

Right from the Start: Complying with MCP Notifications and Preliminary Response Action Requirements

Dave Slowick – Western Regional Office

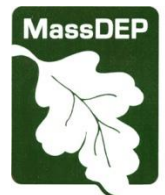
Kevin Daoust – Central Regional Office

Kingsley Ndi – Northeast Regional Office

Dan Crafton – Southeast Regional Office

May 16, 2018

Boxborough Regency



Agenda

8:00 Overview / 2 Hour Notifications – Dan Crafton

72 Hour Notifications – Dan Crafton

Notification Exemptions -- Kingsley Ndi

Specific OHM of Interest -- Kingsley Ndi

9:45 – 10:00 BREAK

10:00 How to Notify – Kevin Daoust

Immediate Response Actions - Kevin Daoust

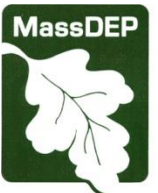
Release Abatement Measures / Construction Activities /

Remediation Waste – Dave Slowick

Homeowners -- Dave Slowick

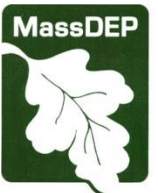
Case Studies

12:00 Adjourn



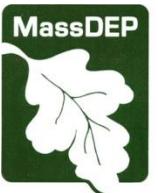
Regional ER Staff

- WERO: Section Chief -Dave Slowick
 - ER Staff: Joel Rees, Joanne Flescher, Anthony Kurpaska, John Moriarty
 - CERO: Section Chief - Kevin Daoust
 - Branch Chief – Robert Dunne (ER)
 - » ER Staff: Dino DelleChiaie, Jay Ward
 - Branch Chief – Paul Vigeant (120d/RR/IRA)
 - » RR Staff: Robert Adler, Hui Liang
 - NERO: Section Chief – Kingsley Ndi
 - ER Staff : Christopher Bresnahan, Andrew Clark, Paul Giddings, Joshua Lohman, Steven Ross, & Kenneth Sanderson
- SERO: Section Chief – Daniel Crafton
- ER Staff: Jamie Goncalves, Andrew Jones, Robert Murphy, Raymond Reimold, Andy Cooney



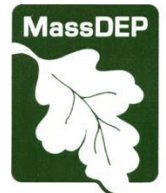
Western Region Summary

- 4 full-time staff and 3 additional night riders
- Largest geographical region/smallest population
- 106 towns and cities
- Hybrid program- includes MassDEP's asbestos program
- Complaint Response
- Satellite Office Coverage
- Self-sufficient on initial response- hands on approach



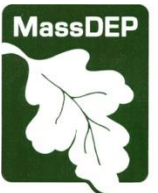
Central Regional Summary

- Two Branches
 - Emergency Response: Up to IRA Status #1 (3 full time staff)
 - Risk Reduction: IRAS#2 to IRAC, Limited Site Management, 120d Notifications, URAMs (3 full time staff)
- 3 full-time ER and 3 additional night riders
- 77 cities and towns
- Complaint response
- Risk Reduction / Audits
- Soil Reclamation Projects



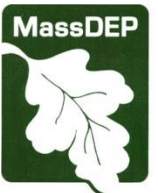
Northeast Region - Emergency Response

- 6 full-time staff, 6 Night Riders
- 84 cities and towns
- About 250 miles coastline
- Marine activities in Boston&Gloucester Harbors
- Notification Intake & Emergency Response
- Technical Support to Locals
- Outreach & GRP/Trailer training for locals
- Response Partnership with Coast Guard & EPA



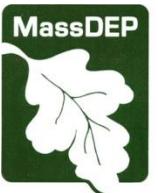
Southeast Regional Summary

- 5 full-time staff, 3 night riders
- 84 cities and towns
- More than 1000 miles coastline
- Cape Cod and the Islands
- Complaint Response
- Risk Reduction / Audits
- 1st year site management



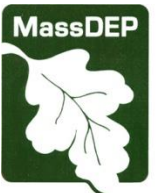
Emergency Response Overview

Dan Crafton -- SERO



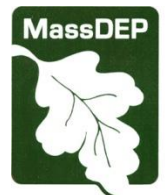
MassDEP Emergency Response

- Emergency Response 24/7/365
- All after hours emergencies
- Familiar with other MassDEP Programs –
 - Wetlands
 - Waste water
 - Drinking water
- Generally responsible for releases in the first year



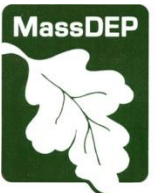
MassDEP Emergency Response continued

- Authorized to commit MassDEP resources to address IHs and other risks to public health and safety
- Operate under Incident Command System
- Joint response with Fire Departments, State Hazmat Teams
- US EPA and US Coast Guard



Other ER Activities

- Massachusetts Oil Spill Prevention and Response Act
 - Trailers, GRP development, testing and training
- Incident Preparedness and Planning
 - Area Committees, Regional Response Team
 - Government and Industry lead exercises
 - Outreach
- All Hazards Planning
 - Local and regional emergency planning committees
- FEMA Emergency Management Assistance Compact



MOSPRA Spill Trailer



Coastal Spill Trailer Locations





Local Responder Boom Training



Oil and Hazmat Spill Exercises

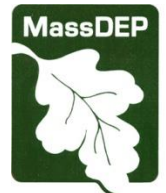


All Hazards Planning - Tornado Response

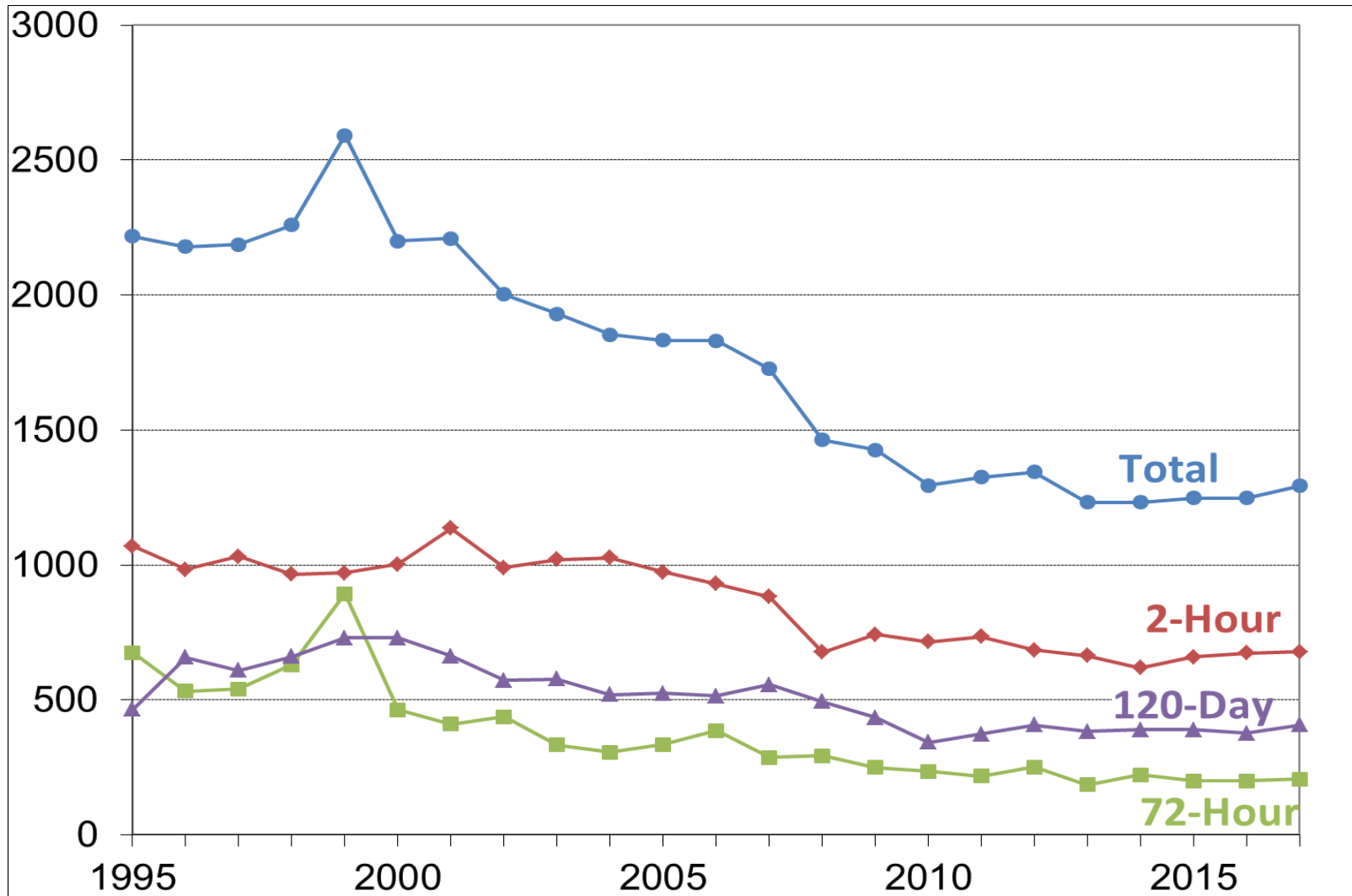


MassDEP Emergency Response Enforcement Priorities

- Failure to Notify/Late Notification
- Performing Work without Approval
 - Any person
- Improper Storage/Disposal of Remediation Waste
- Failure to Perform Cleanup/Non-Responder
- Illegal/Preventable Discharges

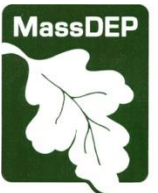


Releases by Notification Category FY95-FY17

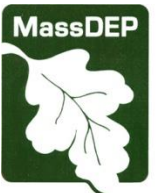


Notifications per Fiscal Year and Region

Fiscal Year	Region	2-Hour	72-Hour	120-Day	Total
2016	WERO	105	40	27	172
	CERO	147	39	44	230
	NERO	223	82	255	560
	SERO	195	37	49	281
	Total	670	198	375	1243
2017	WERO	95	36	54	185
	CERO	155	33	40	228
	NERO	230	85	254	569
	SERO	216	59	65	340
	Total	696	213	413	1322

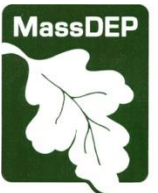


2 Hour Notifications



Notification Content Reminder

- All PRPs associated with site or release
- Correct PRP information (legal entity and address)
- Correct Site address (deed)
- Quantity released and how it was determined



What is the Environment?

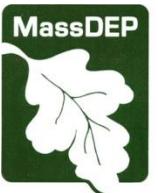
Environment means waters, land, surface or subsurface strata, or ambient air of the Commonwealth, including:

- Impervious surfaces
- Containment Areas
- Surface water



Secondary Containment Areas

- Not “exempt”
- Not all “containment areas” are equally maintained
- Notification must be provided within 2 hours
- At discretion of MassDEP, may allow retraction
 - Justification required – containment is tight, no cracks, air modeling for volatiles, no Imminent Hazard



“Containment” Full of Oil



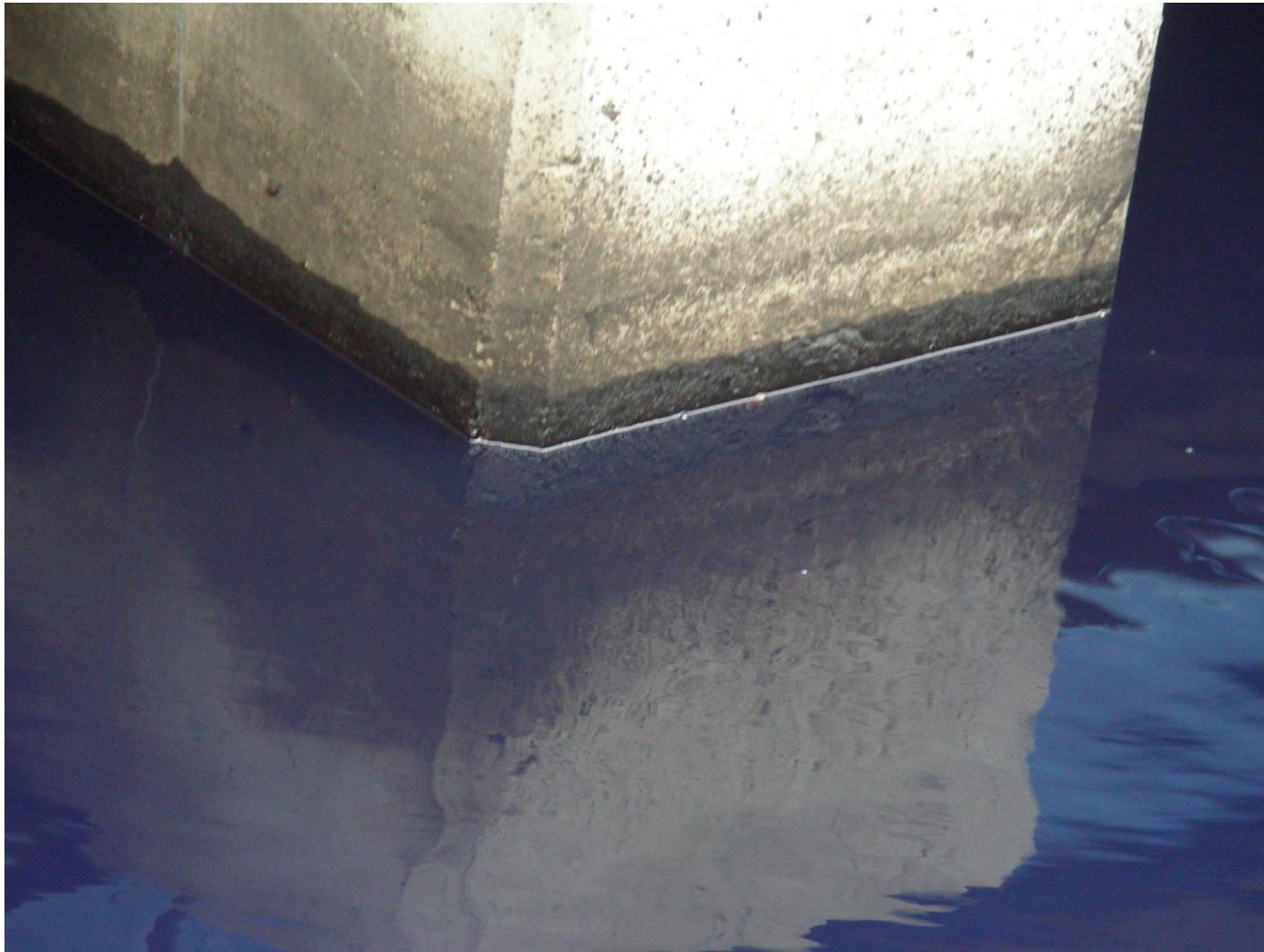
MassDEP



Containment Full of Oil



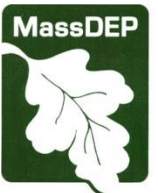
Is the level dropping?



Reminder: 2-hour Notifications

Special Considerations

- Contained within a building
 - Releases into elevator shafts
- OHM in private well >RCGW-1
- Any release to environment with acute human health impacts - Imminent Hazard
- Fishkill from a release - Imminent Hazard



Releases to Storm Drains

310 CMR 40.0311(8)

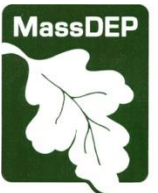
- > RQ = Reportable
- < RQ – potential Imminent Hazard?
 - Lower Explosive Limit
 - Fishkill
- Sheen on surface water?
- Notify storm drain owner in all cases
- Confirm integrity of drain piping



Releases to Sanitary Sewer Systems

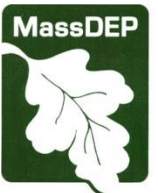
310 CRM 40.0311(9)

- Not immediately reportable under MCP - Notify WWTP immediately
- Oil and hazmat pass through - sheen on discharge or fishkill – Report to MassDEP
- Was combined sewer overflow operational at time of spill
- Response actions priority - limit impacts to biological processes



Threats of Release - 2 hour Conditions

- Buried drums
- Abandoned drums, facilities, tanks
- Tanker truck accidents
 - Potential tank and piping structure compromised
- Boat sinking
- Commercial & Industrial Fires



Buried Drum Incident



Abandoned Containers



Tanker Incident



Sunken Boat



Industrial Fire

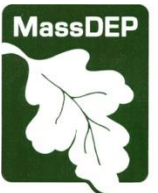


72 Hour Notification



UST Definition

- 310 CMR 40.0006...structure of any size or capacity, including, but not limited to, **ancillary piping**, that is used or designed to be used for the storage of oil and/or hazardous materials where **10%** or more of the volume of such structure and piping is below the ground surface, excluding any structure that is a free standing container in a building.



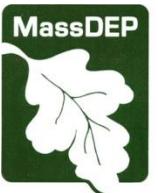
UST Removals and 100 ppm

- Measured within 24 hours after removal pursuant 310 CMR 80.43
- Must be measured prior to backfill
- Pre-characterization counts as part of removal



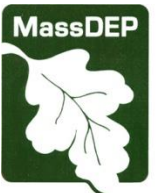
72-Hour Notifications

- NAPL in excavations
- > RCGW-1 near water supply or private well
- SRM - associated with release where notification is or was required



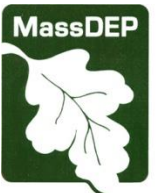
UST Threats of Release

- UST- includes tank, piping and appurtenances
- Leak > 0.05 gallons per hour
 - single-walled tank
 - inner or outer wall of double-walled tank
- Must file a PSS for a true threat of release, even if no environmental impact



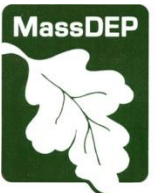
UST Removals at Site with RAO/PSS Residual Contamination

- > 100 ppm at time of UST removal - notify
- Potential retraction if sampling data indicates contamination is consistent with previously filed closure statement



Notification of Subsequent Reportable Conditions

- When in doubt, call....
- Reminder to re-notify for additional contaminants (e.g. metals at petroleum site)
- May be managed under previously issued RTN
- Updated RNF must be submitted
- If separate RTN issued, can link at IRAC if parent Site is Tier Classified

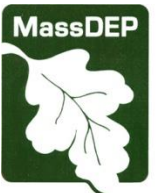


Adequately Regulated Sites - Landfills

- To maintain Adequately Regulated status, must notify of any 2 or 72 hour notification conditions, and
- Undertake and complete IRA to address those conditions
- Exception for certain Conditions of Substantial Release Migration- notification required to BWSC but performance of an IRA is not required



120 Day Notifications



120 Day Notifications

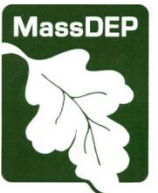
- No oral notifications
- Submit Release Notification Form
- Call regional staff if you need an RTN assigned after you've submitted the RNF via eDEP
- Time of PRP knowledge of release – should explain if outside the window
- Note LSP, if already retained
- Include copies of assessment reports



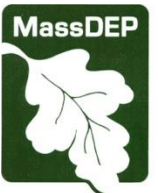
Environmental Assessment Reports

**** Tip ****

- Include statement in conclusion section advising client of timelines for notification to MassDEP



?? Questions??



Segment 2

Notification Exemptions, Notification Thresholds, Some OHM of Concern, and Revised Toxicity Values for CPIH notifications

Kingsley Ndi - NERO

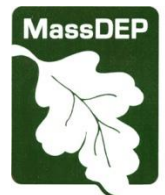


Notification Exemptions

310 CMR 40.0317

Note that exempt “releases” may still be subject to MCP.

- MassDEP can issue an NOR for releases that are exempt from reporting if condition poses a significant risk.
- **Not exempt from cleanup per 310 CMR 40.0370**



Oil/Water Separators

310 CMR 40.0317(1)

- Releases at “oil facilities” - bulk petroleum storage facilities
- **If greater than ten gallons is not captured by OWS; If poses IH; or If Permit Violation: Report Release!**



Don't “squeegee” the oil to the separator drains to reduce quantity remaining on pad to less than 10 gallons

Bulk Fuel Distribution Loading Rack



Passenger Vehicle Releases

310 CMR 40.0317(2)

- All releases to the environment must be cleaned up if they pose a significant risk. Deferred to Locals.
- Exempt - But few/year may need MassDEP oversight
- Notice of Responsibility may be issued
 - Impacts
 - Cost recovery
- Release from accident involving PV & Commercial vehicle is not exempt from notification







Releases Inside Permitted Building/Facility

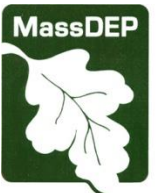
310 CMR 40.0317(3)

Point-source discharges or air emissions with a valid permit are exempt from Notification on condition that;

Don't result in Imminent Hazard and violate/exceed permit

Distinguish from:

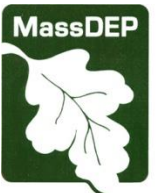
****Volatile or gaseous materials released within building (e.g. chemical warehouse) and \geq RQ vented/evaporates/volatilized to ambient air would be Reportable.**



Natural Gas Exemption

310 CMR 40.0317(6)

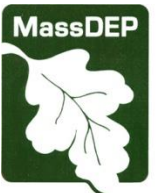
- Releases of natural gas are exempt
- **Component Gases in natural gas**, liquefied natural gas, or natural gas liquids also **exempt** as part of the release.



Propane Exemption

310 CMR 40.0317(23)

- Releases of propane (formerly reportable) are exempt provided that such releases are: **reported to Local FD and managed** in accordance with the Massachusetts Division of Fire Services gas leak Emergency and Reporting Procedure **per 527 CMR 6.00**



Release to Env't from Lead-based Paint

310 CMR 40.0317(8)(a)

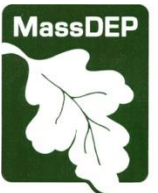
- Emanating from original point of application
 - Not tied to whether structure is still at location
 - If soil moved to other location, exemption no longer applies
- Manage soils in accordance with applicable regulations
- Residential lead soil- exempt from TCLP if disposing or re-using at lined landfill, provided it meets the other acceptance criteria



Pesticide Application

310 CMR 40.0317(8)(c)

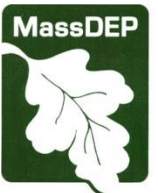
- Pesticide applied in accordance with labeling isn't a release to the environment – e.g. may not have label but observed concentrations are what would be expected based upon published studies
- **Spills during handling at mixing, batching, and storage areas not exempt** - if spillage has occurred, proceed through normal MCP process



HM Release from Coal, Coal Ash or Wood Ash

310 CMR 40.0317(9)

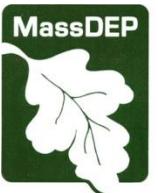
- Coal/wood ash presence is necessary but not conclusive for this exemption. **Prove that exceedance is due to coal/wood ash.**
- To support claim of history/origins, document with photographs, microscopic evaluation, ... as necessary.
- **Ash from** pressure/chemical-**treated lumber** (e.g. Copper Chromium Arsenate) **not exempt** from MCP



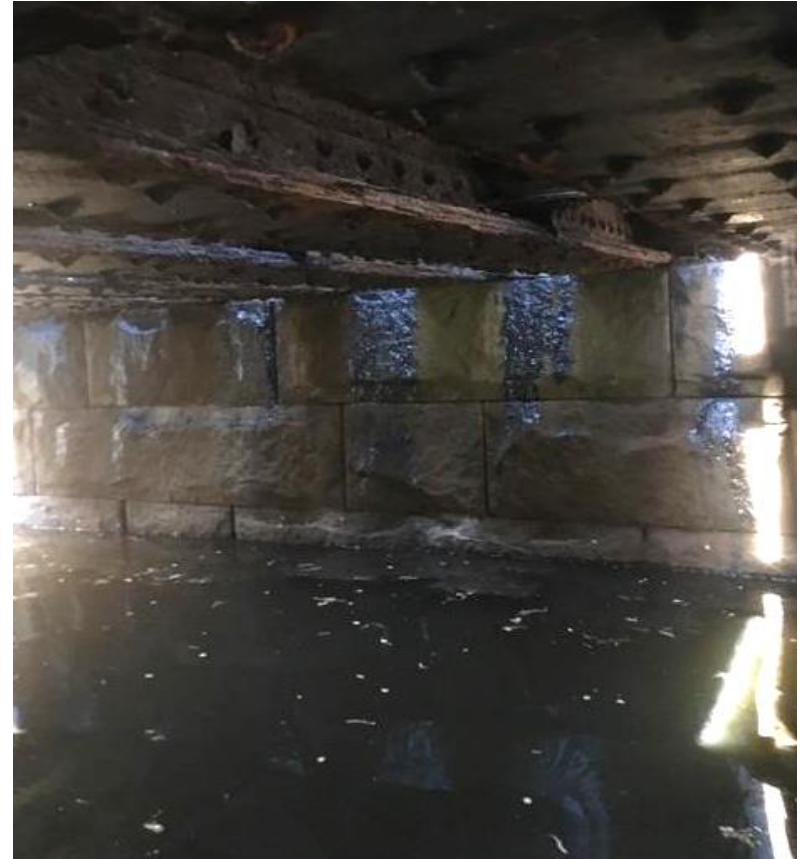
Releases Emanating from Building Materials

310 CMR 40.0317(12)

- Asphalt binder in bituminous pavement
- Piers, Piling, Foundation Structures
- Landscaping timbers, utility poles, Building Materials
 - In good repair and still used for original intended purpose
- Emphasis- **In Use for originally intended purpose and in good repair**



RR bridge ties release of creosote to river



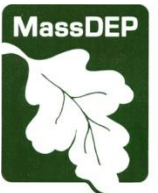
Creosote Sheen in River



Release to Surface water < RQ That Results in Oil Sheen 310 CMR 40.0317(21)

All four conditions below must be met else Exemption doesn't apply:

- Must notify federal officials (National Response Center)
- Response as directed by Federal Officials
- Sheen does not persist for >24 hours
- Sheen does not recur at same location within 30 days





09.11.2007

Releases inside Building/Utility Vault

310 CMR 40.0317(19)

- Release **must be completely contained within structure** for exemption to apply:
- “Completely contained” means that less than RQ was released to the environment
- Variables: Sumps/Dirt Floor/seams/cracks/elevator shaft
- Notify conservatively- retraction option
- Recommend indoor air impacts be addressed immediately
- May need to assess release to ambient air (volatile chemicals)

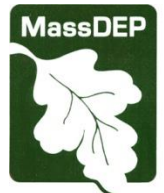


Release Consistent with Previous Notification

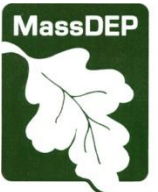
310 CMR 40.0317(16) and (17)

Release/OHM detected but consistent with a previously reported condition at disposal site:

- (16) Notification may not be required at a site where response actions on-going or site being actively overseen on condition that Consistent: **“In nature, type, quantity, & exposure potential”**
- (17) Notification required for new 2/72 hour condition at previously closed site with PSS, Class A or B RAO, or NFA ... Notification retraction may be possible **if prior determination unchanged.**



Specific OHM of Interest



Imminent Hazards - Update

IH table update: 40.0321(2)

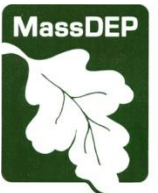
Hazardous Material	June 2014 Concentration (ug/g dry wt)	2018 Proposed Concentrations (ug/g dry wt)
Arsenic (total)	40	50
Cadmium (total)	60	2000
Chromium (VI) (or Total Chromium in absence of CrVI data)	200	200
Cyanide (available)	100	100
Mercury (total)	300	500
Methyl Mercury	10	100
PCB (total)	10	20



Listed Hazardous Materials

**** Tips ****

- Be cognizant of **synonyms** – look up
 - Handheld devices reference applications – WISER, CAMEO suite, HazMat IQ, etc.
 - List and electronic search available on internet
 - Search by name and preferably C.A.S. # if you one is available (e.g. on Safety Data Sheet)
- For facilities, confirm RQs ahead of time and include as part of the emergency plan



Some Oil/Hazardous Materials of Interest

- Mercury - 1 pound RQ
- Asbestos - 1 pound RQ or Imminent Hazard
 - RQ is prorated for percentage in ACM
 - No reportable concentration in soil
- Hydrogen Peroxide - 1 pound RQ regardless of concentration
- Vegetable Oil - 55 gallon RQ
- Cryogenics – 10 pound RQ



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- Mercury - 1 pound RQ
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Asbestos Dumping - 2 hour



Asbestos Dumping Sample



Mercury Spill

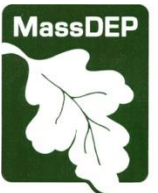


Mercury Spill Cleanup



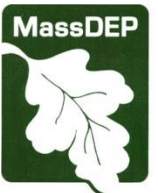
Non-listed Hazardous Materials – 1 or more Characteristic of

- Ignitable, Corrosive, Reactive, Toxic or Infectious
- **Default RQ of 10 pounds**



Non-listed Hazardous Material – Toxic

- Toxic because material failed TCLP
- RQ for entire hazmat = RQ for hazmat for which characteristic of toxicity is based i.e. which failed TCLP. If more than one substance failed, then RQ of failed substance with lower/lowest RQ
- **Applies to entire amount of non-listed hazmat**



Infectious Materials

- Includes infectious wastes described at 105 CMR 130.360, *Medical Waste Disposal*
- **Definition:** physically dangerous medical or biological waste, i.e.,: sharps; blood and blood products; pathological wastes; cultures and stocks of infectious agents & associated biologicals; contaminated animal carcasses, body parts & bedding
- **RQ = 10 lb**



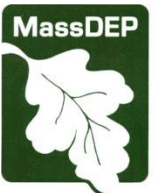
Emerging Contaminants

- PFAS/PFOA
- Pharmaceuticals
- Nano Materials

Some may meet the definition for hazardous materials

MassDEP may issue NOR under 310 CMR 40.0370

- Investigate materials at your site and if hazmat by characteristic would be subject to MCP



Materials Containing PCBs

- MODF/Transformer Oil
 - 25 gallon MODF reportable quantity (<2 ppm of PCBs)
 - Unknown or >2 or <500 ppm - 10 gallons RQ
 - Known to be >500 ppm - 1 gallon RQ
- Be careful- **“non-PCB” is <50 ppm vs. <2 ppm PCBs**
- Does not apply to soils, sediments, residuals etc. being managed in accordance with applicable regulations

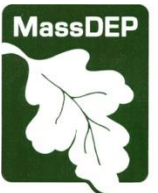




Mixtures

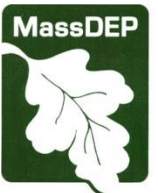
310 CMR 40.0352(4)

- Concentrations of hazmat(s) known and total quantity is above the RQ(s)- report
- Two or more component hazmat below RQs, report if total of hazmats in mixture is 50 pounds
- Concentrations of hazmat unknown, report based upon amount of mixture released if it is equal or greater than the lowest RQ



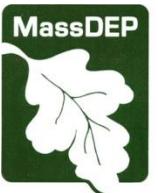
Scenario 1- Mixtures

- 50 gallons of a mixture of 25% ethanol by volume, the remainder being 2 unlisted materials
 - 12.5 gallons of ethanol
 - RQ = 10 gallons
 - Exceeds RQ
 - Report



Scenario 2- Mixtures

- 100 gallons of process wastewater containing 1% ethanol and 1.5% nitric acid by weight overflows onto parking lot
 - < ethanol RQ of 10 gallons (8 pounds)
 - < nitric acid RQ of 50 pounds (12 pounds)
- Although total weight of mixture released exceeds 50 pounds - not reportable as total quantity of hazmat is <50 pounds



Scenario 3 - Mixtures

- 10 gallons of process wastewater containing an unknown concentration of ethanol and unknown concentration of nitric acid overflows to the parking lot
 - Weight of mixture estimated to be 90 pounds
 - Does not exceed ethanol RQ of 10 gallons
 - Exceeds nitric RQ of 50 pounds
 - Report
 - Possibly retract with sampling data





Hmm, what's the
ethanol content?

Pollutants

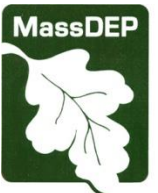
- Regulated by MassDEP under Clean Water Act
 - Pollutant - any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter, in whatever form and whether originating at a point or major non-point source, which is or maybe discharged.....
- Potential enforcement





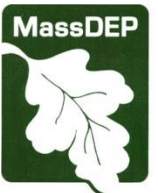


?? Questions??



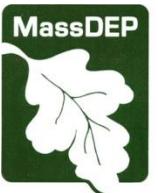
How to Notify

Kevin Daoust - CERO



To Report Releases

- 1-888-304-1133
- 24/7
- MEMA



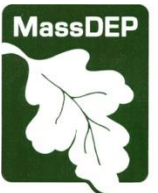
Who Must Notify

- Current owner/operator of a site or vessel where a release has occurred (both oil and hazmat)
- Anyone who caused or contributed to the release (both oil and hazmat)
- Former owner/operator of a site or vessel (hazmat only).
- Anyone who transported, stored or disposed of hazardous waste to or at a site (hazmat only).



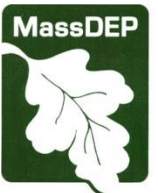
Notification Hierarchy

- Local Public Safety (Police/Fire Department)
- MassDEP and other state regulatory agencies
- USEPA and other federal regulatory agencies



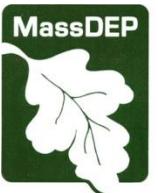
3rd Party Notifications

- PRP must notify MassDEP even if other parties (e.g. local police and fire) have contacted MassDEP already
- PRP must notify other agencies in addition to MassDEP as appropriate (FD, NRC, etc.)



Content of Oral Notification

- Name and contact numbers - PRP/LSP
- Location
- Existing RTNs if any
- Oil and/or hazardous material involved
- **Correct legal name of PRP**
- Time of knowledge (**any PRP employee**)
- Name of other agencies notified
- Receptors impacted or in vicinity
- Proposed response actions and schedule



Release Tracking Numbers

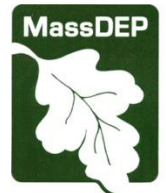
MassDEP will generally assign an RTN to all notifications of releases/threats of release of oil and hazardous materials

- If below notification thresholds or determined to be exempt, will be recorded as “less than reportable”. No additional MCP follow-up necessary (unless specified by MassDEP)



Retracting Notifications

- By a person required to notify and who made the notification
- Utilizing a Release Notification Form
- Justification required (more than just the form unless direct MassDEP oversight)
- Must be received by MassDEP within **60** days of date of notification.
- Presumed approved unless MassDEP denies Retraction within **21** days

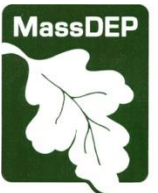


Immediate Response Actions



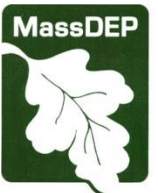
Immediate Response Actions

- Sudden release – No approvals necessary to contain
- Develop an initial conceptual site model
- Assessment- only IRA? - requires MassDEP concurrence
- Specific approvals required for fluid recovery and physical removal of soil
- Provide schedule for implementation



Oral Immediate Response Action Plan

- IRA must be timely and implemented in conformance with approvals
- Contact MassDEP for IRA modification approvals
- MassDEP may request written plan for certain response actions on expedited time frame



IRA Plan Modifications

Submit modified IRA Plan if:

- New contaminants(s) or unexpected conditions are discovered
- Change in soil volume
- Change in soil management option
- Major modification of remedial system or treatment technology



Health and Safety Considerations

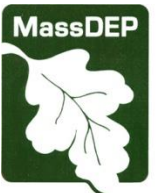
A health & safety plan shall be developed for all assessment and cleanup activities 310 CMR 40.0018

- Can utilize a generic plan
- Tailgate meeting for sudden releases



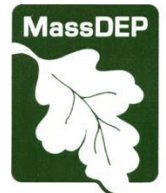
LSP Role in Emergency Responses - Sudden Releases

- Early field presence and communication beneficial
- Develop appropriate IRA to mitigate emergency
- Work in concert with MassDEP and other public safety officials



Special Notes for Highway Spills

- Incident Command System in place
- Massachusetts quick clearance agreements - stabilize and come back for additional work
- Appropriate emergency lighting for vehicles and PPE (level D and high visibility) required for responders
- Contractors pre-permitted
- Follow-up work performed under MassDOT-issued roadway work permit with specified work zone setup
 - MassDOT (800) 227-0608



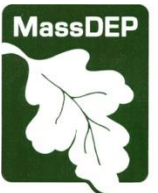






Initial Written IRA Plans

- Good initial Conceptual Site Model
- Discuss receptors, include GIS map
- Highlight modifications to approved IRA
- Indoor air discussion
- Assess storm drains and utilities
- Detail remediation waste storage or disposal
- **Include a Schedule**



General IRA Plan Issues

- Manual bailing should be used as a short term assessment tool, NOT remediation
- Continuous evaluation for Imminent Hazards- document it
- IRA must address Critical Exposure Pathway(s)
- IRA Plan should discuss indoor air assessment performed - priority if applicable and completed prior to the 60-day submittal



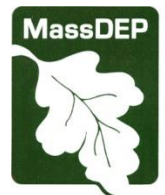
Critical Exposure Pathways

- Presumption that IRA will eliminate or mitigate the CEP
- Presumption may be rebutted where:
 - CEP \neq Imminent Hazard
 - Case is made that elimination/mitigation is not feasible (based on cost v. benefit)



Critical Exposure Pathways

- IRA elimination/mitigation for indoor air impacts
 - Short term (24-48 hours)
 - HVAC adjustments
 - Sealing of cracks/holes
 - Air Purifying Units
 - Follow up sampling **With Schedule** to confirm effectiveness
 - Long term (prevention/elimination)
 - SSDS
 - Follow up sampling **With Schedule**



Critical Exposure Pathways (cont.)

- IRA elimination/mitigation for drinking water impacts (private wells)
 - Bottled water
 - Point Of Entry Treatment System
 - Follow-up sampling **With Schedule**
- Sampling is not mitigation



APU Installed in Home to Abate PCE

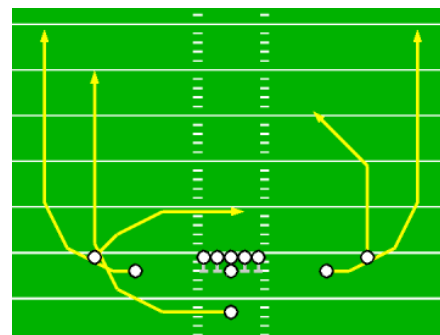


POETS



Critical Exposure Pathways (cont.)

- Where have I not looked? Site in Phase II? If not – go wide and back up.
- Be proactive
- Presumed to require the elimination/prevention to the extent feasible
- SSDS, POETS and bottled water generally considered feasible*



Site Access Authorization

310 CMR 40.0173

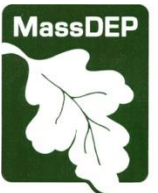
After you have attempted to gain access, submit requests:

- Identify person seeking access and why
- What is to be done and when
- Identify the entity you are seeking access
- Document results of all attempts to gain access (copies)
- Send by certified mail, return receipt to each entity and advise each entity that they may contact MassDEP directly.



IRA Status Reports

- 120 days after first IRA Plan is proposed and approved.
- Generally date of notification
- Every 6 months after first status report submitted
- Late status reports subject to enforcement

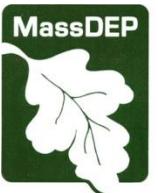


Stalled IRAs

- If no progress, explain why
- Financial inability
- Potential enforcement

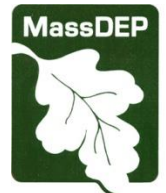
IRA Completion Statements

- Remediation waste removed
- Link to Tier Classified RTN, if applicable
- Document public involvement activities

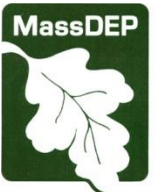


Remedial Monitoring Reports

- MassDEP approval required to terminate a remedial system controlling an Imminent Hazard
- IH – monthly following the first IRA Status Report unless agreed to in writing by MassDEP
- No IH – every 6 months with the first IRA Status or the following 6 month IRA Status
- Frequency can be modified by MassDEP in IRA written approval or Interim Deadline.



??? Questions???



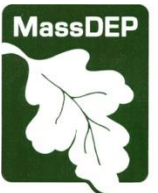
Release Abatement Measures

Dave Slowick - WERO



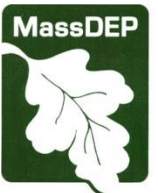
Release Abatement Measures

- Implemented with a level of understanding of disposal site conditions
- Approved once submitted - potential MassDEP review and comment
- Invalid if not initiated within one year of submittal
- Document public involvement activities



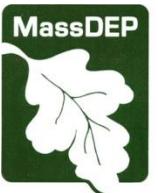
Hints for Successful RAMs

- Propose a range of soil volume with a “not to exceed” volume
- Remember financial assurance certification for large amounts of soil
- Include clear discussion on disposition of all Remediation Waste, including soil to be re-used on-site



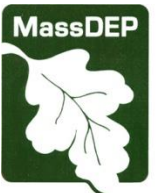
Additional RAM Hints

- Always discuss approach to dewatering to handle groundwater as well as storm water accumulation
- Provide plan to manage new discoveries (e.g. new contaminants, buried USTs or drums)
- Have and implement Health and Safety Plan
- Discuss Environmental Monitoring



Additional RAM Hints

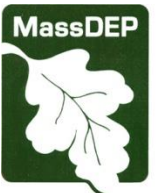
- Always discuss approach to dewatering to handle groundwater as well as storm water accumulation
- Provide plan to manage new discoveries (e.g. new contaminants, buried USTs or drums)
- Provide Health and Safety Plan
- Discuss Environmental Monitoring



RAM - Significant Modifications

Submit modified RAM Plan if:

- New contaminant(s) or unexpected conditions are discovered
- Change in soil volume
- Change in soil management option
- Major modification of remedial system or treatment technology

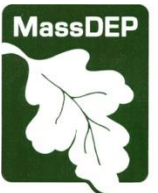


Utility Related Abatement Measures



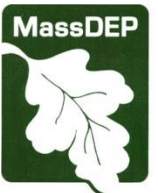
Utility-Related Abatement Measures

- Written confirmation due within 7 days
- Utility work only- no foundations
- IRA conditions (2/72 hour)- notify and stop
- Develop health and safety plan
- Make sure follow-up paperwork including URAM completion statement is submitted
- Discuss known releases in vicinity/Possible MassDEP follow-up



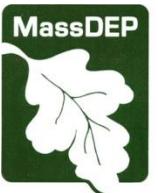
Front-End Construction Activities

- MassDEP has maintained the consistent position that construction activities at “active” (and some closed) Disposal Sites constitute a Remedial Action, and as such must be conducted under one of the five remedial alternatives set forth in the MCP.



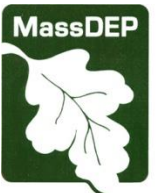
Construction Activities Applicable to Disposal Sites Where:

- Notification is required pursuant to 310 CMR 40.0300
- Construction activities include disturbance and management of Remediation Waste



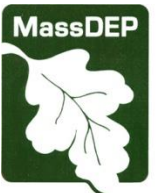
Construction as a Limited Removal Action?

- “Limited” - not appropriate in many cases
- Consider RAM first, especially if extent of contamination unknown
- Think before you dig: “dig and haul preferred”
- No Oral Approval for LRA to RAM
- Dewatering allowed GW < RCs only



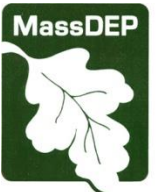
Construction Activities Under an IRA

- Only in limited cases (e.g. abandoned Underground Storage Tank encountered during excavation)
- Limit actions to what is necessary to assess and abate IRA condition



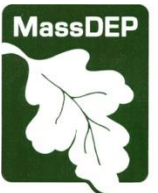
Most Common Approach - RAM

- Improvements and modifications to RAM process (e.g. elimination of the MassDEP 21-day presumptive approval requirement) were largely based upon experiences with construction activities.



Storage Reminder

- Under/over 6 mil poly
- Minimize volatilization and dust
- Avoid storage near sensitive receptors - catch basins, residential areas
- Minimize access - fencing
- Load and go preferred for most



PLAYKEN







Temporary Off-Site Storage

If temporarily storing off-site:

1. Only to location owned by PRP/RP/OP or appropriate facility
2. Overseen by LSP (BOL completed)
3. In emergency, MassDEP responder can approve other suitable location (generally only for highway emergencies)



Remedial Wastewater

- Surface Discharge on-site - exempt from groundwater discharge permit
- Publically-owned treatment works – Owner approval and owner of conveyance network
- Surface water (NPDES)



UST Removals/Installations- Groundwater Disposal

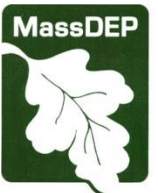
If on-site discharge is not an option, handling is based upon chemical characterization and hazardous waste determination (flashpoint):

- Exempt from TCLP testing if managed under the MCP
- Transport on straight bill of lading as non-hazardous if <RCs - Industrial Wastewater
- Transport on Massachusetts Bill of Lading if >RCs
- Facility approved or permitted to accept material



Remedial Additives

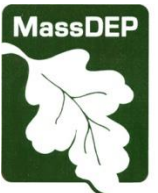
- Not appropriate for many IRA situations- no oral approval generally will be granted (oral IRAP/modification)
- If deemed necessary, submit with written IRAP or written IRAP modification
- 30 day presumptive- sensitive receptors



Remedial Additives- Approvals

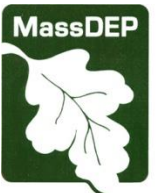
MassDEP approval needed for application near sensitive receptors:

- 100 feet of a private water supply well
- 800 feet of public water supply well
- 800 feet of a public surface water source
- 50 feet of any other surface water body
- 100 feet of school, daycare, child care center or occupied residential dwelling

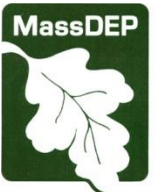


State-Funded Response Actions

- When and Why
- On-call contractor rotation
- Notice of Responsibility/Notice of Response Actions
- Extent of MassDEP response actions
- Response actions by PRP/state-funded transition
- Cost Recovery



??? Questions ???



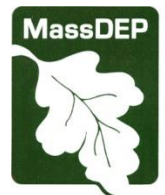
Homeowner Oil Release Examples

State-Funded Response Actions



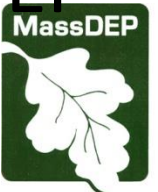
Springfield -- November 2013

- After-hours call from Springfield Fire Department
- Single-family residence- public utilities
- Densely populated urban neighborhood
- Pipe/Filter snapped off basement AST
- 200 gallons released
- MassDEP on-scene within 45 minutes of call

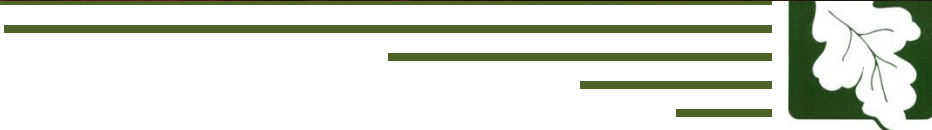


Incident Size Up

- 2” of oil across portion of basement floor- no speedy-dri put down by FD
- Absorbents deployed by MassDEP
- Competency of basement floor unknown
- Strong vapors in residence
- Homeowner not financially able to commit to cleanup
- State-funded contractor retained by MassDEP







Initial Cleanup - First Night

- Vacuum truck on scene in about 2 hours- limited amount of fuel oil recovered
- Speedy-dri deployed
- Contaminated personnel items removed from basement for cleaning or disposal
- Basement sealed off from upstairs living area
- Most of fuel oil noted to have migrated through floor via substantial cracks



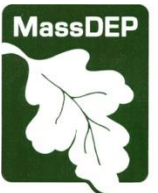
Follow-up

- Insurance coverage for cleanup quickly approved- assumes financial responsibility for first night actions
- LSP retained
- LSP continues with MassDEP's contractor
- NOR issued to homeowner
- Follow-up MassDEP inspections at various stages of cleanup



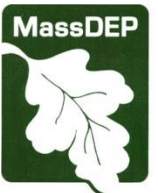
Cleanup Summary

- Vast majority of oil release below floor
- Structural support/underpinning required
- Soils hand excavated and vactored- lengthy phased cleanup- 58 cubic yards removed
- No groundwater encountered
- Class A-2 RAO filed within 7 months



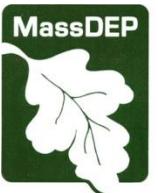
Agawam Residence - April 2014

- 3:40 PM call from Agawam Fire Department
- Single-family residence- public water/private sewer
- Suburban neighborhood- ½ acre lots
- Pipe/Filter snapped off basement AST
- 125 gallons released
- Oil company on scene recovering oil
- MassDEP on-scene within 20 minutes of call



Incident Size Up

- Free-phase oil across entire basement floor- 50 gallons recovered by oil company
- Absorbents deployed by MassDEP
- Competency of basement floor unknown
- Strong vapors in residence
- Homeowner not financially able to commit to cleanup
- State-funded contractor retained by MassDEP



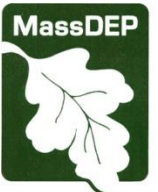






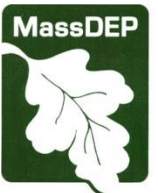
Initial Cleanup- First Night

- Oil company and MassDEP recovered 90 gallons of oil- retained for re-use
- Vacuum truck on scene in about 1.25 hours – 25 gallons of additional fuel oil recovered
- Speedy-dri deployed
- Contaminated personnel items removed from basement for cleaning or disposal
- Basement sealed off from upstairs living area
- Basement floor appeared to be in excellent condition



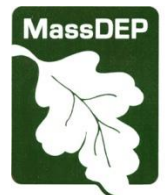
Follow-up

- No insurance coverage
- Homeowner retained MassDEP contractor
- NOR issued to homeowner
- Follow-up MassDEP inspections at various stages of cleanup
- MassDEP on-site to observe soil borings below floor
- Release Notification Retraction (accepted) filed by Homeowner



Releases to Impervious Surfaces – Suggested Permanent Solution Documentation

- Clear site map- release remained on pavement
- Multiple photographs- pre- and post-cleanup if available
- Description of pavement construction
- Field assessment of paved areas with significant cracks or perforations
- Assessment of asphalt/concrete seams



Release with Surface Water Impacts

Vehicle Accident – Auburn, MA

November 28, 2015



Upon Arrival



Cab Separated from Tractor



View from Hill Base



Tractor Remains (Upside Down)



UNIFIED RESPONSE
MANUAL
FOR
ROADWAY TRAFFIC INCIDENTS



November 2006

MassDEP Responder(s)

MassDEP responders shall:

- **Set clean-up goals to open roadway.** MassDEP will evaluate release area and conditions and will make every effort to **prioritize immediate actions that will facilitate opening of the roadway.**
- **Assess environmental threat.** MassDEP will assist with the identification of chemical(s) present (if possible), the likely receptors, sensitive resource area impacts, and will try to identify potential threats to public health, safety, welfare and the environment.
- **Support Fire Departments with OHM releases.** With the protection of public safety and the environment paramount, MassDEP will support the Fire Department with implementation of release mitigation measures and/or proving suggestions for booming of roadways and storm drains, collection of firewater, chemical plume migration pathways also, suggestions for safe evacuation zones and other support as necessary.



- **Address potential public drinking water supply issues.**
Once notified of the incident, MassDEP will evaluate the threats posed by the incident to drinking water sources in the vicinity and notify the local officials and the public water supply owners/operators accordingly. If it is determined that there are actions necessary to reduce risk of exposure to the release, including the shutdown of the supply, MassDEP will make that

November 2006

29

FIED RESPONSE MANUAL FOR ROADWAY TRAFFIC INCIDENTS

- determination in conjunction with MDPH and local officials.



Incident Challenges

- **Safety**
 - Busy highway
 - Dark
 - Very steep slope (50°+)
 - Slippery: Oil on road, cardboard on slope
 - Reservoir
- **Road closure - 2 lanes**
 - MOU
 - Traffic
 - Secondary Incidents
 - Managing priorities
 - MassDOT & MSP
 - DEP & Auburn Water
- **Environment**
 - 200 gallons diesel released
 - Proximity to PWS wells
 - Dark Brook Reservoir
 - Rain
- **Logistics**
 - Organizing logistics in light of dynamic priorities
 - Staff and equipment
 - Safety of trailer and Recovery activities
- **Other**
 - PWS well treatment mods (\$\$) and imminent return of PWS to service
- **Unidentified/Unresponsive PRP**





Poly Installation



Dark Brook Reservoir



Hill Excavation



Dark Brook Reservoir





Excavated area - 11/30/2015

Excavated area - 12/2/2015

Interceptor Trench - 12/2/2015

AUBURN

Harbor & Absorbent Boom



Excavation Off Slope & Stockpile



ssDEP



Initial Trench and Excavation

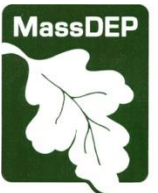


Excavation Nearly Done



Measures of success

- Removal of approximately 450 cubic yards of contaminated soil by MassDEP
- Response costs transferred to PRP
- No public water supply impacts
- Surface water, soil, and sediment sampled for EPH/VPD target diesel analytes
- Monitoring wells installed, sampled for EPH/VPD, target diesel analytes
- PSS filed in October 2016



Critical Exposure Pathway Case Study



PCE in indoor air

Anytown, MA

- Former dry cleaner (75 yrs) in densely developed Commercial/Residential area
- PCE contaminated soil and groundwater, Site closed with B-1 RAO
- PCE detected in adjacent basement apartment at 28 ug/m³ during indoor air sampling performed by MassDEP
- MassDEP notified owner of former drycleaner and issued a Notice of Responsibility with requirement to submit IRA Plan



PCE in indoor air

Anytown, MA

Immediate Response Actions

- Continued indoor air sampling
- Excavation of soil outside the building to bedrock (7' below grade) for installation of groundwater interception
- Ventilation/window air exchange unit
- Installation of APUs
- Installation of secondary floor with SSDS

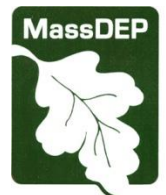


PCE in indoor air

Anytown, MA

Site challenges

- Older apartment building with incomplete concrete slab
- Groundwater elevation under/at the basement floor
- Basement residence with sump in a closet
- Access issues with apartment tenant
 - APU turned off
 - Summa sampling valve closed
 - APU stolen



PCE in indoor air

Anytown, MA

Site challenges

- Variable PCE concentrations in indoor air
- PRP claiming Financial Inability (denied)
- Unknown extent









PCE in indoor air

Anytown, MA

MassDEP Actions

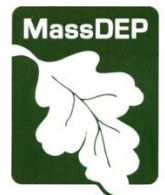
- Increased IRA Status Report frequency
- NORA/NOIM
- Access Agreement
- MassDEP sampled indoor air of all apartments
 - PCE in indoor air ranged from ND to 510 ug/cm³ (median conc. = 4.5 ug/cm³)



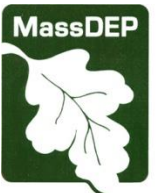


Next Steps

- PRP:
 - Basement apartment reported recently unoccupied
 - Repair basement floor
 - Installation of negative pressure monitors
 - Limited follow-up indoor air sampling
- MassDEP
 - NORA/NOIM
 - Assess downgradient properties for SRM/CEP
 - Conduct indoor air sampling of all apartments



?? Questions ??



Contact Information

- Dave Slowick -- WERO -- 413-755-2246
David.slowick@state.ma.us
- Kevin Daoust – CERO – 508-767-2805
Kevin.daoust@state.ma.us
- Kingsley Ndi – NERO – 978-694-3379
Kingsley.ndi@state.ma.us
- Dan Crafton – SERO – 508-946-2721
Daniel.crafton@state.ma.us

