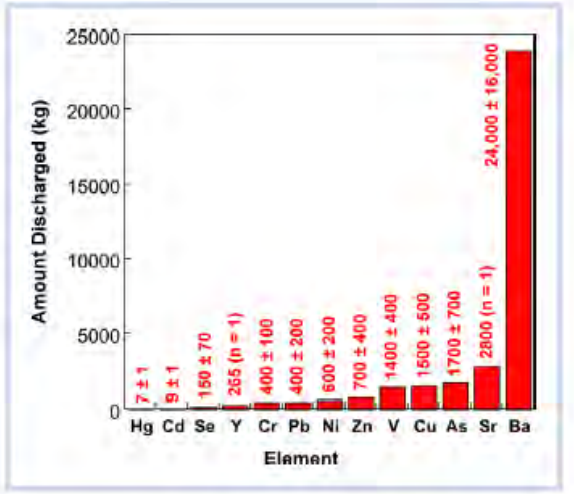
- Other work in progress



Yang et al., 2015



Hesterberg et al., 2015



Hesterberg et al., 2015

Academic scientists can also be independent experts

- Extra sets of eyes
- Additional lines of evidence
- Example: DWH and flow rates
- Estimates from different groups using different methods and techniques

Table 1. Flow rate estimates from in situ observations

2010 Date event day	Method	Flow rate (1,000 BPD)	Source
Preriser cut estimates			
May 13–16 ED 24–27	Large eddy tracking	30 ± 12	Berkeley (BKY) (6)
May 13–16 ED 24–27	Particle image velocimetry	23 ± 9	Expert E (6)
May 13–16 ED 24–27	Particle image velocimetry	25 ± 8	Experts A, B, C (6)
May 13–16 ED 24–27	Feature tracking velocimetry	55 ± 14	National Energy Technology Laboratory (NETL) (6)
May 14 ED 25	Optical plume velocimetry	56 ± 12	Lamont–Doherty Earth Observatory (LDEO) (8)
May 31 ED 42	Acoustic Doppler velocity + sonar	57 ± 10	Woods Hole Oceanographic Institution (WHOI) (11)
Postriser cut estimates			
June 3 ED 45	Large eddy tracking	46 ± 4*	Berkeley (BKY) (6)
June 3 ED 45	Particle image velocimetry	35 ± 5*	Expert E (6)
June 3 ED 45	Particle image velocimetry	32 ± 8*	Experts A, B, and C (6)
June 3 ED 45	Digital image velocimetry	62 ± 58*	University of California at Santa Barbara (UCSB) (6)
June 3 ED 45	Feature tracking velocimetry	61 ± 15*	National Energy Technology Laboratory (NETL) (6)
June 3 ED 45	Optical plume velocimetry	68 ± 14	Lamont–Doherty Earth Observatory (LDEO) (8)

All rates expressed in stock tank barrels (stb = 0.159 m^3) at the ocean surface for consistency.
*Rates from p. 15 in ref. 6. In some cases, mean and SD values were not identical to values in the appendices of ref. 6, which were finalized after official flow rates were publicly reported.

Table 3. Flow rate estimates from reservoir modeling

Group	Most likely flow rate (1,000 BPD)	Worst case discharge (1,000 BPD)	August model flow rate (1,000 BPD)
Hughes (Louisiana State University)	63 (channel/levee complex)	64 (extensive sheet sands)	62 decreasing to 53
Kelkar (University of Tulsa)*	27–32	37–45	62 decreasing to 53
Gemini Solutions Group	60 decreasing to 50	102 (flow-through multiple paths in well)†	62 decreasing to 53

McNutt et al. 2012

NSF-sponsored Workshop May 2015

- “Fostering Advances in Water Resources Protection and Crisis Communication: Lessons Learned from Recent Disasters”
- Supported by Bill Cooper, NSF Program Director of Environmental Engineering
- Organizers: Jennifer Weidhaas (WVU), William Alexander (Memphis)
- Participants
  - Researchers (academic/federal) working on Elk River and Dan River spills
  - Emergency responders: Craig Giggleman (FWS), Myles Bartos (EPA), Dennis Matlock (EPA), Rusty Joins (WV DEP)
  - Others
- Goals
  - Understand regulatory roles and needs
  - How to communicate between scientists, with responders, with public
  - How to integrate research into emergency response
- Output: One manuscript in review, two others in preparation

How to find academic scientists with the needed expertise at the time of a spill?

Currently, there is no organized system for identifying these scientists.

Finding academic scientists with needed expertise during a crisis is challenging

DWH Example (Lubchenco et al., 2012)

> "*Mission agencies rapidly mobilized numerous preexisting relationships (e.g., with university or independent scientists) through ongoing research relationships financed through competitive grants and preexisting contracts to provide services in the event of a spill.*"
>
> "*Scientists interested in the spill" were a challenging group to identify quickly and communicate with frequently and in the depth required for meaningful exchanges.*"

How can we improve?

- Relationship building and networks
- Science Support Teams
  - Science Support Coordinators as points of contact
- Regional scientific collaboration networks (Lubchenco et al., 2012)
- Workshops
- Education
- Communication

"*The DWH incident also saw the willingness of the academic community to act in disaster-response mode. New arrangements for training and funding need to be developed to enable greater participation*" (Lubchenco et al., 2012)

Acknowledgements

- Research
  - Funding for our Dan River work by NSF RAPID program
  - Collaborators on the Dan River work
  - Brian Williams from the Dan River Basin Association
  - Myles Bartos (EPA OSC) for assistance with site access

- Workshop
  - Organizers of the “Fostering Advances” workshop, including academic/federal scientists and emergency responders
  - “Theme 2” team for contributions and discussions
  - Dr. Jennifer Weidhaas and Dr. Andrea Dietrich for discussion

References cited

- Cooper, W. J., 2014, Responding to crisis: the West Virginia chemical spill: Environmental Science & Technology, v. 48, no. 6, p. 3095-3095.
- Dietrich, A. M., Thomas, A., Zhao, Y., Smiley, E., Shanaiah, N., Ahart, M., Charbonnet, K. A., DeYonker, N. J., Alexander, W. A., and Gallagher, D. L., 2015, Partitioning, aqueous solubility, and dipole moment data for cis-and trans-(4-methylcyclohexyl) methanol, principal contaminants of the West Virginia Chemical Spill: Environmental Science & Technology Letters, v. 2, no. 4, p. 123-127.
- Foreman, W. T., Rose, D. L., Chambers, D. B., Crain, A. S., Murtagh, L. K., Thakellapalli, H., and Wang, K. K., 2015, Determination of (4-methylcyclohexyl) methanol isomers by heated purge-and-trap GC/MS in water samples from the 2014 Elk River, West Virginia, chemical spill: Chemosphere, v. 131, p. 217-224.
- Gallagher, D. L., Phetxumphou, K., Smiley, E., and Dietrich, A. M., 2015, Tale of two isomers: Complexities of human odor perception for cis-and trans-4-methylcyclohexane methanol from the chemical spill in West Virginia: Environmental Science & Technology, v. 49, no. 3, p. 1319-1327.
- Hesterberg, D., Polizzotto, M. L., Crozier, C., and Austin, R. E., 2015, Assessment of trace element impacts on agricultural use of water from the Dan River following the Eden coal ash release: Integrated environmental assessment and management (published online).
- Lan, J., Hu, M., Gao, C., Alshawabkeh, A., and Gu, A. Z., 2015, Toxicity assessment of 4-Methyl-1-cyclohexanemethanol and its metabolites in response to a recent chemical spill in West Virginia, USA: Environmental Science & Technology, v. 49, no. 10, p. 6284-6293.
- Lemly, A. D., 2015, Damage cost of the Dan River coal ash spill: Environmental Pollution, v. 197, p. 55-61.
- Lubchenco, J., McNutt, M. K., Dreyfus, G., Murawski, S. A., Kennedy, D. M., Anastas, P. T., Chu, S., and Hunter, T., 2012, Science in support of the Deepwater Horizon response: Proceedings of the National Academy of Sciences, v. 109, no. 50, p. 20212-20221.
- McNutt, M. K., Chu, S., Lubchenco, J., Hunter, T., Dreyfus, G., Murawski, S. A., and Kennedy, D. M., 2012, Applications of science and engineering to quantify and control the Deepwater Horizon oil spill: Proceedings of the National Academy of Sciences, v. 109, no. 50, p. 20222-20228.
- Sain, A. E., Dietrich, A. M., Smiley, E., and Gallagher, D. L., 2015, Assessing human exposure and odor detection during showering with crude 4-(methylcyclohexyl) methanol (MCHM) contaminated drinking water: Science of The Total Environment, v. 538, p. 298-305.
- Whelton, A. J., McMillan, L., Connell, M., Kelley, K. M., Gill, J. P., White, K. D., Gupta, R., Dey, R., and Novy, C., 2015, Residential tap water contamination following the Freedom Industries chemical spill: Perceptions, water quality, and health impacts: Environmental Science & Technology, v. 49, no. 2, p. 813-823.
- Yang, Y., Colman, B. P., Bernhardt, E. S., and Hochella, M. F., 2015, Importance of a nanoscience approach in the understanding of major aqueous contamination scenarios: case study from a recent coal ash spill: Environmental Science & Technology, v. 49, no. 6, p. 3375-3382.
- Yuan, L., Zhi, W., Liu, Y., Smiley, E., Gallagher, D., Chen, X., Dietrich, A., and Zhang, H., 2016a, Aerobic and anaerobic microbial degradation of crude (4-methylcyclohexyl) methanol in river sediments: Science of The Total Environment, v. 547, p. 78-86.
- Yuan, L., Zhi, W., Liu, Y., Smiley, E., Gallagher, D., Chen, X., Dietrich, A. M., and Zhang, H., 2016b, Degradation of cis-and trans-(4-methylcyclohexyl) methanol in activated sludge: Journal of Hazardous Materials, v. 306, p. 247-256.

Federal Agency Report-outs

[Refer to *RRT3 Report-Out Summary* in Attachment 3]

- Department of Commerce (DOC)
- Department of the Interior (DOI)
- Agency for Toxic Substances and Disease Registry (ATSDR) / CDC
- Federal Emergency Management Agency (FEMA)
- General Services Administration (GSA)
- Department of Defense (DOD) / Navy
- Army Corps of Engineers (USACE)
- U.S. Department of Agriculture (USDA) – Forest Service
- Department of Transportation (DOT) / Pipeline and Hazardous Materials Safety Administration (PHMSA)
- Department of Homeland Security (DHS) - Protective Security Advisors (PSA)
- Department of Energy (DOE)
- Department of Labor (DOL) / Office of Safety and Health Administration (OSHA)

State/Commonwealth Report-outs

[Refer to *RRT3 Report-Out Summary* in Attachment 3]

- Delaware Department of Natural Resources and Environmental Control (DE DNREC)
- District of Columbia Department of Energy & Environment (DC DOE)
- Maryland Department of the Environment (MDE)
- Pennsylvania Department of Environmental Protection (PA DEP)
- Virginia Department of Environmental Quality (VADEQ)
- Virginia Department of Emergency Management (VA DEM)
- West Virginia Department of Environmental Protection (WV DEP)

OSC Report-outs

[Refer to RRT3 Report-Out Summary in Attachment 3]

- EPA Region III and Sub-Areas
  - Washington DC Extended
  - Southeast PA/DE
  - Northeast PA
  - Southcentral PA
  - Northcentral PA
  - Southwest Pa / Wheeling WV
  - Northwest PA
  - Huntington / Central WV
  - Shenandoah Valley
  - Upper Chesapeake
  - Southeast VA
  - Southcentral VA
  - Northcentral VA
  - Southwest VA / WV
- USCG OSCs
  - Sector Baltimore
  - Sector Buffalo
  - Sector Delaware Bay
  - Sector Hampton Roads
  - Sector North Carolina
  - MSU Huntington
  - MSU Pittsburgh

Upcoming RRT Meeting Announcements

- Lori Miller (EPA) RRT3 Coordinator
  - **Next RRT3 Meeting: 3-5 May 2016 in Rehoboth Beach, Delaware** at the Sands Hotel, 1 Baltimore Avenue, Rehoboth Beach, Delaware 19971
  - For Reservations, call 800-422-0600 (reference Regional Response Team III - Block #8179)
  - **Reservations must be made by Thursday, March 3rd.**

Other Regional Response Team Meetings

- **Region 1**: 4-5 May 2016 in Groton, CT
- **Region 2**: 13-15 April 2016 in West Point, NY
- **CRRT**: 14-16 June 2016 in St. Thomas, USVI
- **Region 3**: 3-5 May 2016 in Rehoboth Beach, DE (Adobe connect webinar available)
- **Region 4**: 1 -3 March 2016 in Gulfport, MS (Adobe connect webinar available)
- **Region 5**: TBD; Spring 2016, in Wisconsin
- **Region 6**: 17-19 May 2016 in Addison, TX

Area Committee Meetings

- Sector Baltimore AC: 24 May 2016
- Sector Delaware Bay AC: 20 April 2016
- Sector Hampton Roads AC: 15 May 2016
- Sector North Carolina AC: TBD
- Sector Buffalo AC: April 2016
- MSU Huntington Tri-state Response Workgroup: TBD
- MSU Pittsburgh 3 Rivers Pollution Response Council: TBD

Referenced / Useful Websites

- RRT3 website (existing; to be removed some time in the future): www.rrt3.nrt.org
- Transitioning to **NEW** website: https://nrtqa.ert.org/site/site_profile.aspx?site_id=35
  - Inland Area Committee Website: https://www.epaosc.org/site/site_profile.aspx?site_id=2037
  - EPA Region 3 OSC Planning Dashboard: https://www.eparm.net/R3IACP/Default.aspx

Referenced / Useful Websites

- Sector Baltimore website and ACP: https://homeport.uscg.mil/mycg/portal/ep/portDirectory.do?tabId=1&cotpId=1
- Sector Delaware Bay website and ACP: https://homeport.uscg.mil/mycg/portal/ep/portDirectory.do?tabId=1&cotpId=40
- Sector Hampton Roads website and ACP: https://homeport.uscg.mil/mycg/portal/ep/portDirectory.do?tabId=1&cotpId=26
- Sector North Carolina website and ACP: https://homeport.uscg.mil/mycg/portal/ep/portDirectory.do?tabId=1&cotpId=53
- Sector Buffalo website and ACP: https://homeport.uscg.mil/mycg/portal/ep/portDirectory.do?tabId=1&cotpId=18
- MSU Huntington website and ACP:
- MSU Pittsburgh website and ACP: https://homeport.uscg.mil/mycg/portal/ep/portDirectory.do?tabId=1&cotpId=1000003

Referenced / Useful Websites

- NOAA Incident News: http://incidentnews.noaa.gov
- NOAA ResponseLink (for government Responders): https://responselink.orr.noaa.gov/login
- Environmental Response Management Application (ERMA): http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-response-management-application-erma
- Selection Guide for Oil Spill Response Countermeasures: http://nrt-sg.sraprod.com/build/#

RRT3 Action Items & Decision-Making

- **ACTION ITEM:** Request comments on the Bakken Document to Frank Csulak (Frank.Csulak@NOAA.gov) by **Friday, 4 March, 2016**
- Inland Area Committee (IAC) Update
  - SCVA Sub-Area Contingency Plan promulgated – 2 remaining
  - Implementing annual update process of IACP (Feb-March)
  - After Action Report for Nov. 2015 IAC Tabletop exercise nearing completion

RRT3 Action Items & Decision-Making

- **ACTION ITEM:** Additional coordination and outreach with academia for response issues
  - Qualification of Scientists – pre-vetting [e.g., Science Advisory Network];
  - Access to Academia science during the emergency phase (e.g., ATSDR and the need for information on MCHM during the Liberty / Elk River, WV spill). How do we address response needs versus ensuring appropriate science requirements?

RRT3 Action Items & Decision-Making

- **Survey of participants of RRT3 Interim Call Format:**
  - **What did you think?**
  - **Suggested changes / modifications?**
  - Provide feedback to:
    - dscholz@seaconsulting.com, or
    - Robin.dermigny@westonsolutions.com

Attachment 1

March 2, 2016 Interim Conference Call

Attendee List

ATTENDEE LIST
RRT3 Interim Meeting Conference Call
March 2, 2016
9:00 to 11:03 a.m.

RRT3 CO-CHAIRS, COORDINATORS, WORKGROUP CHAIRS, SUPPORT

- Kevin Boyd – EPA RRT3 Co-Chair
- Bonnie Gross – EPA RRT3 Alternate Co-Chair
- Dave Ormes – USCG RRT3 Co-Chair
- Dave Pugh – USCG RRT3 Coordinator/Alternate Co-Chair
- Lori Miller – EPA RRT3 Coordinator
- Rich Fetzer – EPA – Inland Area Committee Chair
- Billy Martin – EPA – Spill Response Countermeasures Workgroup Chair
- Frank Csulak – DOC/NOAA – Wildlife Workgroup Chair
- Ed Levine – DOC/NOAA – Training Workgroup Chair
- Craig Giggleman – USFWS – NRDA Workgroup Chair
- Robin Dermigny – WESTON, START V
- Debbie Scholz – SEA, START V

STATE/COMMONWEALTH

- Ben Anderson – DE DNREC
- Walt Bair – PADEP
- REX Miller – PADEP
- Dustin Wyant – PADEP-Northwest Region
- Tom Mear – PADEP
- Beth Lohman – VDEQ
- Rusty Joins – WVDEP

FEDERAL AGENCIES

- Lora Werner – ATSDR
- Valincia Darby – DOI
- Lindy Nelson – DOI
- Adam Hamrick – OSHA
- Susan Lingenfelser – USFWS
- Joe Trimboli – USACE LRH

EPA

- Bill Steuteville – EPA
- Debbie Lindsey – EPA
- Steve Davis – EPA

USCG

- LT Erica Elfguin – USCG Sector Baltimore
- MSTCS Jennifer Ursin – USCG Sector Baltimore
- Jason Spence – USCG MSU Pittsburgh
- Vanessa Blackmore – USCG Sector Hampton Roads
- LTJG John DeCastra – USCG MSU Huntington
- LCDR Robert Webb – USCG MSU Huntington
- LTJG Plank – USCG Sector Delaware Bay
- Jerry Conrad – USCG Sector Delaware Bay
- LT Eric Nielsen – Sector Delaware Bay
- Stephen Fink – USCG Sector Baltimore, Incident Management Dept

PARTNERS

- Madeline Schreiber – VA Tech (Presenter)
- Kevin Gurchack – Three Rivers Pollution Response Council (TRPRC)
- Jeff Emmons – Chester County PA Hazmat
- Benton Best – Tioga County, PA LEPC
- Michele Parsons – Cumberland County, PA LEPC
- Gabriel Miehl – Erie County PA LEPC
- Tammie Cox – Medical Reserve Corps Chesterfield Health District (CHD)

Attachment 2

Bakken Oil Response Guide.pdf

(dated Feb. 19, 2016)

Bakken Crude Oil and Similar Shale Oil Spills: Responder Guidance
(*comments due to Frank Csulak [Frank.Csulak@NOAA.gov] by 4 March 2016*)

Summary:

- Bakken crude oils (and similar shale oils) contain a higher percent of dissolved gases that pose a higher risk of ignition as well as the production of volatile organic compounds and benzene that pose risks to responders and the public shortly after a release, compared to other crude oils.
- The size and scale of an incident described in this guide may be such that significant logistical challenges will delay responses until adequate resources can be identified, dispatched, and deployed. Adequate planning must be done to ensure resources being deployed are adequate for the size of the event at the time resources will be ready at the scene. This may necessitate the need for a scaled, measured response.
- Air monitoring is key to assessing these risks and identifying appropriate PPE (see in Table 1).
- Spills of Bakken crude will likely require continuous air monitoring for days at different locations; therefore, the IC/UC will need to mobilize such resources and technical specialists quickly.
- First responders should have the proper air monitoring equipment. Without the ability to measure the Lower Explosive Limit (LEL), benzene, and volatile organic compounds (VOCs), a full hazard assessment will not be possible.
- First responders should have appropriate personal protective equipment (PPE) such as the correct air-purifying respirator or self-contained breathing apparatus.
- Many of these procedures are unique and should not be tried if first responders haven't been trained.
- Obtain proper paperwork with details from shipper, i.e., consist, bill of lading, Safety Data Sheets (SDS), to determine the type of oil being shipped.
- Ensure all responders are provided safety and hazard information on SDS BEFORE being sent close to affected area.
- Efforts should be made to quickly obtain paperwork from shipper, i.e., consist, bill of lading
- Determining the amount of product and area affected will assist in identifying appropriate response actions.

First-responder guidance is provided for the following spill conditions:

1. Spill from a tank, rail car, tanker truck, pipeline on land
    a. with FIRE
    b. with NO FIRE
2. Spill from a barge or tanker to water
    a. with FIRE
    b. with NO FIRE

Table 1. Recommended air monitoring at spill sites for responder safety. LEL and H_2S pose acute risks of ignition and death, so they are highest in the order.

Parameter*	Measurement/Action
NO FIRE	
LEL	<10% – proceed to measure other parameters 10-25% – proceed to measure other parameters but with care >25% – stand back until measurement is <25% LEL
H_2S	<1 ppm – proceed to measure other parameters >1 ppm – select appropriate respiratory protection for responders
VOCs	<100 ppm – proceed to measure other parameters >100 ppm – select appropriate respiratory protection and PPE for responders
Benzene**	<0.5 ppm – proceed with operations >1 ppm – select appropriate respiratory protection and PPE for responders
FIRE (additional parameters to those above)	
Particulates	<150 µg of $PM_{2.5}$ per m^3, averaged over 1 hr – proceed with operations >150 µg of $PM_{2.5}$ per m^3, averaged over 1 hr – ??? (waiting for EPA input) – select appropriate respiratory protection and PPE for responders
SO_2	<75 ppb averaged over 1 hr; <0.5 ppm averaged over 3 hr – meets NAAQS***
NO_2	<100 ppb averaged over 1 hr – meets NAAQS
CO	<9 ppm averaged over 8 hr; <35 ppm averaged over 1 hr – meets NAAQS

***** LEL = Lower Explosive Limit: the LEL for Bakken crude oil is estimated to be 0.4-0.8%; H_2S = Hydrogen sulfide; VOCs = Volatile organic compounds; SO_2 = Sulfur dioxide; NO_2 = Nitrogen dioxide; CO = Carbon monoxide
** Most first responders have limited or no ability to monitor benzene levels. Specialized resources will likely be needed to determine benzene levels.
*** National Ambient Air Quality Standards

In the event of a release of Bakken crude oil and similar shale oils on land with FIRE (tank, rail car, tanker truck, pipeline):

Secure the perimeter

- Establish and secure a safety zone. Refer to ERG 128.
- Consider evacuation of non-essential personnel or public evacuation based on area affected.
- First responder vehicles should be parked away from manholes and storm sewers.
- Conduct air monitoring to identify hazards and required PPE for responder safety (see Table 1).

Stop the source

- Close valves, plug holes if this can be done safely and using non-sparking tools.
- However, only pipeline staff should attempt to open or close pipeline valves.

Determine fire-fighting approach (can change over time)

Intervention

- Apply Class B firefighting foam. Foam is most effective on static fires that are contained in some manner. Firefighting foam is not effective on hydrocarbon fuels in motion (i.e., three dimensional fires) that include product leaking or spraying from manways, valves, fractures in the tank shell (e.g., rips, tears, etc.) or spills on sloping terrain.
- Key Issue: Will need to have adequate foam supplies and equipment available for post-fire operations that may last for several hours or days.
- Apply cooling water to any exposures including adjacent tank cars or trucks containing ignition or BLEVE hazards.
- Do not apply water directly inside a rail car or tank. Apply water from the sides and from a safe distance to keep fire-exposed containers cool. Use unmanned fire monitors for cooling rail cars when available. Withdraw immediately in case of rising sound from venting pressure relief devices or tank discoloration. If available, dry chemical extinguishing agents, such as potassium bicarbonate (i.e., Purple K) may also be used in conjunction with Class B foams.
- Improper application of fire streams may create a dangerous phenomenon known as a slopover, increasing risks to emergency responders. A slopover results when a water stream is applied to the hot surface of burning oil. The water is converted into steam causing agitation of the liquid and burning oil to slop over the sides of the tank or rail car. This can occur within 10 minutes of the product becoming involved in fire. Note: Slopover will not occur in a pool of crude oil on the ground.
- Application of foam, even if done properly many cause frothover if fire cannot be immediately extinguished. Frothover can occur as foam breaks down on the surface of the water and drains into the burning oil prior to extinguishment causing conditions similar to slopover.
- Dry chemical extinguishing agents must be compatible with foam.

Non-intervention

- Let the currently burning oil burn.
- Move non-affected rail cars/containers from fire area if this can be done safely.
- Consider the need for additional fire breaks.
- Apply cooling water to adjacent rail cars, tanks, or other vehicles containing oil. Use unmanned hose holders or monitor nozzles to reduce fire fighter risk.
- Monitor the progress of the fire. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

Control fire fighting water runoff

- Prevent runoff from entering storm or sewer systems and sensitive areas, as this may create a serious hazard and environmental problems.
- Notify proper authorities, downstream sewer and water treatment operations, and other downstream users of potentially contaminated water.
- Runoff may be flammable and/or toxic and should be contained, treated, and disposed of in accordance with applicable federal, state and local environmental regulations.

Minimize spread of unburned oil on land

- Construct berms, trenches, etc. but only at safe distances as determined by continuous air quality monitoring.
- Be aware of vapor ignition hazards in areas where the oil has been contained, or in sewers and other confined space where the oil has spread.

Minimize spread of unburned oil into a waterbody

- Construct dams, dikes, diversions, etc., but only at safe distances as determined by continuous air quality monitoring.
- Be aware of vapor ignition hazards in areas where the oil has been contained, or in sewers and other confined space where the oil has spread.
- Be aware that there can be renewed release of VOCs, benzene, etc. when oil that was thick on land reaches a waterbody and spreads into a thinner slick.

Determine if booms should be used to contain oil on water for recovery

- Monitor VOCs and benzene adjacent to floating oil on open water.
- In addition, monitor for LEL for floating oil in smaller waterbodies (such as streams and ponds), where vapors could concentrate in low areas and not be dispersed by air turbulence.
- If levels are below thresholds, proceed with oil containment and recovery
- If LEL is >25%, do not attempt containment but continue monitoring. Once levels are below 25% LEL, proceed with containment and recovery and continue monitoring.
- If VOCs and benzene levels are above thresholds, provide appropriate PPE for responders.

Implement protection strategies at sensitive areas

- If oil is present, monitor for VOCs and benzene to determine responder PPE before implementing the protection strategy.
- If no oil is present, proceed with implementing the protection strategy.

For a release of Bakken crude oil and similar shale oils on land with NO FIRE:

Secure the perimeter
• Establish and secure a safety zone. Refer to ERG 128. • Consider evacuation of non-essential personnel or public evacuation based on area affected. • Eliminate ignition sources. • Conduct air monitoring to identify hazards and required PPE for responder safety (see Table x).
Stop the source
• Close valves, plug holes if this can be done safely and using non-sparking tools. • However, only pipeline staff should attempt to open or close pipeline valves.
Determine the need for vapor suppression
• If LEL is >25%, apply Class B firefighting foam. Class B foam blankets prevent vapor production and ignition of flammable and combustible liquids. See Appendix B for additional information on firefighting foam.
Minimize spread of oil on land
• Construct berms, trenches, etc. but only at safe distances as determined by continuous air quality monitoring. • Monitor air quality at all areas where the oil is contained. • Be aware of vapor ignition hazards in areas where the oil has been contained, or in sewers and other confined space where the oil has spread.
Minimize spread of oil into a waterbody
• Construct dams, dikes, diversions, etc., but only at safe distances as determined by continuous air quality monitoring. • Be aware of vapor ignition hazards in areas where the oil has been contained, or in sewers and other confined space where the oil has spread. • Be aware that there can be renewed release of VOCs, benzene, etc. when oil that was thick on land reaches a waterbody and spreads into a thinner slick.
Determine if booms should be used to contain oil on water for recovery
• Monitor VOCs and benzene adjacent to floating oil on open water. • In addition, monitor for LEL for floating oil in smaller waterbodies (such as streams and ponds), where vapors could concentrate in low areas and not be dispersed by air turbulence. • If levels are below thresholds, proceed with oil containment and recovery • If LEL is >25%, do not attempt containment unless adequate Class B foam is available to suppress vapors, and continue monitoring; if oil has not been contained and vapor suppression applied, once levels are below 25% LEL, proceed with containment and recovery and continue monitoring. • If VOCs and benzene levels are above thresholds, provide appropriate PPE for responders.
Implement protection strategies at sensitive areas
• If oil is present, monitor for VOCs and benzene to determine responder PPE before implementing the protection strategy. • If no oil is present, proceed with implementing the protection strategy.

For a release of Bakken crude and similar shale oils on water with NO FIRE:

Secure the perimeter
• Establish and secure a safety zone around the vessel. • Consider evacuation of non-essential personnel or public based on area affected. • Eliminate ignition sources. • Notify downstream facilities and/or water intakes of impacts. • Conduct air monitoring to identify hazards, hot, warm and cold zones and required PPE for responder safety (see Table 1). • Ensure that small boats working in the area do not operate in or around floating oil as this may impact engines and other equipment until hazard is adequately evaluated. This is especially important for initial first responders who are first dispatched to an incident that has not been adequately evaluated as to size, scope and impact.
Stop the source
• Close valves, plug holes if this can be done safely and using non-sparking tools.
Determine if booms should be used to contain oil on water for recovery
• Monitor for VOCs and benzene adjacent to floating oil concentrations on open water. • In addition, monitor for LEL for floating oil in smaller waterbodies (such as streams and ponds), where vapors could concentrate in low areas and not be dispersed by air turbulence. • If levels are below thresholds, proceed with oil containment and recovery. • If LEL is >25%, evaluate ignition sources but do not attempt containment. • If oil will not be impacted by ignition sources, continue monitoring; once levels are below 25% LEL, proceed with containment and recovery and continue monitoring. • If ignition sources cannot be eliminated, evaluate ability to conduct diversion booming to keep oil away from ignition sources. Ensure all vessels operating in the area have air monitoring equipment to keep out of hazardous atmospheres. • If tug/barge is involved, with LEL <25% consideration for removing the tug should be made or for LEL >25% shutting down tug (as ignition source) and removing the crew must be evaluated. • If oil can be safely boomed and simultaneously covered with class B foam to reduce or eliminate vapors, consider booming oil to reduce fire risk and spread of oil. • If VOCs and benzene levels are above thresholds, provide appropriate PPE for responders.
Implement protection strategies at sensitive areas
• If oil is present, monitor for VOCs and benzene to determine responder PPE before implementing the protection strategy. • If no oil is present, proceed with implementing the protection strategy.
Determine if additional protective measures should be used to limit the impact of flammable vapors
• If flammable vapors are detected in areas of concern, consider the need for vapor dispersion utilizing fog streams from fixed or portable fire monitors. • If vapors cannot be suppressed utilizing Class B foams, consider using fire monitors to agitate oil on the water to more rapidly increase vaporization to facilitate mechanical oil removal from water.

For a release of Bakken crude and similar shale oils on water WITH FIRE:

Secure the perimeter

- Establish and secure a safety zone around the vessel.
- Consider evacuation of non-essential personnel or public based on area affected.
- Utilize Thermal Imaging Cameras or FLIR to determine extent of fire impact on adjoining tanks or structures.
- Conduct air monitoring to identify hazards, identify hot, warm and cold zones and offsite impacts and required PPE for responder safety (see Table 1).

Stop the source

- Close valves, plug holes if this can be done safely and using non-sparking tools.

Determine fire-fighting approach (can change over time)

Intervention

- Apply cooling water to any exposures including adjacent docks, piers, tanks, vessel hull and deck. Avoid putting water into interior of vessel to prevent destabilization.
- Fire systems on board tank vessels may be used to provide boundary and exposure protection, but this system should be augmented using the International Shore Connection (ISC) from an off vessel source (fireboat, facility system, fire engine).
- Fire systems on facilities may be used to protect facility exposures and if practical assist in protecting exposures on vessels as well.
- Do not apply water directly inside vessel tanks or other spaces. Apply water from the facility, fireboats, sides, deck, and superstructure from a safe distance to keep fire exposed vessel structures cool. Use unmanned fire monitors and hose lines for cooling where available.
- Apply Class B firefighting foam. Foam is most effective on static fires that are contained in some manner. Foam is ineffective on free-floating fuel fires and must be contained in some matter to be extinguished.
- Vessel may be ringed in fire boom or oil boom (if foam is applied on the inside of the boom as it encircles). This requires close coordination of application of foam and booming vessels. Steel cable will be required by booming vessels to protect tow lines from fire. Foam must be available and ready for application prior to booming vessel.
- Booming vessel may increase fire impact on vessel initially until foam is effective at reducing fire.
- Fire in tanks that have been compromised may require foam hand lines to reach fire areas.
- If available, dry chemical extinguishing agents, such as potassium bicarbonate (i.e., Purple K) may also be used in conjunction with Class B foams. Dry chemical may be required to extinguish fires in tanks or piping.
- Key Issue: Will need to have adequate foam supplies and equipment available for post-fire operations that may last for several hours or days?

Non-intervention

- Let the currently burning oil burn.
- Apply cooling water to any exposures including adjacent docks, piers, tanks, vessel hull and deck. Avoid putting water into interior of vessel to prevent destabilization.
- Fire systems on board tank vessels may be used to provide boundary and exposure protection, but this system should be augmented using the International Shore Connection (ISC) from an off vessel source (fireboat, facility system, fire engine).

- Monitor the progress of the fire. Withdraw immediately in case of rising sound from venting safety devices on non-burning tanks indicating excessive heating of tanks. Apply cooling water to sides and tops of tanks if possible.
- Monitor heating spread using thermal imaging devices.

Caution: As oil burns or leaks from impacted tanks, a hogging or sagging condition may occur causing the vessel's hull to fracture. This could greatly increase the fire and or stability of the vessel significantly increasing risk or impacts. Additionally, fire impinging on the hull or tank structure may weaken the structure causing it to catastrophically fail.

Minimize spread and impact of burning oil away from vessel

- Booming may be used to reduce the impact and spread of floating fuel fires. Fire boom can be used if available, but normal boom may be used if it is protected by Class B foam to keep fire from affecting the boom.
- Fire streams may be set up on areas (waterfronts/piers/facilities) that could be impacted by floating fuel fires to deflect fuel and/or protect exposures.

Minimize impact of floating fuel fires on vessel

- Utilize shipboard firefighting systems to protect vessel exposures (superstructure, deck, hull) until fire can be extinguished.
- If fire involves a barge or dead-ship tanker, then fireboats may be required to provide adequate water supply for cooling or exposure protection.

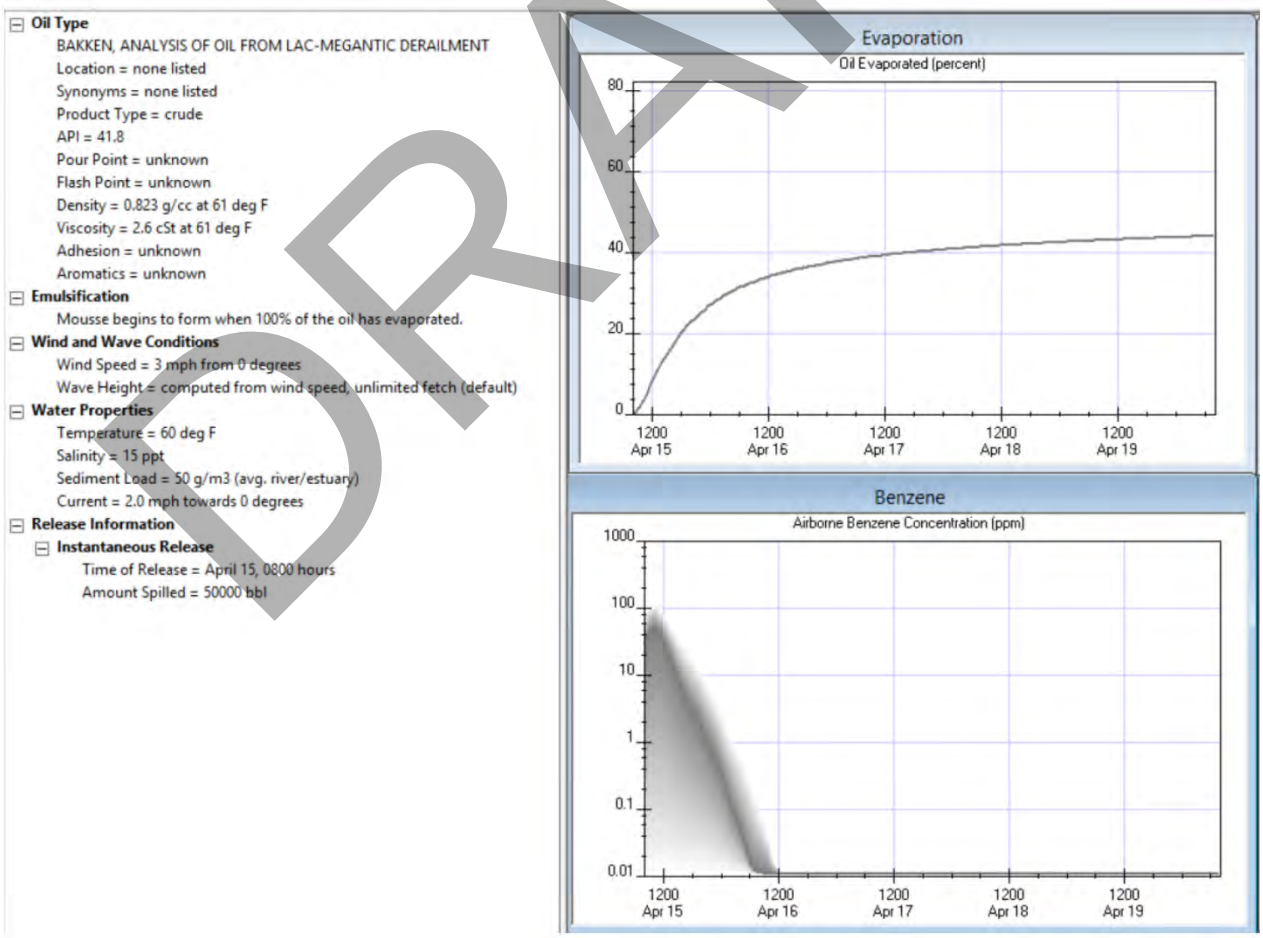
Determine if additional protective measures should be used to limit the impact of flammable vapors

- If flammable vapors are detected in areas of concern, consider the need for vapor dispersion utilizing fog streams from fixed or portable fire monitors.
- If vapors cannot be suppressed utilizing Class B foams, consider using fire monitors to agitate oil on the water to more rapidly increase vaporization to facilitate mechanical oil removal from water.

Additional Resources:

NOAA ADIOS ((Automated Data Inquiry for Oil Spills) oil weathering model. http://response.restoration.noaa.gov/adios
Emergency Response Guidebook. USDOT. 2012. http://www.phmsa.dot.gov/hazmat/library/erg Note that the 2016 guidebook will be available in early 2016.
Region III LEPC Fact Sheet: Bakken Crude Oil: https://crrc.unh.edu/sites/crrc.unh.edu/files/lepc_update_2015_february_regioniii_rev3_0.pdf
Sandia Report on Literature Survey of Crude Oil Properties Relevant to Handling and Fire Safety in Transport. DOE/DOT Tight Crude Oil Flammability and Transportation Spill Safety Project. March 2015. http://prod.sandia.gov/techlib/access-control.cgi/2015/151823.pdf
TRANSCAER API AAR Crude Oil by Rail Safety Course. March 2015. http://www.api.org/~/media/Files/Oil-and-Natural-Gas/Rail-Transportation/TRANSCAER-API-AAR-Crude-Oil-by-Rail-Safety-Course.pdf
Consensus Ecological Risk Assessment of Potential Transportation-related Bakken and Dilbit Crude Oil Spills in the Delaware Bay Area: Comparative Evaluation of Response Actions. 2015. https://www.uscg.mil/d5/sectDelawareBay/Planning/Final_ERA_report_093015%20REV.pdf

Though each spill will be different, the graph below shows NOAA the results of the oil weathering model (ADIOS 2) for a release of 50,000 barrels of Bakken crude oil from a barge in the Delaware River with winds of 3 knots and 60°F. Benzene levels were modeled to be very high for the first several hours, and above 1 ppm for 16 hours.



Attachment 3

RRT3 Report-Out Summary (PDF)

Regional Response Team 3 Interim Conference Call- March 2, 2016

1. Federal Agency Report-outs (alphabetical):

Department of Agriculture (USDA) -Forest Service - *Not provided*.

Department of Commerce (DOC) /National Oceanic and Atmospheric Administration (NOAA)

- Ed Levine (NOAA):
  - SMART Decision Analysis and Data Management Job Aid: we are in the process of creating this for the SSCs to use for decision support.
  - Marine Pollution Surveillance Report: Working with USCG and NOAA NESDIS to create a summary document on interpreting the satellite imagery.
- Frank Csulak (NOAA Scientific Support Coordinator [SSC]):
  - **Training**
    - SCAT Team Member training – March 29-31, Institute of Marine and Coastal Sciences Coastal Center. Tuckerton, NJ - Class filled
    - SCAT Team Member training – April 19-21, Chincoteague, VA. Class filled
    - Intro to SCAT – May 3, 2016; 1:00pm-4:00pm. Part of RRTIII meeting, Rehoboth Beach, DE
    - USCG Sector Del Bay and NOAA providing oil spill response training to The Nature Conservancy, June 15, Delmont, NJ
  - **Other Events**
    - 2016 Underwater Heritage Symposium; Graveyard of the Atlantic Museum, March 12. NOAA presenting on RULET Program and HUTTON response
    - NOAA/OAR North Carolina Waterways Marine Debris Response Planning Workshop, April 6-7, Beaufort, North Carolina
  - **Products**
    - Bakken Oil Response Guide – Prepared by NOAA and RPI. Document has been drafted and reviewed by various stakeholders, including USCG, Federal and State agencies, and industry. Revisions being made to document to address comments received. Plan is to have document finalized by RRTIII meeting
    - Dilbit Oil Response Guide - Prepared by NOAA and RPI. Being drafted, preparing to go out for comment. Plan is to have document finalized by RRTIII meeting
  - **ESI**
    - North Carolina ESI – In process of being updated. Expect to have finalized by end of 2016.
    - Chesapeake Bay ESI - In process of being updated. Expect to have finalized by end of 2016.

- **RRTIII Meeting Presentations**
  - RULET Program Update, Mallows Bay on the Potomac River proposed to be a NOAA National Marine Sanctuary, Proposed Expansion of the NOAA Monitor National Marine Sanctuary – Lisa Symons, NOAA
  - Present Overview of Bakken and Dilbit oil response guides – Frank Csulak
  - Wildlife Work Group Presentation: Wildlife Responses Lessons Learned from Two Virginia Oil Spill Responses – Elizabeth Lohman, VADEQ and Sam Christie, Tri-State Bird Rescue.

Department of Defense (DOD)

U.S. Navy - *Not provided*.

U.S. Army/U.S. Army Corps of Engineers (USACE) - *Not provided*.

Department of Energy (DOE) - *Not provided*.

Department of Health and Human Services (DHHS)/Agency for Toxic Substances and Disease Registry (ATSDR) - *Not provided*.

Department of Homeland Security (DHS)

Federal Emergency Management Agency (FEMA) - *Not provided*.

Protective Security Advisors (PSA) - *Not provided*.

Department of the Interior (DOI) - *Not provided*.

Department of Transportation (DOT) – Pipeline and Hazardous Materials Safety Administration (PHMSA)

- Anthony Murray:
  - US DOT Celebrates 50th Anniversary https://www.transportation.gov/50
  - 2016 Emergency Response Guidebook is at the printers and will be distributed to the ERG State Coordinators in April 2016. A list of the ERG State Coordinators can be found here:
  - http://www.phmsa.dot.gov/pv_obj_cache/pv_obj_id_95A33D6D0E4FE40E36BED9CC70DA19D63BC00100/filename/ERG_State_Coordinators_7_13_15.pdf

Department of Justice (DOJ) - *Not provided*.

Department of Labor (DOL)/Occupational Safety and Health Administration (OSHA) - *Not provided*.

General Services Administration (GSA) - *Not provided*

2. State / Commonwealth Agency Report-outs:

Delaware Department of Natural Resources and Environmental Control (DNREC)

- Jamie Bethard (DNREC) and Ben Anderson (DNREC-WAB):
  - No incident-specific report-outs
  - DE DNREC is sponsoring a free hazmat workshop April 1 and 2 at our Delaware State Fire School in Dover. (information included as attachments)

District of Columbia Department of Energy & Environment (DOEE)

- John Emminizer, Jr. (DC DOEE):
  - Two major incidents of note (See Sector Baltimore and VA DEM/DEQ reports):
    - The Regan International Jet Fuel Spill in October 2015, and
    - The oil sheen incident on the Roaches Run + Potomac – February 2016.

Maryland Department of the Environment (MDE)

- Alan Williams (MDE) – nothing to report.

Pennsylvania Department of Environmental Protection (PADEP)

- Mr. Brian Moore (PADEP):
  - Kerry Leib retired and Brian Moore is the new ER Director for the PADEP.

a. Pollution Response Operations:

- Numerous minor pollution events from auto accidents throughout the state which would be reportable under the PA Clean Streams law.
- Smaller Incidents: PADEP average around 700 calls on our ER hotlines per month about half of which are minor pollution events, 100 gallons or less. We send responders out approximately 10 times per month on the larger of those incidents with the two largest ones specified above. Most of the events are transportation related but occasionally we have fire events.

b. Notable Cases (since November 2015 RRT 3 meeting):

- A 4,000 gallon fuel oil tank leak into the Schuylkill River in the Southeast region in January and a
- A 6,000 gallon mineral oil spill into the Allegheny River from a transportation accident in our Southwest region in February.

Virginia Department of Emergency Management (VDEM) and Department of Environmental Quality (VDEQ)

- Wade Collins (VDEM) and Elizabeth Lohman (VDEQ):

a. Pollution Response Operations:

	20 Nov 2015 to 31 Dec 2015	1 Jan 2016 to 26 Feb 2016	Totals since last RRT3 Meeting
Pollution Reports[1]	335	428	763[2]
Federalized Cases	0	1	1
Criminal Cases			

[1] Numbers reported include only those incidents occurring within Agency Jurisdiction or requiring an Agency response.

[2] The VDEQ has 8.5 Pollution Response Coordinators in six regions. The VDEQ may receive on average 3,000 pollution reports annually, and the VDEQ is required to respond to and/or investigate all the reports that fall within the agency's statutory and regulatory authorities. The type of reports include sheen reports, petroleum releases from tanks and containers, sanitary sewer overflows, saddle tank ruptures in vehicle crashes, fish kills, illegal surface water discharges, illegal solid & hazardous waste disposal, train derailments, and so forth.

b. Notable Cases (since November 2015 RRT 3 meeting):

- **Dominion Virginia Power – Augusta County – 6 January**: Transformer failure resulted in release of 9,000 gallons of mineral oil to WOTUS. RRT3 approved use of chemical countermeasures as a polishing step in the response/recovery action.
- **Kinder Morgan Fuel Terminal – Chesapeake – 22 January**: During pipeline-to-tank transfer, facility overfilled a 1.5 million gallon storage tank. Approximately 70,000 gallons of jet fuel (JP1) was released to secondary containment. The release resulted in neighborhood evacuation and wildlife impacts (approximately 60 geese and ducks). USCG assisted but incident not federalized. DEQ and EPA are currently reviewing case files for compliance/enforcement response.
- **Dominion Virginia Power – Arlington County – 24 January**: Transformer failure resulting in the release of 13,500 gallons of mineral oil. Approximately 11,000 gallons were recovered. Several hundred tons of soil/gravel were excavated and removed. Some mineral oil reached an adjacent storm sewer system. Following snowmelt and a significant precipitation event, mineral oil was discharged to Roaches Run & the Potomac River.
- **Plains Marketing – York County – 31 January**: During a vessel-to-tank transfer, the facility overfilled a storage tank. Approximately 262,000 gallons of alkylate gasoline was released to secondary containment with a small fraction released to a contiguous storm water ditch. Incident was not reported to NRC. DEQ and EPA are currently reviewing case files for compliance/enforcement response.
- **Roaches Run + Potomac River Mystery Sheen – 4 February**: Federalized incident with Unified Command consisting of USCG, VDEQ, DC's DOEE, and MDE. Sheen linked to Dominion Virginia

Power - Arlington County release (above). Wildlife impacts (66 individuals), which includes mortalities (27 birds, 1 carp, and 1 beaver).

c. Training & Readiness Highlights:

- VDEM hosted VDEQ and USCG staff on 16 February at the HazMat/CBRNE facility in York County. Focus was review of non-pressurized rail car design/construction.
- Virginia State Police provided training to VDEQ staff on 13 January on state radio communications system and operations.

d. Exercises:

- USCG, VDEQ and VDEM hosted the Crude Oil Seminar on 17 February. Seminar provided series of presentations crude oil, rail and facility response plans & capabilities, state and federal response plans, Virginia flammable liquids working group and other related work on guidance development, and ecological risk assessments.
- VDEQ and VDEM collaborated with other state agencies to develop a "Self-Administered Infectious Disease Tabletop Exercise" that can be distributed to healthcare facilities to exercise response capabilities to a variety of communicable diseases including Ebola, MERS, Measles, etc.

e. Other Highlights:

- VDEQ is rewriting its Pollution Response Program Base Manual.

f. Future Events / Meetings:

- Following the Kinder Morgan and the Dominion Virginia Power incidents, which resulted in wildlife impacts, the VDEQ is hosting meeting with the Virginia Department of Game & Inland Fisheries on 1 March to discuss how to oversee and coordinate wildlife response and recovery actions during an incident. USCG, USFWS and EPA have been invited to participate.

West Virginia Department of Environmental Protection (WV DEP)

- Rusty Joins (WV DEP):

a. Notable Cases (since November 2015 RRT 3 meeting):

- 12/21/15: Illegal dumping of a mixture of gasoline and diesel fuel along Cabin Creek in a remote part of southern Kanawha County. Estimated quantity, 300 gallons, for this occurrence. It is believed that this practice had happened at this location in the weeks prior to the 12/21 incident. A responsible party has not been identified.
- 2/4/2015: Tractor trailer hauling propylene overturned in Littleton, Wetzel County. The tanker was damaged and leaking and could not be offloaded. Responders utilized a controlled burn of the material in order to empty the tanker.
- 2/20/16: Due to an unidentified crack in a valve, an estimated 3,000 gallons of DOWTHERM heat transfer fluid, was released at a natural gas processing facility near Pine Grove, Wetzel County. A yet undetermined quantity of the material was released to the North Fork of Fishing Creek. The facility is situated approximately 12 stream miles upstream of the Town of Pine Grove. Pine Grove utilizes the stream to provide drinking water for the town.

3. On Scene Coordinator Reports (OSC) Report-outs:

Environmental Protection Agency (EPA) Region III

- Richard Fetzer – Inland Area Committee Chair
- Don McLaughlin – Shenandoah Valley Sub-Area:
  - Tuesday, April 19, 2016 - Conducting the TTX with the eight Shenandoah Valley West Virginia Counties; this TTX will be followed by the 5th Annual 8 County HazMat Full-scale exercise occurring during the calendar year (dates to be determined).
- Mike Towle – Southeastern Pennsylvania/Delaware:
  - Date to be determined – a Montgomery County, PA will be conducting a multi-county functional exercise for a Bakken crude oil spill. EPA Region 3 will be participating.
- Anne DiDonato – Northcentral Pennsylvania:
  - On December 15, 2015, OSC Ann DiDonato, RPM Brad White, and START David Scerbo presented an overview of EPA's Superfund program to 9th graders at the Hazelton Area Academy of the Sciences. The presentation included a brief history of the Superfund program, why it exists, and what it is intended to do; and, a description and summary of particular Superfund Sites that Brad and Ann are working on. A demonstration of various levels of PPE and environmental equipment was also conducted. As part of the demonstration, students were invited to don the various levels of PPE.
- Myles Bartos – Southcentral Virginia:
  - Participating in LEPC meetings (Rockbridge/Lexington, Danville, and (upcoming) Roanoke).
  - Early stages of developing a full-scale exercise with VDEM for fall 2016 or spring 2017 implementation

U.S. Coast Guard (Districts 5, 8, and 9)

Sector Baltimore - *Not provided*.

Sector Buffalo - *Not provided*.

Sector Delaware Bay

a. Training & Readiness Highlights:

- **Sector Delaware Bay Area Committee / Marine Firefighting Seminar / TTX - 30 March 2016**: This Seminar/TTX exercise is suited for firefighters, resource providers, Qualified Individuals, and other entities that would respond to a vessel fire. Roles, responsibilities and actions of participants will be explored. Location: the Exxon/Mobil Tech Center, 600 Billingsport Road, Paulsboro, NJ 08066. Time: 0900 - 1600.
- **Cyber Security Seminar – 19 April 2016:** This seminar will provide port stakeholders with an overview of cyber concerns and discuss some methods to evaluate one's cyber risks. Location: Sector Delaware Bay, 1 Washington Ave., Philadelphia, PA. Time: 0800 - 1600.

- **Sector Delaware Bay Mass Rescue Workshop - 9 June 2016**: This will be a facilitated workshop to update and validate elements of the Sector's Mass Rescue OPLAN for an incident that occurs in the Philadelphia and Camden areas. Location and time TBD.
- **Sector Delaware Bay Military Outload Workshop - 20 July 2016**: Location and time TBD.
- **Sector Delaware Bay Coastal Inlet Workshop (surveys)**: These surveys will be conducted during the May to 30 September timeframe on days where the contractor, SDB representatives, and state and local subject matter experts are available. The surveys will evaluate field conditions with protective booming strategies in the ACP.

b. Exercises:

- **Sector Delaware Bay Area Maritime Security TTX - 16 Mar 2016**: This exercise will be done in conjunction with the Burlington County Office of Emergency Management. This seminar is designed to build and sustain efforts of core capabilities across Prevention, Protection, Response, Mitigation, and Recovery by utilizing a combined effort of the whole port community. Location: Clarks Landing Yacht Club, Delran, NJ. Time: 0900-1400.

Sector Hampton Roads

a. Pollution Response Operations:

	20 Nov 2015 to 31 Dec 2015	1 Jan 2016 to 26 Feb 2016	Totals since last RRT3 Meeting
Pollution Reports*	50	79	129
Federalized Cases	0	1	1
Criminal Cases	0	0	0

*Numbers reported include only those incidents occurring within Agency Jurisdiction or requiring an Agency response.

b. Notable Cases (since November 2015 RRT 3 meeting):

- **Kinder Morgan JP-5 Spill**

(Potential Major Spill)
Elizabeth River
Chesapeake, VA
22 January, 2016
Sector Hampton Roads personnel were notified that a holding tank (Tank#6) on the Kinder Morgan South Hill Terminal facility had discharged approximately 75,000 gallons of JP-1 (kerosene) into secondary containment due to the tank being overfilled. When SECHR personnel arrived on scene, the facilities OSRO was on scene with 02 vacuum trucks and 06 personnel and containment/recovery operations were underway. Initial recovery efforts were greatly slowed due to a snow storm and cold temperatures encountered the first day. Operations on the following days of the response were impeded due to rain as well as confusion of remaining and recovered amount of product in the damaged tank and within the containment. The confusion arose due to RP's inconsistent use of barrels, gallons and tank soundings when reporting remaining and recovered amounts. There was impact to wildlife as waterfowl were contaminated with the product. Efforts to respond to the wildlife were halted when it was

identified that the wildlife handlers RP contracted to recover the wildlife were not certified to conduct this recovery. Final report of wildlife was 63 affected, 5 confirmed deceased, 1 not caught, 21 euthanized at SPCA, and 36 transported to various rehabilitation facilities. Future plans are for State to oversee remediation of soil within containment.

c. Training & Readiness Highlights:

- Conducted ICS 339 September 15-16, 2015 for 20 students (CG).
- Conducted ICS 300 August 18-21, 2015 for 30 students (CG).
- Conducted ICS 400 September 17, 2015 for 27 students (CG, Industry, Other Federal agencies, State).
- Continuing to send Sector personnel to ICS Position specific training (Yorktown) to meet WQSB and IMT Type 3 requirements.
- HAZWOPER Training: Annual training was made available to all Active Duty and Reserve Sector Hampton Roads and Sub-unit personnel. Several class sessions were held and training completed for over 131 members.

d. Exercises:

- **Crude Oil in Virginia Seminar Hosted by Plains Marketing, L.P., Yorktown, VA - 17 February, 2016**. Sector Hampton Roads partnered with Plains Marketing, Virginia Department of Emergency Management, and Virginia Department of Environmental Quality to hold a Crude Oil in Virginia Seminar. The objectives of the seminar were to identify appropriate Crude Oil Response Plans and understand where plans overlap and where there are gaps, assess response resources and understand the equipment that each agency utilizes to manage a response, review relevant response plans and understand decision making processes and information briefing chains. The information presented at the seminar will be used to draft a Crude Oil Annex to the Area Contingency Plan, and will be tested in a Tabletop Exercise later this summer. There was significant representation from multiple federal and state agencies, as well as a variety of local first responders.

e. Other Highlights:

- Nothing to Report.

f. Future Events / Meetings:

- Crude Oil in Virginia Tabletop Exercise to be held tentatively August 18, 2016.

Sector North Carolina - *Not provided*.

Sector Ohio Valley – MSU Pittsburgh

a. Pollution Response Operations

- MSU Pittsburgh received 59 National Response Center (NRC) pollution reports since the last RRT III meeting in November 2015, of which 2 were within the Coast Guard jurisdiction. The majority of NRC reports received were outside of Coast Guard jurisdiction with in the inland zone.

b. Partnerships

- MSU Pittsburgh continues to partner with U. S. Environmental Protection Agency (USEPA) Region III and Region V to schedule joint Government Initiated Unannounced Exercises at regulated facilities that fall under both Coast Guard and USEPA jurisdiction.
- MSU Pittsburgh meets quarterly with the Three Rivers Pollution Response Council, comprised of over 50 member companies that include chemical and oil manufacturers, environmental contractors, barge towing and/or fleeting companies, State and other Federal regulatory agencies. Through this group, a collaborative effort is made to provide mutual assistance, resources, and cooperation to respond to pollution on the rivers in the Pittsburgh COTP zone.

c. Training and Readiness

- MSU Pittsburgh currently has seven qualified Pollution Responders and four Federal On-Scene Coordinator Representatives.

d. Exercises

- No drills or Exercise conducted since the last RRT III Meeting in November 2015.

e. Future Events / Meeting

- The next Three Rivers Pollution Response Council meeting is scheduled for May 10, 2016.
- MSU Pittsburgh has partnered with the Three Rivers Pollution Response Council, Port Of Pittsburgh Commission and other government agencies to plan an industry day on May 20, 2016.

Sector Ohio Valley – MSU Huntington

a. Pollution Response Operations:

	20 Nov 2015 to 31 Dec 2015	1 Jan 2016 to 26 Feb 2016	Totals since last RRT3 Meeting
Pollution Reports*	7	6	13
Federalized Cases	0	0	0
Enforcement Action	2	2	4
Criminal Cases	0	0	0

*Numbers reported include only those incidents occurring within Agency Jurisdiction or requiring an Agency response.

b. Notable Cases (since November 2015 RRT 3 meeting):

- Nothing to Report.

c. Training & Readiness Highlights:

- MSU Huntington currently has nine (9) qualified Pollution Responders and two (2) Federal On Scene Coordinator Representatives (FOSCRs).

d. Exercises:

- Our staff will work closely with the EPA in the upcoming months to identify and coordinate joint GIUEs in the Huntington tri-state area.

e. Other Highlights:

- Nothing to Report.

f. Future Events / Meetings:

- MSU Huntington is hosting the tri state spill response workshop on April 26th to discuss the State Flex Viewer.