

IMMEDIATE REMOVAL ACTIONS

Subcommittee 4 Concept Report

June 2021

Prepared for:

**The Working Group established pursuant to Section 19 of Public Act 20-9 and
The Connecticut Department of Energy and Environmental Protection**

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The Immediate Removal Action Subcommittee

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1. Introduction

This Concept Report (the “Report”) was prepared by the Immediate Removal Action (“IRA”) Subcommittee (the “Subcommittee”) appointed pursuant to Section 19 of Public Act 20-9 (“PA 20-9”). The Subcommittee met for the first time on January 28, 2021, and has met regularly since then to discuss the following charge, as provided by DEEP: Under the release-based cleanup program, releases may be discovered and reported that must or may be addressed swiftly through recognized mitigation and remediation efforts. This subcommittee shall evaluate which releases require an Immediate Removal Action and examine how to incentivize swift yet comprehensive/protective action for other releases.

The DEEP provided discussion points and questions that the Subcommittee considered in connection with the development of this Concept Paper are discussed further below and are provided as Appendix 4.1 to this Report.

PA 20-9 creates a release-based system of environmental regulation that will eventually replace the Property Transfer Act (CGS 22a-134 et seq). The envisioned system will be consistent with other states and will maintain and, in some ways, expand environmental protections important to public health and the environment. Under PA 20-9, DEEP and DECD were charged with co-chairing a working group to receive advice and feedback for regulations to be adopted by DEEP. The working group meets monthly in a forum open to the public and seeks input from all stakeholders.

The working group created five initial topical subcommittees to make concept recommendations in discrete areas. Three additional subcommittees are planned to consider additional concepts following the initial phase. The subcommittees and their discrete areas of consideration are provided as Appendix 4.2.

In considering and evaluating aspects of IRAs as tasked by the working group, the Subcommittee created several ancillary documents including spread sheets and flow charts which are provided as Appendix 4.3 as will be referred to herein.

1.1 Subcommittee Members.

The members of Subcommittee 4 are summarized in the following table.

Immediate Removal Actions Subcommittee 4 Members and Representation		
Name	Company	Representing
Ben Rieger	AnteaGroup	LEPs
David Kallander	CT Dept. of Public Health	State Agency
Dustin Mitchell	Environmental Services, Inc.	LEPs
Frank Hird	O,R&L Commercial	Commercial Real Estate Brokers
Jean Perry Phillips*	Pullman & Comley	Environmental Attorneys
John J Lyons	Symbiosis	Interested member of the public
Mark Burno	CT Dept. of Economic and Community Development	LEPs
Michael Bedson	CT Department of Transportation	State Agency
Mitch Wiest*	Roux Associates, Inc.	LEPs
Paul Jacobi	Jacobi, Case and Speranzini	Environmental Attorneys
Rachel Rosen	Burns & McDonnell	EPOC
Robert Kovach	Eagle Environmental, Inc	LEPs
Roy Cavanaugh	Town of Watertown	Municipal
Sally Kropp	Kropp Environmental Contractors, Inc.	LEPs
Steven C Sosensky	Sosensky Law Firm	Environmental Attorneys
Pete Zack	DEEP	DEEP Resource -Lead
John Aceto	DEEP	DEEP Resource
Richard Scalora	DEEP	DEEP Resource

*Subcommittee co-chairs

1.2 Approach.

The Subcommittee approached the topic of immediate removal actions informed by Subcommittee members' direct experience in working on a variety of sites in Connecticut, and other states, that span the gamut of potential and actual releases into the environment. The protection of human health and the environment was the paramount goal of all involved in the process. Secondary goals and considerations taken into account by the Subcommittee included conservation of resources in both the public and private sectors, coordination with and improvement of existing regulatory schemes and directives, improvement of outcomes for the universe of responsible parties and stake holders including efforts to provide certain and definable end-points, facilitate third party payments now hindered under the current programs, expansion of appropriate resources and regulatory options for responsible parties and public stakeholders, and models and lessons to be learned from peer state programs, in particular the Massachusetts Contingency Plan.

1.3 Acknowledgements.

The Subcommittee was assisted in its deliberations by regular attendance at its meetings by Eric Brown representing CBIA and by DEEP representatives Lori Saliby and Dean Applefield. Brendan Schain, Betsy Wingfield and Graham Stevens also of DEEP attended and provided support. Members of the Subcommittee were gracious and generous with their time and expertise. A variety of opinions was often offered based on the disparate experiences of the Subcommittee members.

The Subcommittee was very fortunate to have the experience and expertise of several LEPs in the group and especially those with experience with the Massachusetts Contingency Plan: Mitch Wiest, Ben Rieger, Bob Kovach, Rachel Rosen and Mark Burno; it was further fortunate to have an experienced permitted spill contractor, Sally Kropp, who shared much valuable experience with the universe of spill response and provided invaluable resources including note taking and development of spreadsheets. Drafting responsibilities for this report were shared by Mitch Wiest, Jean Perry Phillips, Mark Burno, Bob Kovach, Frank Hird, and Ben Rieger. Peter Zack was our primary DEEP liaison and provided invaluable information and insight into the current regulatory process.

1.4 Current Connecticut Regulatory Structure and Massachusetts MCP Per State Exemplar.

Currently, there are 16 existing and proposed environmental regulatory programs in Connecticut, eight of which may trigger liability or an obligation to conduct response actions to investigate and remediate impacts from contaminants that may have impacted the soil and waters of the state. The environmental regulatory programs include, among others, spill reporting, significant environmental hazard reporting, corrective action, the underground storage tank program, two voluntary remediation programs, and the Property Transfer Act. In addition to these programs, another set of regulations known as the Remediation Standard Regulations (“RSRs”), provide the numerical standards and demonstration of compliance obligations that govern clean-ups in Connecticut, but do not actually require the clean-up of impacted sites. The Property Transfer Act is based on the “transfer” of only certain parcels of real property or business operations (“Establishments”), and is property and not release based, thus requiring the investigation of entire parcels of land, regardless of the presence and number of releases.¹ PA 20-9 directs DEEP to adopt regulations to create a new, release-based cleanup program that will replace the Property Transfer Act as part of the ongoing comprehensive evaluation and transformation of Connecticut’s cleanup laws.

To inform the Subcommittee’s discussion and development of the IRA concept, the Massachusetts Contingency Plan (“MCP” found at 310 CMR 40.000) was used as a model of a mature privatized release based regulation. The MCP, first created in 1988, was significantly redesigned in 1993 to provide a comprehensive privatized system with the goal of reducing the backlog of contaminated properties, including redevelopment of brownfield sites, by authorizing licensed site professionals (“LSPs”) to assess risk and implement cleanups (in 2003 Massachusetts Department of Environmental Protection’s oversight and review of most functions was reduced even further based on the success of the 1993 revisions and lessons

¹ It is important to note that releases to the environment at sites that do not meet the definition of an “Establishment” often are not investigated or remediated as they are not subject to the Transfer Act. Thus, the current regulatory system that relies on the transfer of only certain types of properties or businesses is inequitable and allows non-establishment releases to go unaddressed.

learned). As reported by the Licensed Site Professional’s Association, LSPs have closed over 30,000 sites in the last 27 years as compared to just 630 sites between 1983 and 1993.

In contrast to Connecticut’s regulatory structure, the MCP provides one set of regulations governing the identification, investigation, clean-up, and closure of sites (“one stop shopping”) based, in part on:

1. Clear risk-based notification requirements;
2. Incentives for quick/early closures (i.e., the ability to keep small releases out of the broader system);
3. Multiple features to that allow closure throughout the regulatory process (i.e., “multiple exit ramps”); and
4. Increasing site-specific options and complexity for complex sites that require additional time to achieve closure.

Specifically, Subcommittee 4 considered the MCP’s Immediate Response Actions (310 CMR 40.0410) and Limited Removal Actions (310 CMR 40.0318) as model regulations for “mandated” and “non-mandated²” IRAs as detailed in Section 2 of this report as summarized in the following table.

Comparison of PA 20-9 Immediate Removal Actions Concepts vs. MCP Immediate Response Actions and Limited Removal Actions Regulations			
PA 20-9	Mandated IRAs	Non-Mandated IRAs	
	Immediate Removal Actions	Limited Removal Actions (LRA)	Release Abatement Measure (RAM)
MCP	<i>A mandatory risk reduction measure that must be taken at all sites which have spill or site conditions requiring notification to MassDEP within 2 or 72 hours. Additionally, an IRA must be conducted any time an imminent hazard is identified, before or after Tier Classification.</i>	<i>A voluntary remedial measure taken to totally clean up small problems, before Tier Classification (1 year of notification).</i>	<i>A voluntary remedial measure taken to totally clean up small problems, or reduce the magnitude of larger problems before or after Tier Classification (1 year of notification).</i>

² In contrast to mandated IRAs must be immediately implemented upon actual knowledge of an imminent risk to human health, the environmental and safety or if yet to be defined release thresholds are exceeded (e.g., Significant Environmental Hazards as defined CGS §22a-6u), Non-mandated IRAs are incentivized optional measures that Responsible Parties may complete before Tier Classification to either close out the release and avoid Tier Classification or potentially lower the classification of the site (and thus potentially associated fees) through completion of risk mitigation / remedial tasks. Subcommittee 4 believes that the actual name for the non-mandated IRA should be commensurate with the yet to be drafted IRA regulations. As conceived herein, non-mandated IRAs may be called Limited Removal Actions (LRAs) if the scale of the tool is actually limited by the regulations (equivalent to as the MCP’s LRA) or it may be called Expediated Removal Action (ERA) if the future regulations provide a means to complete the work quickly (equivalent to the MCP’s Release Abatement Measure or RAM). Note also that the DEEP and the regulation drafting team may also choose to include both options and provide more flexibility.

2. Concepts and Issues considered by the Subcommittee:

The following sections of this Concept Paper address the points and questions included as guidance provided to Subcommittee 4 by DEEP.

2.1. Which releases will be subject to mandatory IRAs?

Mandated IRAs – Reportable releases that exceed a specified quantity of a regulated material or other material risk thresholds for impacts to soil, groundwater and/or surface water of the State.

Mandated IRAs may include those which are:

- At locations that present a material threat to identified sensitive receptors;
- Releases that present an explosive or toxic vapor hazard;
- Releases of product or highly concentrated and/or toxic materials to stormwater collection structures or waterbodies;
- Releases of large volume that have a potential to significantly impact soil and/or groundwater in areas where sensitive receptors are present; or
- Releases that meet criteria consistent with CGS §22a-6u (“Significant Environmental Hazards”), as may be modified.

2.2. Non-mandatory IRAs.

Non-Mandatory IRA – Releases to soil and/or groundwater that do not exceed the mandatory IRA specified quantities or other criteria such that they do not present an immediate material threat to sensitive receptors. To avoid placement in a Tier and achieve closure, these releases must be contained, investigated, and remediated to standard within a certain timeframe. Records of such release(s) must be maintained by the responsible party for a specified period of time and required documentation provided to DEEP. Thus, non-mandatory IRAs could include smaller releases that are not subject to the mandatory IRA process.

Note that historic releases are being considered by another subcommittee but to the extent regulated under this program, those that do not present an immediate threat to sensitive receptors may be eligible for a non-mandatory IRA.

2.3. How will the Responsible Party (“RP”) determine its status and requirements vis a vis IRAs?

RPs, which can include owners, lessees, and operators of real property, equipment, vehicles or vessels, upon learning of a release or potential release from a discrete source that may be impacting soil and/or groundwater are charged with notifying appropriate officials, as detailed

otherwise in applicable regulations, and, to the extent appropriate and necessary, including as directed by regulatory officials, engaging a Qualified Environmental Professional (“QEP”) to assist in making the determination of regulatory requirements. DEEP will retain oversight authority and may, under certain circumstances, dictate response actions.

RPs are responsible for an initial evaluation (“IE”) of the release or potential release to determine if soil and/or groundwater is or may be impacted by the release and if an IRA is required under the regulations. The IE may include the following components as necessary and appropriate:

- Visual, olfactory, actual data or other evidence of a release.
- Identification of the material released to determine if it is petroleum based or contains a hazardous substance under state or federal regulations.
- Sensitive receptors.
- Condition of any secondary containment structures including
 - Permeability of material
 - Structural integrity
 - Tertiary measures such as epoxy coatings (or conditions thereof).
- Volume of release measured if known.
- Total elapsed time associated with active release prior to termination.
- Relevant additional factors that may be present that the QEP believes should be considered.

The RP will use the information contained in the IE to determine its regulatory requirements.

2.4. What will Mandated and Non-mandated IRAs Require?

The IRA Subcommittee developed a general set of requirements for mandated IRAs as well as non-mandated IRAs, which differ only because mandated and non-mandated IRAs are intended to address different situations. Consequently, the aim of mandated IRAs includes accelerated remedial actions to reduce risks and/or mitigate conditions associated with serious and/or time critical releases.

Subcommittee 4 also considered the benefit of non-mandated IRAs that would be available in certain situations to allow responsible parties to quickly remediate minor releases prior to Tier Classification and entry into the release-based remediation program contemplated by PA 20-9 (i.e., a means to keep small problems out of the regulatory system).

Provided below is an outline of the conceptual requirements for both mandated and non-mandated IRAs.

2.4.1. DEEP Notification

DEEP Notification requirements for new or contemporaneous releases are currently included in CGS §22a-450 (and the newly proposed regulations pursuant to CGS §22a-450.) Other PA 20-9 Subcommittees have been tasked with identifying DEEP notification requirements related to ‘newly discovered’ historical releases. Consequently, the IRA Subcommittee assumes that proper DEEP notification of the discovery of a new or contemporaneous release or DEEP notification of a ‘newly discovered’ historical release will have been completed before the IRA process begins.

2.4.1.1 Mandated IRAs

- Immediate oral notification to DEEP for IRAs addressing contemporaneous releases (i.e., emergency spills, etc.); and
- Submission of a written IRA Plan, within a defined, short-time frame following oral notification.

2.4.1.2 Non-Mandated IRAs

- No DEEP notification required if conducted within a defined short period of time of obtaining knowledge of the applicable release / condition
- Immediate DEEP notification required upon knowledge that the extent of the non-mandated IRA remedy exceeds permissible quantities or types of media.

2.4.2. Initial Evaluation (“IE”)

As stipulated in PA 20-9, the new release based program regulations and as a result, mandated and non-mandated IRAs, apply to only releases to the land and waters of the state. Consequently, following immediate actions to stop, control and contain active (contemporaneous) releases, an initial evaluation (“IE”) to: a) determine if the land and waters of the state have been impacted; and b) if a Significant Environmental Hazard condition or other criteria mandating an IRA exists shall be conducted. The IRA subcommittee has assumed that updates to the DEEP’s Site Characterization Guidance Document, or new guidance documents will support the regulations contemplated by PA 20-9.

2.4.3. Situational Response

As contemplated by Subcommittee 4, in addition to immediate measures to stop, control and contain active (contemporaneous) releases, all IRAs will require an IE to determine if one or more remedial actions are required to address releases to the land and waters of the state.

Given that Subcommittee 4 believes that non-mandated IRAs will mostly be limited to small-scale soil impacts from ‘newly discovered’ historical releases, or reportable contemporaneous releases not otherwise required to conduct a mandated IRA, responses

will typically be limited to excavation of impacted soils with off-site disposal or other remedies that could achieve compliance with applicable standards before Tier Classification. Accordingly, non-mandated IRAs would not typically include groundwater remediation, on-site treatment or large-scale soil excavations as these situations usually require significant assessment and/or would be subject to RSR compliance requirements (e.g., groundwater monitoring) that would preclude release closure prior to the tiering deadline.

2.4.4. Reporting

Reports documenting both mandated IRA and non-mandated IRA activities will be required. However, reports prepared in support of mandated IRAs must be submitted to the DEEP. Reports associated with non-mandated IRAs may not require submission to DEEP but must be retained by the RP for a prescribed period of time, if submission is not required. An IRA Closure Form for non-mandated IRAs, to be developed by DEEP, must be filed with DEEP within a specified timeframe following closure. The Subcommittee strongly recommends that the Case Management System currently under development by DEEP include release reporting and follow up submittals and documentation as part of its electronic database available to the public.

2.4.4.1 Mandated IRAs

- IRA Plan (no written plan if IRA is completed within a prescribed time frame);
- IRA Status Reports (no status report required if completion report submitted within a prescribed time frame); and
- IRA Completion Report.

2.4.4.2 Non-Mandated IRAs

- Records documenting the extent of soil impacts, including concentration of compounds of concern, and volume removed from the site;
- Records documenting concentration of compounds of concern remaining at the site following completion of the non-mandated IRA;
- Shipping and disposal records; and
- IRA Closure Form.

2.4.5. Completion and Closure

A mandated IRA shall be considered complete when: a) the work detailed in the written plan has been completed; b) the performance standards included in the regulations contemplated by PA 20-9 have been met; and/or c) site conditions are stable. Note that Subcommittee 4 has assumed that some Mandatory IRAs may not result in release closure. Releases that do not achieve closure will continue into Tier Classification and the phased investigation and remediation program until closure is achieved (or other new early exit options that may be included in future regulations are used to achieve closure). If a mandated IRA achieves completion, but completion does not result in release closure, an

additional non-mandated IRA may be conducted by the RP before the Tier Classification deadline.

In contrast, non-mandated IRAs shall be considered complete when the work allowed by the regulations either meet the performance standards included in the regulations contemplated by PA 20-9 (i.e., closures) within the allowed timeframe or if not, the release will continue into Tier Classification. Note that to the extent of the non-mandated IRA remedy exceeds permissible quantities or types of media, DEEP notification and Tier Classification will be required.

2.5. What are the timelines for IRA requirements and Tiers?

All IRAs should be completed within a maximum of 365 days. At 365 days the release would be Tier Classified if not closed. Note that a different subcommittee has been tasked with evaluating Tier Classification, thus the timeline recommend herein, should consider concepts developed by the other subcommittees.

If the IRA is to address an imminent hazard or potential for significant release migration it shall be completed as quickly as is reasonably practical (hours to days).

2.6. What criteria and methodology will be utilized to determine if an IRA has been satisfactorily completed?

IRAs have two possible completion paths: 1) Release Closure and 2) Release Tier Classification. For an IRA to end in Release Closure, compliance with the numerical criteria contained in the RSRs including preapproved criteria included in the list of Additional Polluting Substances (APS), appropriate to the substance released, shall be attained for the soil and/or groundwater impacted by the release.

An IRA will end in Tier Classification if compliance with the numerical criteria of the RSRs and/or preapproved APS criteria appropriate to the substance released, has not been attained for the soil and/or groundwater impacted by the release.

2.7. What professional support will be required under various circumstances in connection with an IRA?

The following conditions will require the support of an LEP to fulfill obligations:

1. IRAs that are demonstrated to have impacted groundwater or surface water or which present a material threat, either immediate or over time, of impacting groundwater or surface water;
2. IRAs that are demonstrated to impact sensitive receptors or which present a material threat, either immediate or over time, of impacting sensitive receptors; and

3. IRAs that present conditions which under the regulations otherwise require the support of an LEP;

All other IRAs can be supported by QEPs.

QEPs may include, as circumstances dictate:

- LEPs;
- Permitted Spill Contractors;
- Individuals with Certified Hazardous Materials Manager (CHMM), Certified Industrial Hygienist (CIH) certifications or Professional Engineers (PEs) with relevant qualifications; or
- “A or B UST System operators”.

2.8. Non-mandated IRAs and incentives.

The quick and efficient containment, investigation and remediation or mitigation of releases that are not subject to mandatory IRAs under this program will be encouraged by the use of incentives and articulation of a program that is efficient and workable. The benefits of the program should include documentation sufficient to satisfy insurers, financial institutions and other third parties who may become involved with the property. This should include clearly articulated standards and documentation necessary to demonstrate achievement of same. Completion of required actions and closure of a site, before Tier Classification is required, while maintaining these records for a specified period of time would avoid the Tier Classification requirement for spills that are below a specified quantity. For most RPs, avoidance of fees and preparation of plans, milestone reports, and other administrative burdens associated with release closure under the tier system will incentivize closure of releases, when appropriate, prior to the tiering process.

Additional benefits could include access to a low interest loan pool that can accelerate the cleanup process, with loans repaid upon closing or over an established period of time for current owners. However, some on the subcommittee recognize that a loan program for non-mandated IRAs may not be practical given the short periods of time required to do the work before Tier Classification.

The creation of a loan program similar to CT Green Bank’s Commercial Property Assessed Clean Energy (C-PACE), which is an innovative program that lets you pay for green improvements over time through a voluntary benefit assessment on your property tax bill. C-PACE makes it easier for building owners to secure low-interest capital to fund energy improvements and is structured so that energy savings more than offset the benefit assessment.

Conveyance or property tax incentives should also be considered.

2.9. Interaction with SEH program and other state programs.

The IRA Subcommittee assumes that the proposed release-based remediation program will have significant overlap with existing statutes, DEEP regulations, and remediation programs, and that to ensure workability, avoid conflicts and achieve all possible efficiencies, the release-based remediation program and other programs, a “Unified Program” will need to be created and/or existing regulations modified to eliminate duplicative or contradictory requirements.

The existing Significant Environmental Hazard (SEH) statute (CGS §22a-6u) and proposed spill reporting regulations are of particular pertinence to the IRA Subcommittee, given that there will necessarily be a convergence of initial response actions and characterization activities for releases subject to those programs, and such releases may, in fact, be subject to reporting and mitigation under both programs (as currently constructed). Alternatively, part or all of other regulations may ultimately be incorporated into the release-based remediation program to avoid redundancy and provide unified and consistent closure procedures and requirements for both contemporaneous and historic releases, similar in concept to the MCP in Massachusetts.

Another related set of regulations that will require modification to provide for and work efficiently with oversight activities under the proposed release-based remediation program is the Licensed Environmental Professional (LEP) regulations. The IRA Subcommittee envisions that for efficient and expedited release closures to be workable, LEPs will need to be authorized to have primary oversight and closure certification authority for many contemporaneous release clean-ups. The committee also discussed the utility of defining a lower tier of environmental professional qualification under the proposed release-based regulation that could be responsible for certifying closure of certain minor releases.

2.10 Integrated Process.

As conceived by Subcommittee 4, the applicability of IRAs will be based on an evaluation of material threats to human health or the environment, the scale of the impact as well as the circumstances of the release. Accordingly, there are several possible IRA entry points: 1) upon discovery of a new reportable contemporaneous release above criteria to be established; 2) upon discovery of a Significant Environmental Hazard, or 3) identification of a relatively minor contemporaneous or a newly discovered historic release that did not impact groundwater and that can be cleaned-up quickly. Following the determination of applicability, the IRA work will be planned, overseen, and documented by a qualified environmental professional to be defined in the regulation. IRAs that completely address the release such that compliance with the applicable numerical standards can be demonstrated, will be eligible for an “early exit” from the proposed release-based system by means of final closure before Tier Classification (note that early exits would not apply to mandated IRAs implemented to address SEHs discovered after Tier Classification). If closure requirements cannot be met before Tier Classification, the site would be Tier Classified and then proceed through the remaining aspects of the proposed release-based system. Tier Classification should be based on the most recent conditions established prior to the tiering evaluation, rather than initial conditions, to provide an incentive to the RP for initiating non-mandated IRA remediation activities prior to

tiering (if applicable). The possibility of petitioning the Commissioner for an extension to complete the IRA under extraordinary and rare circumstances should be considered.

A flow chart illustrating the IRA concepts and process presented in this paper is provided in Appendix 4.3.

3. Conclusions

The Subcommittee appreciates the opportunity to examine the issues associated with mandatory and non-mandatory IRAs and to make these recommendations for consideration by DEEP. We all feel very strongly that the ability to implement IRAs as part of the proposed release-based system of environmental regulation that could lead to official site closure is long overdue. Additionally, members of the subcommittee also believe that the requirement to implement IRAs as necessary to immediately mitigate imminent hazards anytime they are identified will be well received by the general public. Lastly, unifying existing statutes, DEEP regulations, and remediation programs under the proposed release-based system of environmental regulation will be an improvement to the current system to the benefit of all in the State and will be necessary to efficiently implement the concepts developed by the IRA subcommittee.

4. Appendices

- 4.1. DEEP provided discussion points and questions with responses.
- 4.2. Subcommittees created by Working Group.
- 4.3. Flow charts and spread sheets.
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APPENDICES

Appendix 4.1. DEEP provided discussion points and questions with responses

Immediate Removal Actions Subcommittee

Under the release-based cleanup program, releases may be discovered and reported that must or may be addressed swiftly through recognized mitigation and remediation efforts.

Additional Discussion Points

1. Should releases for which immediate action is required fall into a cleanup tier or exist outside the tiered releases?

Releases should exist outside the tier framework for an established period of time, both for releases for which immediate action is required and for lower priority releases. The pre-tiering timeframe will allow many smaller releases to be addressed and closed before being tiered.

2. For what types of releases should immediate action be an option?

Contemporaneous and newly discovered historical releases that can achieve the benchmarks and standards identified as part of the IRA program. These will typically be those identified as having a predictable improvement based on Immediate Removal Action and or potential for being eliminated from further classification into a tiered reporting system.

What incentives to undertake such action should be provided?

Avoidance of fees and preparation of plans, milestone reports, and other administrative burdens associated with early pre-Tier Classification release closure.

Creation of a loan program similar to CT Green Bank's Commercial Property Assessed Clean Energy (C-PACE) is an innovative program that lets you pay for green improvements over time through a voluntary benefit assessment on your property tax bill. C-PACE makes it easier for building owners to secure low-interest capital to fund energy improvements and is structured so that energy savings more than offset the benefit assessment.

Conveyance or property tax incentive.

Reduced fees from DEEP.

Fastrack qualification from DEEP.

3. Whether there are differences between historical and contemporaneous releases or will characteristics of discovered release control?

The characteristics of the discovered release, i.e. the threat posed to human health and the environment as measured by the criteria to be developed, will control.

4. Must an LEP close an immediate action?

A LEP will not be required to close every immediate removal action. There will be a class of releases that can be closed out by an QEP (qualified environmental professional) and will not require the technical regulatory expertise that an LEP possesses. A thorough review of the types of releases, their migration pathways and subsequent assessments will need further review to delineate the difference between release closure by an LEP or an QEP.

5. What is role of emergency responders/spill contractors?

On site immediate response to oil, chemical, biological, and radiological or hazardous waste spills which pose a potential threat to human health and/or the environment. These incidents are small and large-scale emergencies. To contain and stop the release while simultaneously performing on site assessment of the relative conditions including any nearby receptors; to evaluate the resources needed to clean up the release and dispose of all associated waste generated during the incident; to balance emergency response activities with any and all regulatory considerations; to mitigate additional hazards to public safety and the environment.

These contractors also will, under some circumstances, manage the IRA process as QEPs.

6. What time limit should apply to such an immediate action before a release is placed in a particular tier?

Time limits similar to those used in the MA MCP should apply. This would include:

Notification thresholds: Certain spills/conditions that present a clear and present threat to human health or the environment would require notification within 2 hours of obtaining knowledge; other site conditions which will require LEP or DEEP supervision would require notification within 72 hours of obtaining knowledge; and others that do not require LEP or DEEP supervision would require notification within 120 days of obtaining knowledge. Notifications required within 2 or 72 hours are provided by telephone, with a written follow-up. Notifications required within 120 days of obtaining knowledge of a reporting trigger are provided in writing.

Immediate removal actions to mitigate and identify risks to human health and the environment must be taken immediately for sites that fall into the 2 hour and 72 hour notice categories. Immediate removals actions MAY be taken for the 120 day notice category.

All immediate removal actions must be closed out within 365 days to avoid being placed in a particular tier.

7. Whether an immediate action can be closed if additional monitoring is still required?
- **An immediate action can be considered complete if additional monitoring is required (i.e., the work to mitigate the triggering hazard condition) included in the IRA plan); however, the release can not be closed if additional monitoring is required to demonstrate compliance with applicable criteria.**
8. How will immediate actions and the existing Significant Environmental Hazard program relate?
- **Assumptions:**
 - **We assume that certain releases that pose documented significant risk will require IRAs (e.g., SEHs, etc.) that must be quickly initiated to mitigate the risk, but not necessarily ‘close the spill’ but may result in an early exit from the standard process.**
 - **Upon discovery of a release:**
 - **If the hazard evaluation identifies conditions requiring notice in accordance with the Significant Env. Hazard regulations (or a yet to be written notification reregulation), mitigation measures shall be conducted (within some timeframe) to abate the immediate hazard(s).**
 - **Historical Releases**
 - **Immediate removal action can be triggered for an historical release if SEH condition is identified.**
 - **Risk factors articulated in SEH program would be a required immediate removal action for a property that has historic gross contamination.**
 - **SEHs that are discovered must be reported within two hours and have an IRA. If necessary, they should be tier-classified. However, there are provisions in the SEH regulation that if you clean up the site in a certain timeframe, you don’t have to report it.**
 - **Interaction between IRAs and the SEH regulations will likely be driven by the circumstances at the site (volume and substance involved, impacts to groundwater or surface water, etc.).**
 - **Releases that present a vapor intrusion hazard, impacts to drinking water, or otherwise trigger a significant environmental hazard action should trigger an IRA.**

9. When immediate action is needed and required, what name should be used for such action? Should there be two names: one for immediate action that is required; and another for immediate action undertaken voluntarily?

- **Required / Mandatory actions to address ongoing releases (that meet certain criteria) and high risk situation should be called Immediate Removal Actions.**
- **Voluntary actions for small releases to either: eliminate the need to report and which are completed before the reporting deadline in accordance with limits to be included in the new regulations should be called Non-Mandated Immediate Removal Actions. However, the actual name for the non-mandated IRA should be commensurate with the yet to be drafted IRA regulations (e.g., Limited or Expedited Removal Action, etc.).**

10. Discuss the conceptual framework for which releases require immediate action and examine how to incentivize swift yet comprehensive/protective action for other releases.

This conceptual framework is discussed in the Report to the Working Group submitted on June 11, 2021.

Appendix 4.2. Subcommittees created by Working Group

Release-Based Cleanup Program Topical Subcommittees

The Release-based Working Group has established five topical subcommittees to make concept recommendations related to the regulations.

Release-Based Cleanup Program Topical Subcommittee Meetings

The subcommittees will proceed in at least two phases, with the first five subcommittees convening in the first phase. Concepts developed in the first phase will guide discussion in subsequent phases. For example, a discussion of how releases may be divided into tiers will help identify the necessary adjustments to clean-up standards for lower-risk tiers. The first phase of subcommittee topics are:

1. Discovery of Historical Releases

This subcommittee should discuss the following:

- Based on the definition of “release” in Public Act 20-9, what constitutes a historical release? Does the presence of non-naturally occurring pollutants in the environment indicate that a release has occurred?
- When is a historical release discovered?
- How should discovery of an historical release by parties other than an owner of property be addressed, including lessees, municipalities, and other interested parties? What role will LEPs play, if any?
- How does Public Act 20-9 apply, if at all, when a release is discovered by a potential purchaser of property or similar person that did not create, or is not maintaining, the release? What if that same party subsequently purchases the property?
- What if the release involves an imminent/substantial risk to public health or the environment?
- In addition to who, what information is necessary to conclude that a release occurred? Is seeing a sheen on water enough? What about an oral report of disposal activity by a lay person?
- What if analytical results point in different directions, for example, one results shows an exceedance while multiple other results don't?

This subcommittee should evaluate what constitutes “discovery” of a release for purposes of Public Act 20-9. This includes the various ways in which a release may be “discovered” and how, or whether, the obligations of Public Act 20-9 are triggered by such discovery.

2. Reporting Newly-Discovered Historical Releases

This subcommittee should discuss the following:

- What is the threshold for requiring reporting of a historical release? Is this threshold quantitative, qualitative, or both?

- Within what time frame after discovery should a report be required?
- Should reporting exceptions for certain historical releases be created if timely remediation occurs? If so, what situations would qualify and what would constitute timely remediation?
- Is it necessary to address, beyond the detail provided in the statute, releases on Transfer Act or brownfield sites?
- If reporting is required, what information should be reported?
- How will that report be accessible to the public?
- If releases do not require reporting, will there be a mechanism for the public or others to become aware that a release occurred?

This subcommittee shall discuss when an historical release must be reported, what information should be reported and how that information will be accessible to the public.

3. Characterization of a Discovered Release

This subcommittee should discuss the following:

- Should the regulations prescribe a method or methods that must be used to characterize the nature and extent of such release and its impact upon human health and the environment before undertaking clean-up?
- Should there be a process for approving a method of characterization selected by a licensed environmental professional, including standards to validate such a method?
- Should the regulations specify a process for identifying prevailing standards and guidelines to be used to characterize the nature and extent of such release?

This subcommittee shall evaluate a conceptual framework for release characterization, including the relationship to any action taken before characterization and the extent to which prescribing a method or methods within the regulation could affect the use of newer or novel forms of characterization. In addition, the subcommittee should consider whether different characterization methods or standards are necessary depending whether an urgent removal action has been performed, as well as the time that has passed since a release has occurred. While DEEP's current site characterization guidance document should inform the work of this subgroup, any methods or standards identified should be limited to characterization of a single release.

4. Immediate Removal Actions

Under the release-based cleanup program, releases may be discovered and reported that must or may be addressed swiftly through recognized mitigation and remediation efforts. Such subcommittee shall discuss the following:

- For what types of releases should immediate action be required?
- Should releases for which immediate action is required fall into a cleanup tier or exist outside the tiered releases?
- For what types of releases should immediate action be an option? What incentives to undertake such action should be provided?

- Whether there are differences between historical and contemporaneous releases or will characteristics of discovered release control?
- Must an LEP close an immediate action?
- What is role of emergency responders/spill contractors?
- What time limit should apply to such a cleanup before it is placed in a particular tier?
- Whether Immediate Removal Action can be closed if additional monitoring is still required?
- When immediate action is needed and required, what name should be used for such action? Should there be two names: one for immediate action that is required; and another for immediate action undertaken voluntarily?
- How will immediate actions and the existing Significant Environmental Hazard program relate?

This subcommittee shall evaluate which releases require an Immediate Removal Action and examine how to incentivize swift yet comprehensive/protective action for other releases.

5. Tiers

This subcommittee should discuss the following:

- After a release has been characterized, if an Immediate Removal Action has not fully remediated a release, such release will be placed into a tier.
- Placement into a tier should include consideration of who will supervise a clean-up (i.e., trained employee, spill contractor, LEP, or the Commissioner), the factors that will impact the applicable tier of any release, such as risks to public health and the environment, impact to groundwater and other natural resources, and degree of removal of pollution, the demonstration that remediation of that release has been complete (closure document, verification, another endpoint), the timeframe to complete clean-up and how timing impacts a tier.
- Will placement in certain tiers require clean-ups to be completed more quickly?

The subcommittee shall evaluate what factors should be used to determine into which tier a release should be placed and whether different factors need to be identified for releases discovered when they occur or later.

After the first phase of subcommittee, subsequent phases of subcommittee topics may include the following topics:

6. Modification of Clean-up Standards for Lower-Risk Tiers

Clean-up standards adopted pursuant to Public Act 20-9 will be based on the current Remediation Standards Regulations (RSRs). Certain modifications to the RSRs may be necessary, particularly additional endpoints for releases remediated at or near the time they occur. This subcommittee should discuss the following:

- Which remedies should be available without approval of the Commissioner, which remedies will continue to require the Commissioner's approval, which new remedies should be available for certain tiers, and which may require adjustment based on the tiers of releases identified?
- Other adjustments aimed at better aligning clean-up standards with the requirements of release-based cleanup may also be considered.

This subcommittee shall evaluate how clean-up standards can best align with Public Act 20-9 and the tiers or releases developed.

7. LEP-implemented, Risk-Based Alternate Cleanup Standards

The release-based program will require DEEP to focus its resources on releases that pose the greatest risk to human health and the environment. LEPs familiar with the site may be best suited to justify using alternative standards and the release-based regulations will need to accommodate additional methods and scenarios for use of alternate standards. This subcommittee should discuss the following:

- How do the statutory factors (site use, exposure assumptions, geologic and hydrogeologic conditions and physical and chemical properties of each substance that comprise a release) control applicability of risk-based approach?
- Should there be threshold factors (i.e., site conditions, proximity to receptors, depth to groundwater, soil type) that will permit or exclude use of certain calculated alternative standards?
- Which inputs for calculating alternative standards can be modified, using what information, and in what instances?
- What are contaminant thresholds that cannot be exceeded (ceiling values)?
- Will alternative standards be allowed for all contaminants, are any off-limits (PCBs, PFAS and other emerging contaminants)?
- Are there instances where LEPs cannot independently implement such alternatives? Is this specialized group with particular qualifications?
- What are scenarios and thresholds where alternate cleanup levels can be developed as part of site closure? Are any contaminants off limits (e.g., PCBs, emergent contaminants)?

This subcommittee shall evaluate under what circumstances, and with what justification, LEP-implemented alternative criteria can be used.

8. Clean-up Completion Documentation, Verifications, and Audit Frequency and Timeframes

This subcommittee should discuss the following.

- What is needed to demonstrate that the obligations under Public Act 20-9 have been discharged?
- What documents are necessary to demonstrate such compliance?

- When is verification by an LEP needed? If verification is not needed, who can determine that the clean-up meets the requirements of Public Act 20-9?
- What information must be maintained to demonstrate that a release has been remediated, including any environmental use restriction?
- Does this requirement to maintain records extend to: 1) remediation of releases that do not have to be reported; or 2) releases for which a verification is not required?
- Are the information requirements different for different types of releases?
- How long must records demonstrating compliance be maintained?
- How will such information be publicly accessible – by providing to DEEP or by being maintained in a publicly accessible database?
- How should the auditing of verification (screening versus thorough review) be calibrated to the different types of release?
- What oversight will be exercised for releases not subject to reporting or for remediation if a verification is not required?

This subcommittee shall evaluate the types of documents and records that must be used and maintained to demonstrate compliance with Public Act 20-9, including the Commissioner's review and audit of such documents and records.

Subcommittees will operate in the following manner:

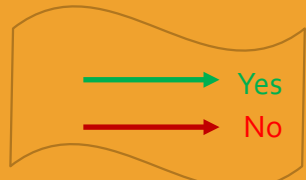
- Subcommittees will be comprised of Working Group members and members of the public.
- Subcommittee meetings will be open to the public.
- DEEP and DECD will provide a written charge, detailing the issues on which advice should be provided for each topic.
- Each subcommittee will consider those issues identified in its charge and, over the course of a number of meetings, prepare a paper offering conceptual direction on each issue for inclusion in a concept paper to be issued by the working group. Subcommittees may prepare more than one concept paper in the event that there are multiple perspectives on how issues identified in the charge should be addressed.
- The concept papers will be presented to the Working Group and individual members of the Working Group may respond to such concept papers.
- After discussion of such concept papers, the Working Group will assemble and issue such concept papers for public feedback.
- The public will be asked to provide comments on such concept papers.

Appendix 4.3. Flow charts and spread sheets.

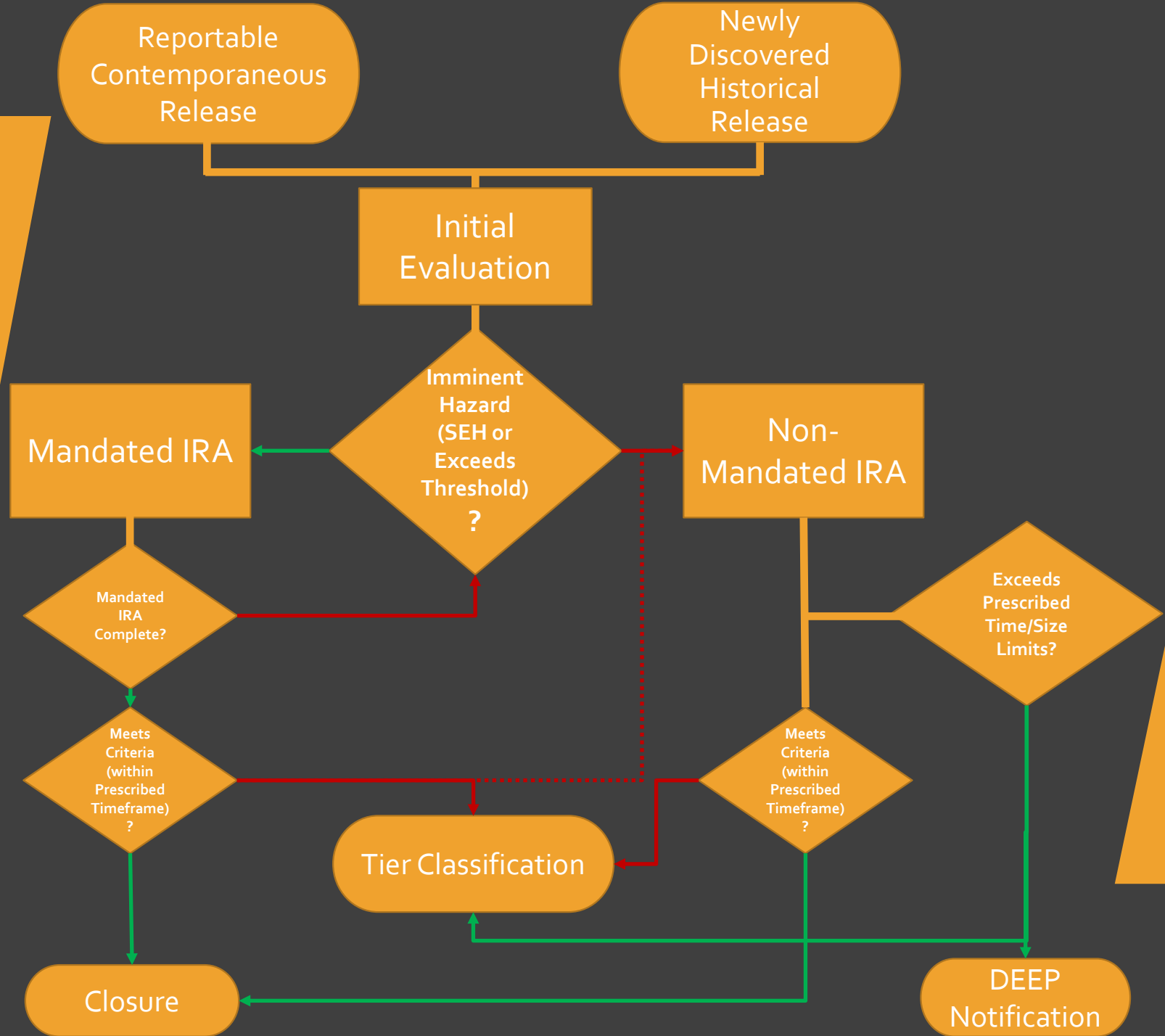
PA 20-9 Concept Paper

Immediate Removal Actions Conducted Before Tier Classification

Integrated Process



Dashed = Optional

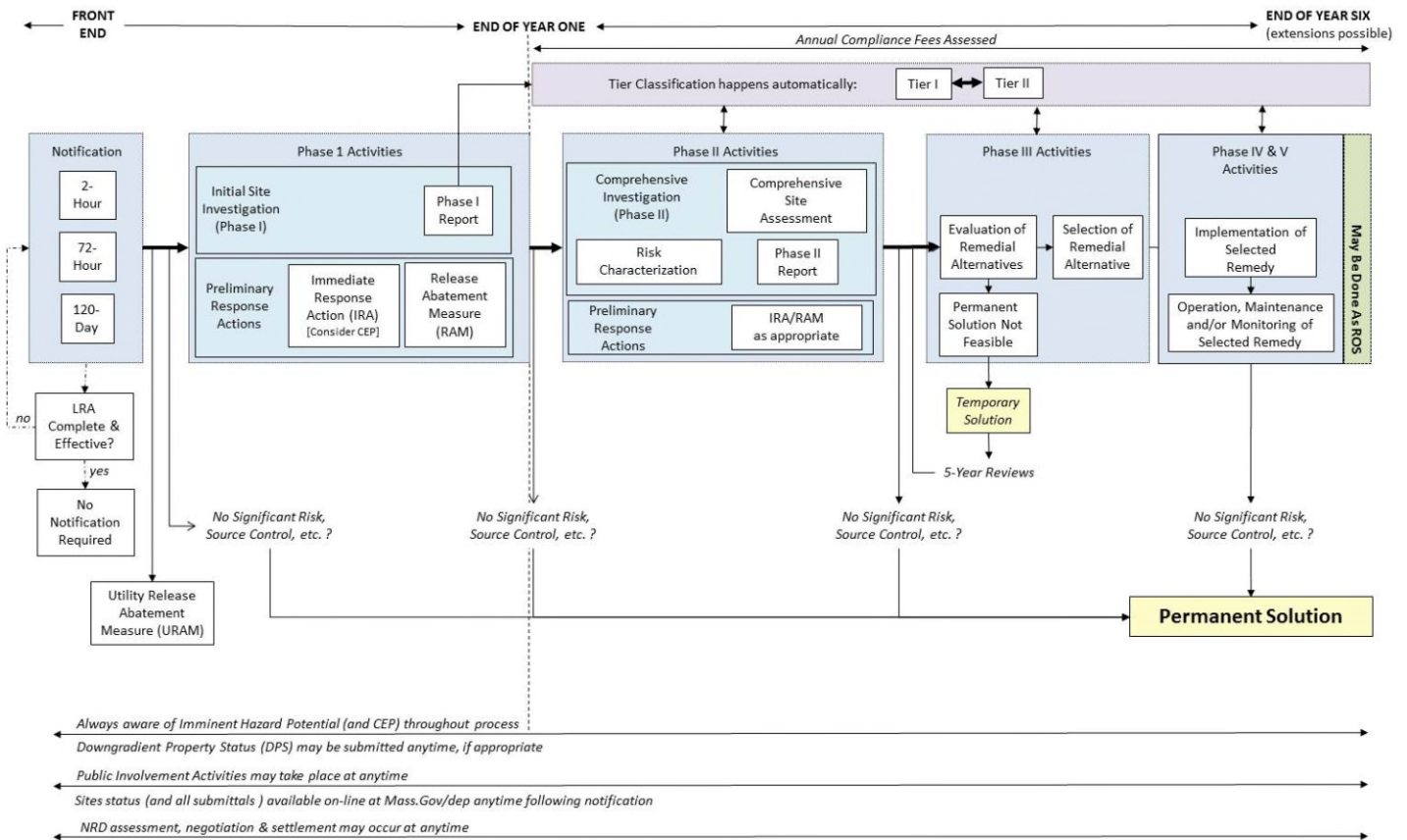


Type of Release Mechanism			Emergency Response? NER = No Emergency Response ERP = Emergency Response Potential (Based upon ...) ER = Emergency response required	Probability for Equified Remedial Action	SEH Required (Significant Environmental Hazard)	DEEP ERU Close (Emergency Response Unit)	TEP Close (Technical Environmental Professional)	DEEP Remediation Division Close	LEP Close (Licensed Environmental Professional)	For what types of releases should immediate action be required? (Expedited Remedial Action)	Should releases for which immediate action is required fall into a cleanup tier or exist outside the tiered releases? (TIER 0?)	For what types of releases should immediate action be an option?
Release Mechanism	Release type	Water impacted?										
Equipment Failure	Hose		ER	1_HIGH	3_LOW	1_HIGH	1_HIGH	1_HIGH	3_LOW	3_LOW	0	Yes
Interior substance release	No impact to the soil		ERP/Volume/Substance/Location	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Interior substance release	No impact to the drinking water		ERP/Volume/Substance/Location	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Interior substance release	No impact to the surface water		ERP/Volume/Substance/Location	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Interior substance release	No impact to the catch basin		ERP/Volume/Substance/Location	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Transportation	Saddle tank		ER	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Transportation	Gasoline tank		ER	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Transportation	Bulk transport		ER	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Transportation	Load / Shipping containers		ERP/Volume/Substance/Location	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Biomedical			ER	1_HIGH	3_LOW	1_HIGH	1_HIGH	3_LOW	3_LOW	3_LOW	0	Yes
Illegal Dumping	Container tip		ERP/Volume/Substance/Location	1_HIGH	3_LOW	1_HIGH	1_HIGH	2_MEDIUM	3_LOW	3_LOW	0	Yes
Equipment Failure	Overflow		ER	1_HIGH	2_MEDIUM	1_HIGH	1_HIGH	2_MEDIUM	3_LOW	3_LOW	0	Yes
Historic Contamination	Polluted fill		NER	1_HIGH	3_LOW	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH	0	Yes
Chemical / Other	Chemical		ER	1_HIGH	3_LOW	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH	0	Yes
Transformer / PCB			ERP/Volume/Substance/Location	1_HIGH	3_LOW	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH	0	Yes
Non RCRA Permit Discharge / Exceedance			NER	1_HIGH	2_MEDIUM	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH	0	Yes
Non-RCRA Permit Discharge / Exceedance (Water)		(Water)	NER	1_HIGH	2_MEDIUM	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH	0	Yes
Historic Contamination	Never remediated		NER	2_MEDIUM	3_LOW	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH		Potentially
Historic Contamination	Previously remediated		NER	2_MEDIUM	3_LOW	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH		Potentially
Transformer / PCB (Water)		(Water)	ER	2_MEDIUM	2_MEDIUM	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH		Potentially
Transportation (Water)	Saddle tank	(Water)	ER	2_MEDIUM	3_LOW	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		Potentially
Equipment Failure (Water)	Overflow	(Water)	ER	2_MEDIUM	3_LOW	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		Potentially
Chemical / Other (Water)	Chemical	(Water)	ER	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		Potentially
AST (Aboveground storage tank)	Unregulated tank		ERP/Volume/Substance/Location	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	3_LOW	1_HIGH	1_HIGH		Potentially
AST (Aboveground storage tank) (Water)	Unregulated tank	(Water)	ERP/Volume/Substance/Location	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	3_LOW	1_HIGH	1_HIGH		Potentially
UST (Underground storage tank)	Regulated tank		ERP/Volume/Substance/Location	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		Potentially
UST (Underground storage tank)	Unregulated tank		ERP/Volume/Substance/Location	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		Potentially
UST (Underground storage tank) (Water)	Regulated tank	(Water)	ERP/Volume/Substance/Location	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		Potentially
UST (Underground storage tank) (Water)	Unregulated tank	(Water)	ERP/Volume/Substance/Location	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		Potentially
Transportation (Water)	Bulk transport	(Water)	ER	3_LOW	2_MEDIUM	1_HIGH	3_LOW	3_LOW	1_HIGH	1_HIGH		No
RCRA Permit Discharge / Exceedance			NER	3_LOW	3_LOW	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH		No
Transportation (Water)	Load / shipping containers	(Water)	ER	3_LOW	2_MEDIUM	3_LOW	3_LOW	3_LOW	1_HIGH	1_HIGH		No
Historic Contamination (Water)	Never remediated	(Water)	ER	3_LOW	2_MEDIUM	3_LOW	3_LOW	2_MEDIUM	1_HIGH	1_HIGH		No
Historic Contamination (Water)	Previously remediated	(Water)	ER	3_LOW	3_LOW	3_LOW	3_LOW	2_MEDIUM	1_HIGH	1_HIGH		No
Historic Contamination (Water)	Polluted fill	(Water)	ER	3_LOW	3_LOW	3_LOW	3_LOW	2_MEDIUM	1_HIGH	1_HIGH		No
RCRA Permit Discharge / Exceedance (Water)		(Water)	ER	3_LOW	2_MEDIUM	3_LOW	3_LOW	1_HIGH	1_HIGH	1_HIGH		No
Transportation (Water)	Gasoline tank	(Water)	ER	3_LOW	2_MEDIUM	3_LOW	3_LOW	3_LOW	1_HIGH	1_HIGH		No
Illegal Dumping (Water)	Container tip	(Water)	ER	3_LOW	2_MEDIUM	2_MEDIUM	3_LOW	3_LOW	1_HIGH	1_HIGH		No
Equipment Failure (Water)	Hose	(Water)	ER	3_LOW	2_MEDIUM	2_MEDIUM	2_MEDIUM	2_MEDIUM	1_HIGH	1_HIGH		No
Historic Contamination	Phase I, II or III performed (Investigation)		ER	3_LOW	2_MEDIUM	3_LOW	3_LOW	2_MEDIUM	1_HIGH	1_HIGH		No
Historic Contamination (Water)	Phase I, II or III performed (Investigation)	(Water)	ER	3_LOW	2_MEDIUM	3_LOW	3_LOW	2_MEDIUM	1_HIGH	1_HIGH		No

What incentives to undertake such action should be provided? (NFA Letter)	Whether there are differences between historical and contemporaneous releases or will characteristics of discovered release control?	Must an LEP close an immediate action (Expedited Remedial Action)?	What is role of emergency responders/SPH contractors? (To remove IDLH conditions? Protect public health and the environment? Response and remediation?)	What time limit should apply to such a cleanup before it is placed in a particular tier? (Until proper characterization is performed?)	Whether Immediate Removal Action can be closed if additional monitoring is still required? (Expedited Remedial Action)	When immediate action is needed and required, what name should be used for such action? Should there be two names: one for immediate action that is required; and another for immediate action undertaken voluntarily? Expedited/Substantial/Comprehensive	How will immediate actions and the existing Significant Environmental Hazard program relate?	Applicable Statute										
								MEDIA	SPILL	SEH	UST	RCRA	VOL	VOL	PCB			
NFA Letter	No	No		g	Yes	Expedited Remedial Action	No Interaction											
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	CM	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	CM	22a-451									
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	CM	22a-451									
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	CM	22a-451									
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	Recovered Volume Dependent	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	No Interaction	S	22a-451	22a-6u			22a-133x	22a-133y				
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	Volume and Substance Dependent	S	22a-451	22a-6u								
NFA Letter	No	No		2-hour Response/2-week Remedy (w/o extension)	Yes	Expedited Remedial Action	Volume and Substance Dependent	S	22a-451	22a-6u								
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Dependent on impact to water (GW, SW)	S	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	No interaction	W	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			22a-463-467
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-449 (d)(h)	22a-133x	22a-133y			
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Potentially	Potentially		2-hour Response/90-day Remedy or w/extension)	Initial Monitoring Event during 90-day Remedy	Substantial Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-449 (d)(h)	22a-133x	22a-133y			
Yes	Yes	Yes		2-hour Response	Yes	Expedited Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Yes	Yes		No Emergency Response	Not Applicable	Comprehensive Remedial Action	If Surface Water or Well Water Threatened	W	22a-451	22a-6u			22a-449 (c)(h)					
Yes	Yes	Yes		2-hour Response	Yes	Expedited Remedial Action	If Surface Water or Well Water Threatened	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Yes	Yes		No Emergency Response	Not Applicable	Comprehensive Remedial Action	If Surface Water or Well Water Threatened	W	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			
Yes	Yes	Yes		No Emergency Response	Not Applicable	Comprehensive Remedial Action	If Surface Water or Well Water Threatened	W	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			
Yes	Yes	Yes		No Emergency Response	Not Applicable	Comprehensive Remedial Action	If Surface Water or Well Water Threatened	W	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			
Yes	Yes	Yes		2-hour Response	Yes	Expedited Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Yes	Yes		2-hour Response	Yes	Expedited Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Yes	Yes		2-hour Response	Yes	Expedited Remedial Action	Volume and Substance Dependent	W	22a-451	22a-6u			22a-133x	22a-133y				
Yes	Yes	Yes		No Emergency Response	Not Applicable	Comprehensive Remedial Action	Environmental Media Concentration Dependent	W	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			
Yes	Yes	Yes		No Emergency Response	Not Applicable	Comprehensive Remedial Action	Environmental Media Concentration Dependent	W	22a-451	22a-6u			22a-449 (c)(h)	22a-133x	22a-133y			

Appendix 4.4. Massachusetts Contingency Plan – Process Flow Chart

Streamlined MCP Process: Notification-to-Closure



Appendix 4.5

Proposal regarding resolution of releases not subject to PA 20-9

A small subset of the IRA Committee met to consider releases that are not subject to the release based program created by PA 20-9 (i.e. do not impact soil and or waters of the state) and how such releases should be regulated. Often these releases are regulated under other programs such as those which address releases of PCBs or from Underground Storage Tanks. The proposal contained herein is not intended to replace or conflict with existing programmatic requirements.

Critical definitions which should be consistent with, ideally by referencing, relevant statutes and regulations, such as the proposed release reporting regulations, to the extent available:

Release
Environmental Media
Qualified Environmental Professional
Responsible Party
Initial Evaluation Report
Response Action
Contained

Introduction:

Current active releases are often/usually now addressed by Licensed Spill Contractors or other non LEP professionals who utilize the SCGD, UST regs and other standards as appropriate. There is nothing akin to a programmatic LEP verification that occurs. There is no stated endpoint that a property owner/responsible party can utilize to demonstrate to a third party that the measures taken to address the release are satisfactory to the state which is problematic.

Our primary goal is to be protective of human health and the environment. A secondary goal is to be conservative with resources both in the private and public sectors. Thus we would prefer to avoid recommending that DEEP review and sign off on these response actions, which by definition (they do not impact the environment), should present lowest risk. As a corollary, we don't want to require property owners/responsible parties to undertake actions, i.e. mini verifications, that are unnecessary and potentially quite expensive.

Concept:

1. Upon the discovery of a release that on its face does not appear to be impacting environmental media, the RP should be required to evaluate the release using appropriate criteria to verify that the releases has not reached environmental media, the ("Initial Evaluation" or "IE"). If so required by regulation the RP must also report the release. To the extent the release is regulated under existing programs, i.e. UST regulations, it should remain regulated by the existing program and not be subject to any additional regulations.
2. The IE must be performed and signed off on by a Qualified Environmental Professional ("QEP") which will include, but may not be limited to, LEPs, Permitted Spill Contractors

and PEs with relevant qualifications. Under some circumstances the QEP may rely on the opinion of an industrial hygienist.

3. The IE will, depending on circumstances, include an evaluation of the following as information is available:
 - a. Condition of any secondary containment structures or other surficial cover materials that may inhibit contaminant migration including
 - i. Porosity of material
 - ii. Structural integrity
 - iii. Tertiary measures such as epoxy coatings.
 - b. Volume of spill.
 - c. Total elapsed time associated with active spill prior to termination of spill.
 - d. Total elapsed time associated with response actions taken to address spill.
 - e. Relevant additional factors that may be present that the QEP believes should be taken into account.
 - f. Any involvement of other professionals and relevant governmental officials including observation, reporting, direction, or use of equipment.
4. The QEP will produce an IE report using a DEEP form that will conclude with an opinion regarding whether there was a release to soil or waters of the State and whether further action is required:
 - a. All releases to environmental media (i.e. not contained) will require further action and regulation under 20-9.
 - b. Releases that were in fact contained and have been successfully responded to will result in the IE being filed with DEEP if a spill report is required.
 - c. Releases contained but that require further action will result in the IE being filed with a notice that further action is required.
5. If the IE report filed with DEEP concludes **there is no release to the environment**, within twenty (20) days of receipt DEEP can review the IE and determine if it requires additional time to evaluate the information contained therein, in that instance DEEP will inform the RP and then, within 120 days provide further direction or notice that the incident is deemed closed as no further action is required (with standard reopeners.) If within the initial twenty (20) days DEEP does not provide notice it will conduct further evaluation then the incident will be deemed closed at that time. Notice of the incident status (under evaluation, closed, further action required) will be posted on the case management system promptly and third parties can request materials from DEEP.