DTE

EMERGENCY ACTION PLAN
INACTIVE BOTTOM ASH BASIN

MONROE POWER PLANT

Monroe, Michigan

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October 2024

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1. NOTIFICATION PROCEDURES

The Communication Action Flowchart for the *Inactive Bottom Ash Basin* (Inactive BAB) is included as **Figure A** and is functionally the same as used for the Emergency Action Plan (EAP) for the Fly Ash Basin Facility. The alternate contacts and alternate communication methods are provided in **Table A**.

This flowchart outlines the communication procedures between DTE Electric Company (DTE) personnel, Monroe County Emergency Management Division (MCEMD), the public, and news media, as necessary. DTE and the MCEMD will coordinate press releases/conferences to the public. The most current version of this flowchart (**Figure A**) shall be provided to those people that have responsibilities as soon as the individuals are identified. Further details of the responsibilities of each individual within the EAP are presented in **Section 5**.

DTE plans to follow National Incident Management System (NIMS) Incident Command System (ICS) protocols for an emergency response. The roles assumed by DTE personnel within the Incident Command Team and the responsibilities of those roles are presented in **Section 6**. The communication flowchart within the Incident Command Team is included as **Figure B** and is functionally the same as used for the EAP for the Fly Ash Basin Facility.

It is the responsibility of the individuals and entities in these flowcharts to have the flowcharts easily accessible and understand their responsibilities in the event of an emergency.

2. STATEMENT OF PURPOSE

The purpose of this EAP for the Inactive BAB is to serve as a resource by defining emergency response steps and actions for an event of catastrophic perimeter embankment failure resulting in the sudden, rapid, and uncontrolled release to the environment of impounded coal combustion residuals (CCRs).

The primary goal of this EAP is to safeguard the lives of DTE personnel and the public and reduce the potential for damage to public resources and private property by mitigating potential or ongoing failure impacts around the perimeter of the Inactive BAB. The EAP has been prepared to be consistent with 40 Code of Federal Regulations (CFR) Part 257 (the "CCR Rule") paragraph 73(a)(3). **Exhibit 1** contains the Emergency Action Plan Certification with the CCR Rule.

This EAP defines the notification and communication procedures and responsibilities of key personnel and provides procedures to identify adverse conditions for the stability of the Inactive BAB perimeter embankment in time to take mitigative and corrective actions and to notify the MCEMD of impending, or actual failure of the Inactive BAB perimeter embankment.

The potential failure mechanism will most likely be a lakeside breach of the perimeter embankment on the east side of the Inactive BAB. **Figure C** illustrates the aerial view of the Inactive BAB and general vicinity. A lakeside breach would cause a limited release of CCRs because the height of the perimeter embankment is not large and the difference between the normal pool of water within the Inactive BAB is less than approximately five feet above the surface elevation of Lake Erie. Any CCR release in this area would have low energy and is expected to be subaqueous (occurring underwater). No interference with navigation is expected from a release of CCRs. No humans are expected to be injured.

To provide a consistent approach to implementation of this EAP, the same response structure has been established as with the EAP for the Fly Ash Basin Facility.

3. PROJECT DESCRIPTION

The Inactive BAB consists of a perimeter embankment constructed on the natural ground surface using primarily rock fill and earth spoils generated during construction of the Monroe Power Plant (Plant or MPP) in the 1970s. The perimeter embankment is primarily used for containment of water formerly used for settling of CCRs. The perimeter embankment has rip rap armor for shoreline erosion protection. The Inactive BAB is classified as a significant hazard potential CCR surface impoundment because there are environmental concerns with the worst-case probable failure scenario but no expected loss of human life (**Exhibits 2** and **3**).

The surface features surrounding the Inactive BAB are:

East: Lake Erie

South: Process Wastewater and Stormwater Basin

West: Plant discharge channel

North: Previously disposed CCR

The surface area of the Inactive BAB is approximately 104 acres. A plan of the Inactive BAB is shown on **Figure C**.

The spillway for the Inactive BAB is a steel sheet pile weir wall with an overflow elevation of 575 ft[1] and is located along the southwest portion of the perimeter embankment.

A road along the top of the perimeter embankment has a minimum width of approximately 12 feet. It is 20 feet or wider along the eastern side abutting Lake Erie because it was constructed with additional rock armament for shoreline protection.

There is a divider berm of crushed rock along the southern boundary of the Inactive BAB to separate the Inactive BAB from the Process Wastewater and Stormwater Basin to the south. There are two culvert pipes through the divider berm to equalize water levels within the Inactive BAB and the Process Wastewater and Stormwater Basin (AECOM, 2017). There is also a designed low elevation area on the eastern end of the divider berm to allow overflow from the Inactive BAB into the Process Wastewater and Stormwater Basin and vice versa.

[1] Elevations reported in this EAP are in the National Geodetic Vertical Datum of 1929 (NGVD29).

The elevation of the bottom of the Inactive BAB, which is natural ground, is approximately 570 to 571 ft along the eastern, southern, and southwestern portions of the perimeter embankment. The lowest point for the bottom of the Inactive BAB is located along the western perimeter embankment with a ground elevation of 558 ft. When the Inactive BAB was active, the CCR was disposed from sluice pipes in the northern area; therefore, the top elevation of CCR within the Inactive BAB slopes downward from the north to the south.

The top elevation of the perimeter embankment is approximately 578 ft. The normal pool elevation within the Inactive BAB is 575 ft with a maximum flood pool elevation of 577 ft (AECOM, 2018). The long-term average elevation of Lake Erie is 571.9 ft (U.S. Army Corps of Engineers, 2018).

4. EMERGENCY DETECTION, EVALUATION AND CLASSIFICATION

4.1 Detection

DTE has two ongoing monitoring programs in place to detect conditions that may create a potential failure of the perimeter embankment for the Inactive BAB. For this EAP, an "embankment failure" is defined as a catastrophic failure characterized by sudden, rapid, and uncontrolled release of impounded water with CCR. This definition is consistent with the definition from the Federal Emergency Management Agency (FEMA, 2013). The two ongoing monitoring programs are: (i) weekly monitoring; and (ii) an annual inspection. The purpose of these two monitoring programs is different, and they are explained below.

Weekly Monitoring of the Inactive BAB Perimeter Embankment

The Inactive BAB is inspected by Environmental Management & Safety employees every week of the year in accordance with the federal CCR Rule paragraph 83(a)(ii). The inspector is a "qualified person" under the CCR Rule.

Observations are recorded weekly, and deficiencies are reported to the Shift Supervisor. The list of items inspected weekly is provided on the CCR Basin Inspection Form (**Exhibit 4**) and additionally in the NPDES – Operator Day Shift Log.

The purpose of weekly monitoring is to: (i) ensure that the Inactive BAB operates in accordance with its operational guidelines; and (ii) point out items that may require maintenance, further investigation, or monitoring.

Annual Inspection Program

The Inactive BAB is inspected annually by a qualified professional engineer in accordance with the federal CCR Rule paragraph 83(b). The annual inspection is performed by a third-party consultant to DTE that is licensed as a professional engineer in the State of Michigan.

4.2 Evaluation and Classification

Adverse conditions observed during inspections are classified as either: (i) Failure Condition; or (ii) Potentially Imminent Failure Condition.

- Failure Condition – Covers scenarios where the embankment failure has occurred or is actively occurring (**Figure D**).
- Potentially Imminent Failure Condition – Covers the scenario where the perimeter embankment is eroding due to active wave action (**Figure E**).

5. GENERAL RESPONSIBILITIES UNDER THE EMERGENCY ACTION PLAN

In the event of an emergency condition, it is imperative to follow the prioritized communication paths outlined in the flowchart in **Figure A.** Following this flowchart will provide effective implementation of the EAP, avoid possible omissions from notification, and provide a coordinated response to an emergency condition.

The following outlines the general responsibilities of the key DTE personnel to respond to an emergency condition at the Inactive BAB. The contact information for people in the EAP and their alternates are summarized in **Table A**.

It is imperative that every contact identified in the EAP becomes familiar with the content of this EAP and their role and responsibilities and those of others. To promote effectiveness of the EAP and remind the participants of their roles and responsibilities, training exercises are performed annually. More information on training exercises is provided in Section 7.14.

5.1 Emergency Action Plan Team

The EAP team is the core group of DTE personnel and their contractors who would respond to an emergency condition at the Inactive BAB. The communication flowchart for the EAP team is outlined in **Figure A** and contact information (including alternates) is presented in **Table A**. General roles and responsibilities for the EAP team are described below. It is expected that the roles of some of the team will require a "deputy" or an "alternate" to continue to fulfill the responsibilities in the event the primary person is not available or being provided a break.

Should an emergency condition arise, the Shift Supervisor (SS) and the Plant Director will initiate the NIMS ICS protocols and notify key members of the EAP team who will also serve as members of the incident command staff. The roles of the EAP team within the ICS and the responsibilities of those roles are presented in **Section 6**. The roles below are within the structure of the EAP team.

5.1.1 Observer of the Emergency Condition

An Observer is anyone who notices an emergency condition or the potential for an emergency condition. An Observer must immediately inform the Shift Supervisor (SS) about the emergency condition, then continue to observe the emergency condition from a safe distance and report to the SS until instructed to stop by the SS.

5.1.2 Shift Supervisor (SS)

The SS is responsible for: (1) assessing conditions to determine whether a failure has occurred or is imminent, and (2) initiating emergency communication procedures with the EAP Coordinator and the MCEMD.

The decision by the SS whether to call 911 should be made jointly with the Plant Director based on the severity of the situation. The severity of the situation will depend on several factors such as when the incident has occurred, when it is identified, and when the initial action items are taken. The action will be determined with guidance from **Section 4.2**.

In the event of a failure or imminent failure, the SS will notify the 911 Emergency Call and National Response Center and MCEMD Director. The 911 operator and MCEMD Director will have knowledge of this EAP and will immediately notify the designated responders. When contacting 911 and the MCEMD Director, the following pre-scripted message must be used, but may be modified by the SS based on observed conditions:

> *"This is (name) from the DTE Monroe Power Plant. I am calling to initiate the Monroe Inactive Bottom Ash Basin Emergency Action Plan. An embankment failure has occurred/is imminent on the south/east/west (direction) side. Please notify other Monroe County Emergency Monument Division and local emergency officials."*

5.1.3 Plant Director

The Plant Director is responsible for activating the EAP and ICS if notified by the SS that an emergency condition has occurred.

5.1.4 Plant Manager

The Plant Manager is responsible for working with the Plant Director to assist with EAP implementation.

5.1.5 Vice President of Environmental Management and Safety (EM&S)

The Vice President of EM&S is responsible for providing overall quality assurance and safety compliance with this EAP.

5.1.6 Public Information Officer (PIO)

The PIO is the point of contact for the media.

5.1.7 Regional Relations Manager

The Regional Relations Manager is responsible for communications with local government officials and the public in coordination with the Plant Director. Duties include maintaining communication between assisting and cooperating agencies.

5.1.8 Legal Department Director

The Legal Department Director is responsible for assessing legal implications that may arise from failure of the Inactive BAB and providing input to the Plant Director.

5.1.9 Fuel Supply Manager

The Fuel Supply Manager shall maintain on-site storage of key materials such as rip rap, clay, aggregate, etc. to assist with implementation of this EAP.

5.1.10 Engineering Support Organization (ESO) Surveillance Monitoring Committee (SMC) Coordinator

The SMC is comprised of the Fuel Supply Manager and appropriate subject matter experts (SMEs) from ESO, civil, legal, and environmental. The SMC is responsible for providing technical and operational oversight during implementation of this EAP. All construction, engineering, maintenance, inspection/monitoring, and operational decisions regarding the Inactive BAB perimeter embankment and the facility must be made in consultation with the SMC. The SMC Coordinator from the ESO is responsible for identifying and notifying the appropriate SMEs to include in the decision-making process.

5.1.11 Geotechnical Engineer

The Geotechnical Engineer is a technical resource to the EAP team and will understand the specific technical attributes of the Inactive BAB and its environs. The Geotechnical Engineer will assist the SMC Coordinator in evaluating and implementing short-term and long-term mitigation measures. They will be a qualified professional engineer (PE) licensed in Michigan to meet the requirements of 40 CFR §257.53.

5.1.12 Environmental Compliance Supervisor

The Environmental Compliance Supervisor is responsible for assessing the implications of a failure at the Inactive BAB, working with regulatory agencies on permit issues, and providing input to the Plant Director. The Environmental Compliance Supervisor will also assist the SMC Coordinator with guidance on environmental monitoring and sampling procedures.

5.1.13 Emergency Response Contractor

The Emergency Response Contractor provides comprehensive emergency response capabilities necessary to support implementation of this EAP by maintaining subcontracts and vendor agreements to allow for rapid mobilization. The Emergency Response Contractor will assist the Environmental Compliance Supervisor

5.1.14 Corporate Security Coordinator

The Corporate Security Coordinator is responsible for providing continuous security of the Inactive BAB.

6. GENERAL RESPONSIBILITIES UNDER THE INCIDENT COMMAND SYSTEM

An emergency condition is defined as any condition or situation considered to have an actual or potential effect on the safety of individuals, safe operation of the system, production, facilities, or customers' premises and which cannot be corrected by the resources immediately available. In the case that an emergency condition exists, and an emergency response is necessary, this EAP incorporates the NIMS ICS methods, structure, and titles. Per this approach, pre-identified individuals have been trained in specific ICS roles, the chain-of-command, the line-of-succession, and delegations of authority to respond in the event of an emergency condition associated with the Inactive BAB.

In utilizing the ICS, DTE grants decision-process and communication authority to the individuals identified in this EAP. Utilizing these pre-determined communication paths will facilitate effective implementation of the EAP, avoid possible omissions in communication, and provide a coordinated response to an emergency. It is imperative to follow the prioritized communication paths detailed on **Figure A** and outlined on **Figure B.**

The most knowledgeable and qualified individual responding to the scene assumes the role of Incident Commander (IC). For an event regarding the Inactive BAB, the role of IC would be assumed by the SS, and if necessary, the Plant Director once they have arrived on site. All identified response personnel will support the IC in responding to the emergency condition at the Inactive BAB. The organization and responsibilities of the rest of the ICS Team are presented in this Section. Members of the EAP Team presented in **Section 5** expected to assume a role within the ICS Team are identified.

Throughout the response, the business units will routinely provide status updates to senior leadership. If the size of the response exceeds the capability of available resources, the Executive Crisis Management Team (ECMT) will be activated to provide strategic direction, oversight, and coordination of the response of Corporate Crisis. The ECMT will implement the ICS structure, appointing the business unit's Crisis Executive as the IC, and assist with response to the incident accordingly. The members of this team are typically corporate executives selected by a Crisis Executive. The DTE Executive Committee may also serve as the ECMT, where not otherwise specified.

6.1 Incident Commander (IC)

Upon discovery that a failure has occurred or is imminent, and once the ICS has been enacted, the SS will assume the position of IC. The IC is technically not a part of either the General or Command Staff discussed below and is responsible for overall incident management, including:

- Immediately informing the EAP Coordinator about the emergency condition, following up with Inactive BAB Operations Personnel, and providing information back to the EAP Coordinator as appropriate.
- Calling the MCEMD and 911 to inform them of the emergency condition.
- Establishing immediate priorities for the incident.
- Ensuring incident safety.
- Establishing an Incident Command Post or Staging Area for incoming law enforcement.
- Determining incident goals and objectives.
- Completing a damage assessment of the Inactive BAB when a failure has occurred.
- Establishing the level of organization needed, and continuously monitoring the operation and effectiveness of that organization.
- Obtaining a briefing from the prior IC and/or assessing the situation.
- Managing planning meetings as required.
- Approving and implementing the Incident Action Plan (IAP).
- Coordinating the activities of the Command and General Staff.
- Authorizing the release of information to the news media.
- Ordering demobilization of the incident when appropriate.
- Ensuring incident after-action reviews are conducted and complete.

6.2 EAP Coordinator

The Plant Director is expected to assume the role of the EAP Coordinator within the ICS Team. The EAP Coordinator is responsible for activating this EAP and ICS if notified by the IC that an emergency condition has occurred. The EAP Coordinator is a deputy IC and is also responsible for contacting the Incident Command Staff, the ECMT, and the regulatory agencies necessary to coordinate on-site and off-site mitigation activities. The EAP Coordinator will serve as the main point of contact for external emergency management agencies and is responsible for the following:

- Updating DTE personnel on the mitigation progress.
- Assisting the IC in preparing IAP status reports for submittal to the appropriate authorities.
- Maintaining a list of assisting and cooperating agencies and agency representatives.
- Coordinating inter-agency contacts.
- Monitoring incident operations to identify current or potential inter-organizational problems.

- Participating in planning meetings, providing current resource status, including limitations and capabilities of agency resources.
- Facilitating EAP progress meetings as necessary to decide on the content of information that should be shared with the media. At a minimum, the following DTE personnel (as identified in **Section 5**) should attend the EAP progress meetings:
    - Plant Manager
    - Vice President of EM&S
    - Fuel Supply Manager
    - Environmental Response Contractor (if utilized)
    - Legal Department Director
    - Regional Relations Manager
    - Environmental Compliance Supervisor
    - Corporate Security Coordinator
    - Public Information Officer
    - SMC Coordinator
    - Geotechnical Engineer
- Provide agency-specific demobilization information and requirements.

6.3 Regional EAP Director

The Vice President of EM&S is expected to assume the role of the Regional EAP Director within the ICS Team. The Regional EAP Director must stay up to date on the situation through close coordination with the EAP Coordinator and is responsible for informing DTE senior leadership and the ECMT of conditions and expediting mitigation and cleanup activities, when necessary.

6.4 Incident Command Staff

The Incident Command Staff is assigned to carry out staff functions needed to support the IC. These functions include public information, interagency liaison, incident safety, and legal ramifications. In the context of large or complex incidents, Command Staff members may need one or more assistants to help manage their workloads. Each Command Staff member is responsible for managing their assistants for maximum efficiency. The Command Staff position responsibilities are summarized below.

6.4.1 Public Information Officer (PIO)

The PIO will also serve as this role within the ICS Team. The PIO is the point of contact for the media. Content that will be shared with the media must be reviewed and approved in advance by the IC and the EAP Coordinator as well as the Regional EAP Director. The PIO is responsible for preparing media content and facilitating the internal review and approval process, communicating with the media, and arranging the media response area and related logistics. The PIO is responsible for:

- Determining, according to the direction from the IC, any limits on information release.
- Developing accurate, accessible, and timely information for use in press/media briefings.
- Obtaining IC's approval of news releases.
- Conducting periodic media briefings.
- Arranging for tours and other interviews or briefings that may be required.
- Monitoring and forwarding media information that may be useful to incident planning.
- Maintaining current information, summaries, and/or displays on the incident.
- Making information about the incident available to incident personnel.
- Participating in the planning meeting.

6.4.2 Liaison Officer

The Regional Relations Manager is expected to serve as the Liaison Officer within the ICS Team. The Liaison Officer is responsible for:

- Acting as a point of contact for agency representatives.
- Acting as a point of contact for local government officials.
- Maintaining a list of assisting and cooperating agencies and agency representatives.
- Assisting in setting up and coordinating interagency contacts.
- Monitoring incident operations to identify current or potential interorganizational problems.
- Participating in planning meetings, providing current resource status, including limitations and capabilities of agency resources.
- Providing agency-specific demobilization information and requirements.

6.4.3 Safety Officer

The Safety Officer is responsible for:

- Identifying and mitigating hazardous situations.
- Ensuring safety messages and briefings are made.
- Exercising emergency authority to stop and prevent unsafe acts.
- Reviewing the IAP for safety implications.
- Assigning assistants qualified to evaluate special hazards.
- Initiating preliminary investigation of accidents within the incident area.
- Reviewing and approving the Medical Plan.
- Participating in planning meetings.

6.4.4 Legal Officer

The Legal Department Director is expected to serve as the Legal Officer within the ICS Team. The Legal Officer is responsible for assessing legal implications that occur from failure of the Inactive BAB and provide input to the EAP Coordinator.

6.5 General Staff

The General Staff is responsible for the functional aspects of the incident command structure. Typically, the General Staff consists of Operations, Planning, Logistics, and Finance/Administration Section Chiefs. General guidelines related to the General Staff positions include the following:

- Only one person will be designated to lead each General Staff position. Positions should not be combined.
- General Staff positions may be filled by a qualified person from any agency or organization.
- Members of the general staff report directly to the IC. If a General Staff position is not activated, the IC will have the responsibility for that functional activity.
- Deputy positions may be established for each of the General Staff positions. Deputies are individuals fully qualified to fill the primary position.
- General Staff members may exchange information with any person within the organization. Direction takes place through the chain of command, which is an important concept in ICS.

6.5.1 Operations Section Chief

The Plant Operations Manager is expected to serve as the Operations Section Chief within the ICS Team. The Operations Section Chief will manage all field operations, including oversight of all tactical resources and types of work being directed from the command post. They assist in developing the IAP by providing the strategies and tactics that the field would like to use to achieve the established incident objectives and oversee operational work and resources for the execution of the IAP. Specific responsibilities include:

- Participating in preplanning activities as requested by the IC.
- Obtaining briefings from Emergency Operations Center (EOC), IC, and/or from Planning Section Chief.
- Documenting incident status summary information and advising the IC and other staff of any significant changes in incident status or conditions.
- Staffing and organizing the Operations Section, as appropriate, maintaining span of control (3-7 subordinates reporting to one supervisor).
- Consulting with the IC regarding the length of operational period and scheduling staffing for multiple operational periods, if necessary.
- Receiving an update on the staffed ICS positions within the response organization, an overview of the status of the incident, and prioritized incident objectives.
- Ensuring incident objectives are SMART (Specific, Measurable, Achievable/ Action-Orientated, Realistic, and Time-Bound).
- Providing any additional information or concerns regarding operational resources and assigned work as appropriate.
- Briefing all assigned resources within the Operations Section on the objectives/ tasks.

The Operations Section Chief will be responsible for coordination with the following positions.

Fuel Supply Manager

The Fuel Supply Manager is responsible for performing on-site mitigation and cleanup activities as directed by the IC. It is the responsibility of the Fuel Supply Manager to assess the scale of the mitigation and cleanup activities required and inform the IC whether the mitigation and cleanup activities can be performed in-house by DTE resources or if outside resources are needed from the Emergency Response Contractor.

SMC Coordinator

The SMC Coordinator from the ESO will identify the SMEs necessary to provide the technical insight to the ICS Team. The SMC Coordinator is then responsible for contacting and coordinating with the SMEs. If necessary, the SMC Coordinator will engage the Geotechnical Engineer to include in the decision-making process with the SMEs.

Geotechnical Engineer

The Geotechnical Engineer will assist the SMC Coordinator in evaluating and implementing short-term and long-term mitigation measures.

Environmental Compliance Supervisor

The Environmental Compliance Supervisor will coordinate all water quality, hydraulic, and biological monitoring. The sampling will be conducted either by DTE personnel or their representative, as directed by the EAP Coordinator.

The Environmental Compliance Supervisor will also be responsible for contacting and coordinating with the Emergency Response Contractor.

Emergency Response Contractor

The Emergency Response Contractor is responsible for implementing mitigation and cleanup activities as directed by the EAP Coordinator/IC. The Emergency Response Contractor responsibilities include:

- Resource management;
- Twice daily check-ins;
- Review/projections of materials and equipment;
- Staffing resiliency;
- Subcontractor coordination;
- Daily/weekly/monthly reporting; and
- Data management.

6.5.2 Finance Section Chief

The MPP Plant Manager is expected to serve as the Finance/Administration Section Chief and is responsible for managing all financial aspects of an incident. Not all incidents will require a Finance/Administration Section Chief. Only when the involved agencies have a specific need for finance services will this Section be activated. Major responsibilities of the Finance Section Chief are:

- Managing all financial aspects of an incident.
- Providing financial and cost analysis information as requested.
- Ensuring compensation and claims functions are being addressed relative to the incident.
- Gathering pertinent information from briefings with responsible agencies.
- Developing an operating plan for the Finance/Administration Section and fill Section supply and support needs.
- Determining the need to set up and operate an incident commissary.
- Meeting with assisting and cooperating agency representatives as needed.
- Maintaining daily contact with agency(s) headquarters on finance matters.
- Verifying personnel time records are completed accurately and transmitted to home agencies.
- Ensuring all obligation documents initiated at the incident are properly prepared and completed.

- Briefing agency administrative personnel on all incident-related financial issues needing attention or follow-up.

The Finance Section Chief will be responsible for coordination with the Supply Chain Manager.

Supply Chain Manager

The Supply Chain Manager will assist the Finance Section Chief during an emergency response.

6.5.3 Planning Section Chief

The Manager of MPP Performance is expected to serve as the Planning Section Chief and is responsible for providing planning services for the incident. Under the direction of the Planning Section Chief, the Planning Section collects situation and resource status information, evaluates it, and processes the information for use in developing the IAP. Dissemination of information can be in the form of the IAP, informal briefings, or through map and status board displays. Major responsibilities of the Planning Section Chief are:

- Collecting and managing all incident-relevant operational data.
- Supervising preparation of the IAP.
- Providing input to the IC and Operation Sections Chief in preparing the IAP.
- Incorporating the Traffic, Medical, and Communications Plan and other supporting materials into the IAP.
- Conducting and facilitating planning meetings.
- Reassigning personnel within the ICS organization.
- Compiling and displaying incident status information.
- Establishing information requirements and reporting schedules for units (e.g., Resources, and Situation Units).
- Determining the need for specialized resources.
- Establishing specialized data collections systems as necessary (e.g., weather reports).
- Providing periodic predictions on incident potential.
- Reporting significant changes in incident status.
- Overseeing preparation of the Demobilization Plan.
- Completing a damage assessment with the IC.

6.5.4 Logistics Section Chief

The MPP Administration Leader is expected to serve as the Logistics Section Chief and provide all incident support needs. The Logistics Section is responsible for providing facilities, transportation, communications, supplies, equipment maintenance and fueling, food services, medical services for responders, and all off-incident resources. Major responsibilities of the Logistics Section Chief are:

- Supplying facilities, transportation, communications, supplies, equipment maintenance and fueling, food services, medical services for responders, all off-incident resources, and hotel accommodations if necessary.
- Preparing financial and cost analysis information as requested.
- Ensuring compensation and claims functions are being addressed relative to the incident.
- Gathering pertinent information from briefings with responsible organizations/agencies.
- Developing an operating plan for the Finance/Administration Section and fill Section supply and support needs.
- Determining the need to set up and operate an incident commissary.
- Maintaining daily contact with headquarters on finance matters.
- Ensuring personnel time records are completed accurately.
- Providing input to the IAP.

The Logistics Section Chief will be responsible for coordination with the Corporate Security Coordinator.

Corporate Security Coordinator

The Corporate Security Coordinator is responsible for providing continuous security of the Inactive BAB and offsite spill area and coordinating the work with local and state police departments.

7. PREPAREDNESS

7.1 Overview

Preparedness actions are taken to avoid uncontrolled release of water or CCR from the Inactive BAB or to help reduce the effects of such release and facilitate response in a timely manner.

Preparedness actions are taken both before and following the development of emergency conditions. DTE has a weekly and a long-term (i.e., annual) monitoring program in place to detect conditions that may create the potential for failure of the perimeter embankment if not addressed in a timely manner. Details about the weekly and annual monitoring programs are provided in **Section 4.1**.

This section of the EAP addresses preparedness actions taken to prepare for an emergency and respond after the development of an emergency condition. These actions are as follows:

1) Retain a contract(s) with Environmental Response Contractor(s) (ERC) and obtain and maintain minimum necessary equipment and materials. The ERC with the necessary equipment and materials will perform emergency on-site and off-site clean-up and conduct emergency repairs to avoid further failure or mitigate the effects of a failure if such condition arises.

2) Provide reporting for ongoing mitigation and clean-up activities.

3) Conduct periodic training to improve EAP implementation efficiency and effectiveness.

4) If necessary, update periodic training to improve EAP implementation efficiency and effectiveness.

5) If necessary, update the EAP on an annual basis.

Additional guidance regarding the ICS and emergency condition response coordination for a lake side breach is provided in the EAP for the Fly Ash Basin (FAB) Facility.

7.2 Communication

In addition to the communication flowcharts provided in **Figures A and B** and the contact information summarized in **Table A**, key communication resources for this EAP include the communication flowchart for the ERC (**Figure F**), the Crisis Response Process Coal Ash Pond Failure Communication Plan and Q&A (**Exhibit 5**), and Crisis Response Plan – Public Information Plan (**Exhibit 6**). Regulatory submittals for emergency response, health and safety planning, CCR management, and environmental monitoring activities are anticipated to be required. **Exhibit 7** provides guidance for documents including weekly

status updates, a CCR removal work plan, engineering structural integrity report, and a surface water monitoring plan.

The primary source of communication will be the existing local emergency radio system. This will be coordinated with the MCEMD. Radios will be maintained by the Fuel Supply Department. Secondary communication methods will be conducted with cell phones and email as appropriate.

DTE will keep stakeholders, including regulatory agencies, media, and local government, informed of the emergency response status and progress. Information will be provided in a stakeholder meeting and within IAP status reports. The occurrence of the stakeholder meeting will be determined based on the incident level.

7.3 Safety

Pursuant to requirements under the Michigan Occupational Safety and Health Administration (MIOSHA), a site-specific Health and Safety Plan (HASP) addressing the potential hazards associated with bottom ash exposure as well as other potential hazards (e.g., heavy equipment traffic) must be reviewed and acknowledged by the ERC employees and any subcontractors who will work on site. Additionally, subcontractors of the ERC will also prepare their own HASPs specific to their roles and responsibilities on site. Anticipated safety procedures include, but are not limited to, air monitoring and Level D personal protective equipment (PPE). Level D PPE consists of the following:

- Hard hat;
- Safety glasses;
- Hearing protection (if appropriate);
- Reflective vest/clothing; and
- Steel-toed boots.

Based on the task, dust masks and air purifying respirators equipped with High Efficiency Particulate Air filters may be required to address potential inhalation exposures. Tyvek suits and gloves may also be necessary to reduce the potential for dermal contact with the fly ash. Per the MIOSHA R408.40636 construction safety standard and the Occupational Safety and Health Administration (OSHA) Safety and Health Regulations for Construction standard 1926.106, personal flotation devices will be required around water-based operations. All ERC subcontractors will be required to ensure their employees are fit to perform assigned activities.

Prior to initiating work, safety protocols (e.g., job hazard analyses, safe work practices, job safety briefing) based on activity-specific elements will be reviewed by the ERC and their subcontractors working on site. Job safety briefings will be completed daily and additional safety briefings will be completed as necessary when conditions change or when new site personnel arrive.

7.4 IAP Status Reports

The IAP status reports are intended to provide the EAP Team with the status of emergency and on-going mitigation and clean-up activities. Status reports will be prepared by the IC/SS and will be provided to the MCEMD Director and other local and state government officials, as necessary. The IC/SS will address the comments from the MCEMD Director and incorporate them in the next IAP status report.

The frequency of IAP status reports will be decided based on discussions with the MCEMD Director along with the time frame within which comments are provided.

Status reports will provide information on the situation so that DTE and the MCEMD and other emergency management officials can modify the course of action accordingly. The MCEMD Director will declare when and how the emergency situation will be terminated at the impacted areas beyond the limits of the Inactive BAB. The EAP Coordinator will declare when and how the emergency situation will be terminated at the Inactive BAB with input from the rest of the DTE personnel involved in the EAP.

7.5 Access to the Site

Access to the site is available from two access roads on the north side of the Inactive BAB. The locations of these roads are shown on **Figure C**.

7.6 Response during Periods of Darkness

If needed, the Fuel Supply Department will supply portable/alternative lighting and power sources during periods of darkness, or other scenarios where such equipment is deemed necessary.

7.7 Response during Weekends and Holidays

The Plant is staffed 24 hours per day, 365 days per year. These personnel will be trained on the use of the EAP.

7.8 Response during Periods of Adverse Weather

If an emergency condition arises, the response will be as fast as the weather conditions will permit.

7.9 Availability and Use of Alternative Systems of Communication

The existing local emergency radio system will be utilized. This will be coordinated with the MCEMD. Radios will be maintained by Fuel Supply Department.

Alternate communication methods will be conducted with cell phones and email as appropriate.

7.10 Actions to Mitigate Breaches and Impede Flows

Based on initial reconnaissance and field conditions, the ERC may implement rapid breach mitigation through placement of aggregate-filled nylon bags within the perimeter embankment breach, including using industrial helicopters, if needed. This will mitigate the initial breach and reduce the potential of additional release of CCRs to Lake Erie.

Several advanced response mechanisms are available for reducing impacts on human health and the environment; however, the key to effectively responding to failure of the perimeter embankment is careful selection and proper use of the equipment and materials best suited to the conditions at the release site.

In the event of a breach, with approval from the IC, the ERC will develop situation-specific refinements to the response procedure based on Standard Operating Procedures to execute operations. As the situation allows, the ERC will provide strategic input from the field relevant to transitioning the situation from emergency response to the post-response phase.

7.11 Emergency Supplies and Resources

The ERC will identify resources that could be used during mitigation and clean-up activities and will have contracts in place to expedite implementation of mitigation and clean-up activities.

7.11.1 Contractors

In case of an emergency, and if directed by the EAP Coordinator, the ERC will act as the general contractor and will subcontract the individual components of the mitigation and clean-up activities, as necessary. The ERC has established contracts with subcontractors and vendors to facilitate implementation of the EAP.

7.11.2 Supplies and Resources

Soil & Aggregate Resources

The ERC will identify aggregate resources to stockpile on site and identify sources for additional materials, if needed. Mitigation will likely include the use of imported soils from adjacent DTE property and/or rock sourced from local quarries. Alternatively, DTE may choose to pre-stage rock stockpiles near the site.

Staging Area

The location of possible staging areas for contractor equipment and supplies will be based on the exact location of the failure and extent of the impacted areas. Potential locations for

these staging areas are provided on **Figure C**. The off-site staging areas can be adjusted as the mitigation and clean-up activities progress but must be coordinated with local agencies through the EAP Coordinator.

7.12 Media Response Facility

The media response facility is at the DTE Monroe Activity Center located at 2035 Fix Road, Monroe, Michigan. DTE Corporate Communication and the PIO will provide and setup the necessary tools to have a press conference.

7.13 Unified Command Center and Emergency Communication

The initial command center for the response will be at MPP. It is up to the EAP Coordinator to make the decision on moving the unified command center to the Emergency Operations Center (EOC) at the Monroe County Emergency Management Office. The EOC is located at 987 S. Raisinville Road, Monroe, Michigan, 48161. The EOC can accommodate more than 60 people and is equipped with a kitchen area and state-of-the-art communication tools.

Public notifications, weather monitoring, and other emergency messaging will be handled at the EOC. MCEMD utilizes the Monroe County Alert Notification System (MCANS), which allows use of multiple means of communication for residents and emergency responders. Methods of communications include home phones, mobile phones, Voice over IP (VOIP) landlines, e-mail, and/or text messaging.

7.14 Training Exercises

The main purpose of conducting training exercises is to improve the effectiveness of the EAP. Regularly executed training exercises will remind everybody involved in the EAP of their role and responsibilities and identify additional items and procedures that will allow more effective communication and execution of the EAP.

The EAP Coordinator is responsible for establishing and organizing the training exercises. Lessons learned from these training exercises will be incorporated into the EAP and redistributed to EAP participants by the EAP Coordinator. Lessons learned will be immediately addressed and any program updates will be completed within 90 days of the exercise. The EAP Coordinator will prepare the training exercise logs and include them in the revised EAP as **Exhibit 9** or maintained as part of the Tabletop Exercise documentation. The training exercise logs will include at a minimum:

- List of EAP participants involved in the training exercise;
- The type of training exercise;
- Emergency conditions that were considered;

- Lessons learned; and
- Meeting minutes.

The following types of training will be conducted:

Orientation Seminar

The first exercise that the EAP Coordinator will organize is the "Orientation Seminar", which will be attended at a minimum by the EAP Coordinator and the MCEMD Director. The purpose of this meeting is to enable each participant to become familiar with the roles and responsibilities, and procedures involved.

Tabletop Exercises

The EAP Coordinator will conduct a tabletop exercise annually at a minimum. The tabletop exercise is a higher-level exercise than a drill of the EAP. The tabletop exercise involves a meeting with MCEMD and other emergency management agencies as necessary in a conference room environment. The exercise begins with the description of a simulated event and proceeds with discussions by the participants to evaluate the EAP and response procedures and to resolve concerns regarding coordination and responsibilities.

7.15 Updating the EAP

As the owner and sole operator of the MPP, DTE is the EAP owner and takes full responsibility for the execution of the EAP. The EAP will be revised periodically to incorporate updated or more detailed information and improvements based on lessons learned. The key communication resources for the EAP listed below must be kept updated to be effective.

- Fly Ash Basin Facility EAP Notification/Communication Action Flowchart (**Figure A**)
- DTE EAP Team Contact information (**Table A**)

The EAP will be reviewed annually. This review will consider personnel changes in positions established in the EAP, and changes to communication systems such as telephone numbers or radio frequencies. The revised EAP will be updated with the revision date. This will ensure other EAP participants that the existing EAP is up to date and has been reviewed considering current operational procedures. Additional revisions may be necessary as part of the outcomes and lessons learned from the tabletop exercises.

As part of the EAP annual review, DTE will document any revisions to the EAP for the Inactive BAB with a Record of Revisions, **Exhibit 10**.

8. POTENTIAL IMPACT AREAS

The most probable failure mechanism is judged to be a breach of the perimeter embankment along the Lake Erie (eastern) side of the Inactive BAB. A breach would result in release of CCRs into Lake Erie (a "lakeside breach"). This area is north of the eastern end of the divider berm and south of the maximum extent of CCR disposal. The most probable failure location is shown on **Figure A**.

It is judged that this portion of the perimeter embankment will be exposed to the largest wave forces from Lake Erie during a high windstorm that could potentially create a breach. A cross section of the perimeter embankment at this location is shown on **Figure D**. The other areas of the perimeter embankment are shielded from high energy waves by either the Process Wastewater and Stormwater Basin or the discharge canal.

A lakeside breach would cause a limited release of CCRs because the height of the perimeter embankment is not large and the difference between the normal pool of water within the Inactive BAB is less than approximately five feet above the surface elevation of Lake Erie. Any CCR release in this area would have low energy and is expected to be subaqueous (occurring underwater). No interference with navigation is expected from a release of CCRs. No humans are expected to be injured.

9. REFERENCES

AECOM (2017), "Inactive Bottom Ash Impoundment CCR Rule Compliance Project, Annual Inspection Report- 2017," June 28, 2017.

AECOM (2018), "Safety Factor Assessment Report, Area 15, DTE Monroe Power Plant," April 2018.

DTE (2024), "Emergency Action Plan Ash Basin Facility Monroe Power Plant," October 2024.

FEMA (2013), "Emergency Action Planning for Dam Owners – Federal Guidelines for Dam Safety," Federal Emergency Management Agency (FEMA)

U.S. Army Corps of Engineers (2018), May 2018 Great Lakes Water Level Summary.

FIGURES AND TABLES

Figure A. MONROE ASH BASIN EMERGENCY ACTION PLAN NOTIFICATION/COMMUNICATION ACTION FLOWCHART

A complete list of contact information for personnel and alternates is listed in Table A.

Observer

Alert/Warning Conditions
- Immediately inform the Shift Supervisor about the abnormal condition.
- Continue to observe the abnormal condition from a safe distance and report to the Shift Supervisor until instructed to stop.

Shift Supervisor (SS)
734-384-2235

Alert/Warning Condition
- Immediately assess the abnormal condition and decide if it may cause failure or creates enhanced public awareness.
- Notify outside rounds person to visually inspect Fly Ash Basin

Failure Imminent?

NO

Failure Not Imminent

Alert/Warning Condition
- If failure is not imminent, conduct additional monitoring, inspections, and mitigation as necessary.
- For the Fly Ash Basin, follow the Inspection, Monitoring, and Maintenance Manual.

YES

Failure Imminent

Emergency Condition:
- If failure is imminent, or the abnormal condition creates enhanced public awareness, immediately notify 911, the Plant Director (Michael Twomley - 313-320-7096), and the Monroe County Emergency Management Division (MCEMD) Central Dispatch (John Conlin - 734-243-7070), of the potential for failure.
- Notify Operations Manager (Jim Feaganes - 734-777-3713).
- Use the following pre-scripted message when notifying 911: "*This is…(name) from DTE Monroe Power Plant. I am calling to initiate the Monroe Ash Basin Emergency Action Plan. An embankment failure has occurred/is imminent on the north/south/east/west…(direction) side at approximately Station ##. Please notify MCEMD and local emergency officials.*"
- Units 1, 2, 3, and 4 (dry ash units) will remain in operation.

Call 911
Immediately notify MCEMD (John Conlin - 734-243-7070) and local emergency management officials to initiate the offsite response.

Monroe County Emergency Management Division (MCEMD) Director
John Conlin - 734-243-7070
- Immediately warn and evacuate local residents and land owners.
- Coordinate off-site mitigation and clean-up activities with the Plant Director.

Plant Director (EAP Coordinator)
Mike Twomley - 313-320-7096
- Contact Vice President of EM&S and Incident Command Staff (right).
- Assist Shift Supervisor with coordinating EAP activities.

Shift Supervisor (Incident Commander)
734-384-2235
- Monitor emergency condition.
- Immediately initiate mitigation and clean-up activities.
- Contact Plant Director (Michael Twomley above) and General Staff (right).
- Coordinate EAP activities with DTE.
- Coordinate off-site mitigation and clean-up activities with the MCEMD and other emergency management agencies.
- Be the main point of contact for the MCEMD and other emergency management agencies.
- Facilitate EAP progress meetings.
- Prepare status reports.

Incident Command Staff

General Staff

Vice President of EM&S (Regional EAP Director)
Shawn Patterson - 313-819-2417
- Reports to senior management and provides overall quality assurance and safety compliance for EAP.
- Monitors emergency condition with assistance from Plant Director.
- Coordinates with DTE's Executive Crisis Management Team.

Public Information Officer (Public Information Officer)
Colleen Rosso - 248-496-3536
- Conduct a joint press conference(s) with MCEMD as needed.
- Inform the media only after the content is reviewed and approved by the EAP Coordinator.
- Manage media hotline (313-235-5555)

Regional Relations Manager (Liaison Officer)
Molly Luempert-Coy - 313-820-3881
- Communicate with local government officials.
- Execute access agreements as needed for response activities.

Safety Officer (Safety Officer)
Crissy Calvin - 419-551-1712
- Safety Compliance for EAP.

Legal Department Director (Legal Officer)
Mike Solo - 586-899-9297
- Assess legal implications and provide input to the Plant Director.

Operations Manager (Operations Section Chief)
Jim Feaganes - 734-777-3713
- Manage all field operations, including oversight of all tactical resources and types of work being directed from the command post.
- Contact Fuel Supply Manager, ESO SMC Coordinator, and Environmental

MPP Performance Manager (Planning Section Chief)
Eric Burger - 734-735-8450
- Provide planning services for the response. The Planning Section collects situation and resource status information, evaluates it, and processes the information for use in developing incident action plans.

MPP Admin Leader (Logistics Section Chief)
Kelly Nowicki - 734-347-5031
- Provide facilities transportation, communications, supplies, equipment maintenance and fueling, food services, medical services for responders, and all off-emergency response resources.

Plant Manager (Finance Section Chief)
Dan Casey - 248-202-2524
- Manage all financial aspects of emergency response

Media

Public

Fuel Supply Manager
Kyle Taylor - 734-652-7943
- Start short-term mitigation and clean-up activities if directed by the Plant Director.
- Assist Operations Section Chief with long-term mitigation measures.

ESO SMC Coordinator
Mark Green - 734-624-1088
- The SMC provides technical and operational oversight and guidance during implementation of the EAP. All construction, engineering, maintenance, inspection/monitoring, and operation decisions regarding Ash Basin embankment and facility is made after consulting with SMC.
- Notify and include appropriate SMEs from ESO, civil, legal, and EM&S in decision-making.

Geotechnical Engineer - Geosyntec
Clinton Carlson - 810-347-6375
- Assist Coordinator in evaluating and implementing short-term and long-term mitigation measures.
- Implement additional monitoring and inspections as necessary.

Environmental Compliance Supervisor
Chris Paquette - 810-728-5019

EM&S
Jason Logan - 248-201-9221
- Assess permit compliance and provide input to the Plant Director.
- Communicate with regulatory agencies on permit compliance issues.
- Provide assistance to SMC Coordinator with regard to environmental monitoring and sampling procedures.

Emergency Response Contractor – Arcadis
Andrea Krevinghaus – 810-841-1474
- Start mitigation and clean-up activities if directed by the Plant Director.
- Conduct appropriate environmental assessment.

Corporate Security Coordinator
Dan Torres - 734-771-7363
- Arrange corporate security to provide security at the ash basin and spill area during implementation of EAP.

Supply Chain Manager
Scott Darga - 586-943-3227
- Assist Finance Section Chief during emergency response.

LEGEND

- DTE Personnel
- Outside Party
- Alert/Warning Condition
- Emergency Condition

Title (ICS Team Role)

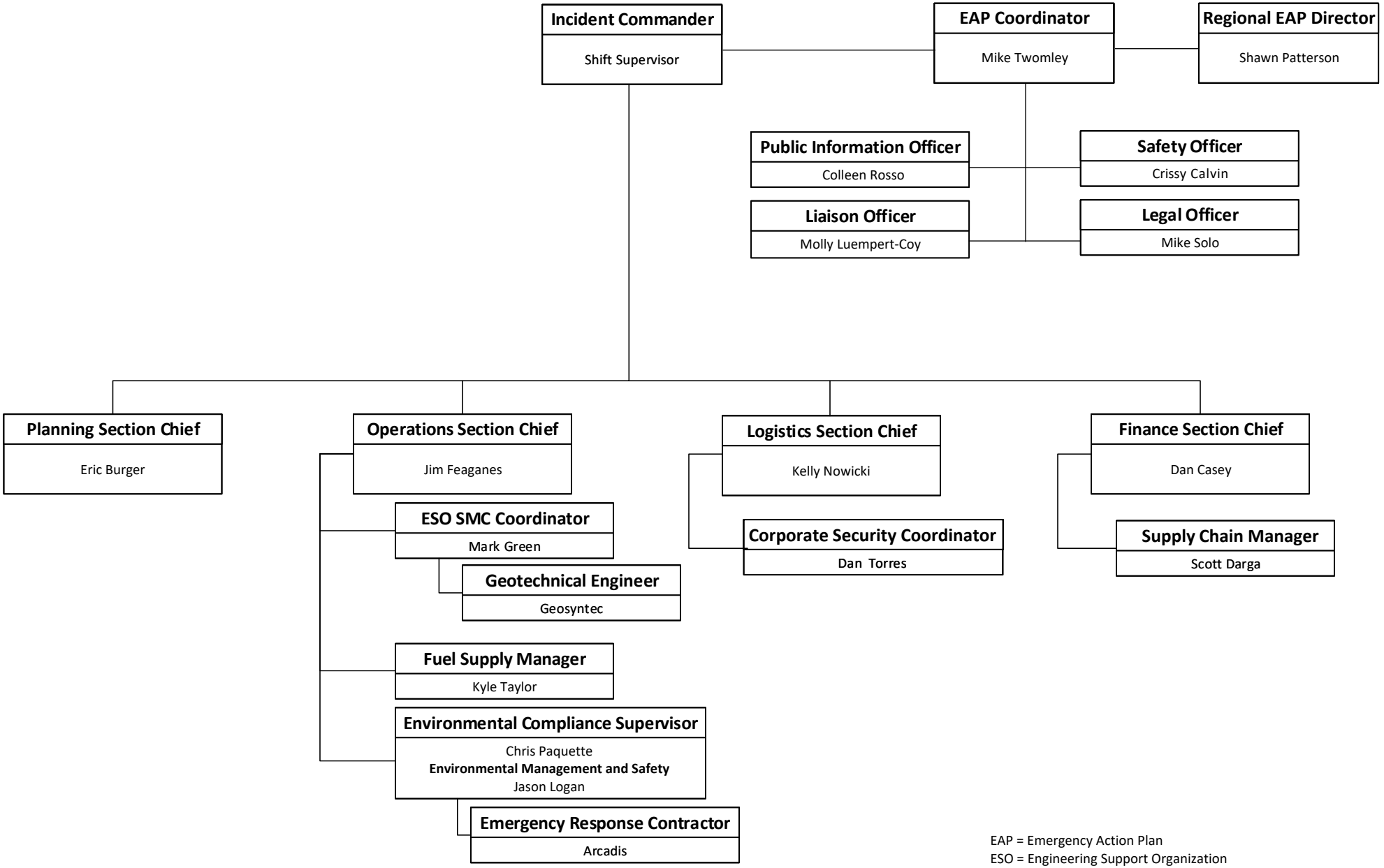
EAP = Emergency Action Plan
EM&S = Environmental Management and Safety
ENS = Energy Supply
ESO = Engineering Support Organization
ICS = Incident Command System
MPP = Monroe Power Plant
SMC = Surveillance Monitoring Committee
SME = Subject Matter Expert

10/30/2024

Figure B. A.17 Environmental Release Crisis Event

ICS Organization Chart

A complete list of contact information is listed on Table A.



EAP = Emergency Action Plan
ESO = Engineering Support Organization
ICS = Incident Command System
SMC = Surveillance Monitoring Committee

10/30/2024

Geosyntec consultants

Geosyntec Consultants of Michigan

Figure C:
Site Plan
Inactive Bottom Ash Basin
Emergency Action Plan
Monroe Power Plant
Monroe, Michigan

Perimeter Dike Crest
Elev. 578 ft
20-ft Wide

Geosyntec consultants
Geosyntec Consultants of Michigan

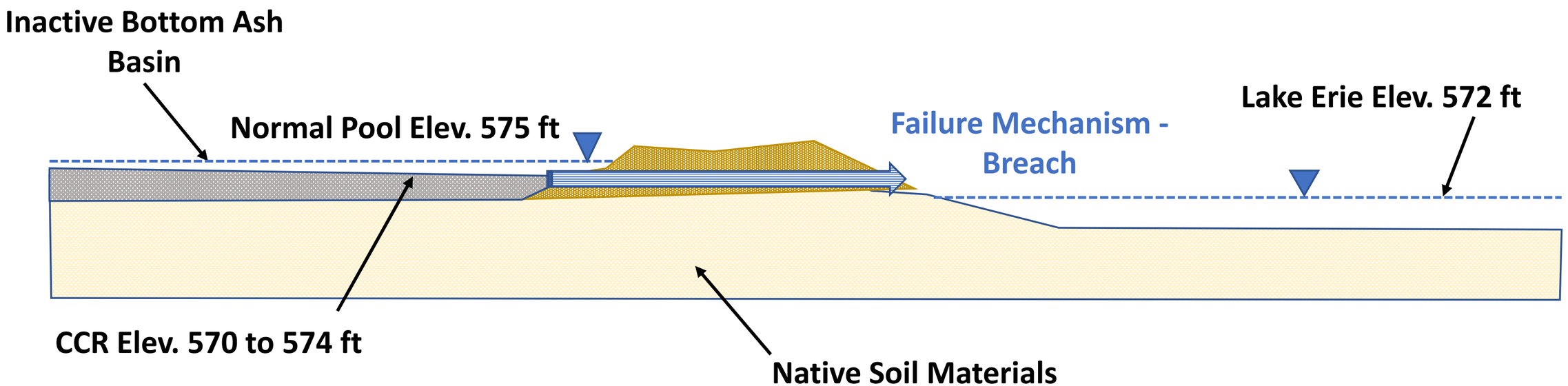


Figure D:
Failure Condition
Inactive Bottom Ash Basin
Emergency Action Plan
Monroe Power Plant
Monroe, Michigan

October 2024

Geosyntec consultants

Geosyntec Consultants of Michigan

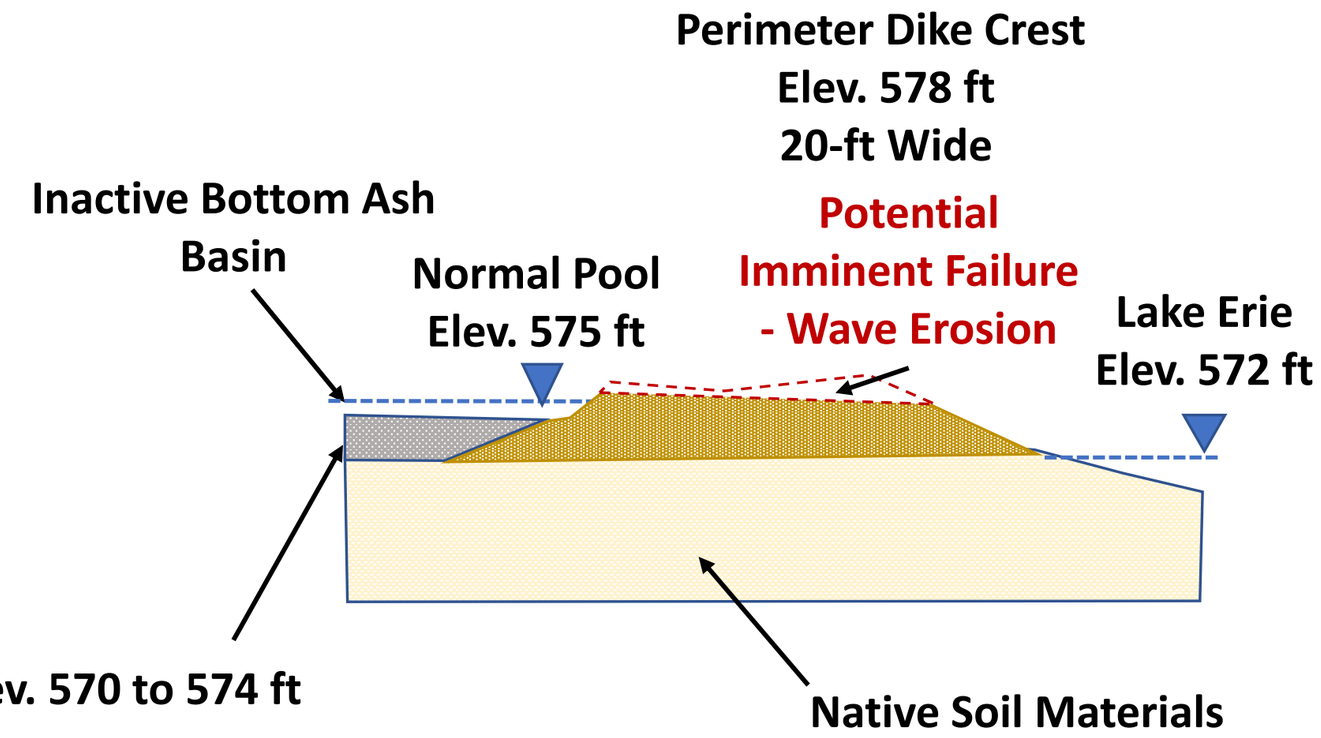
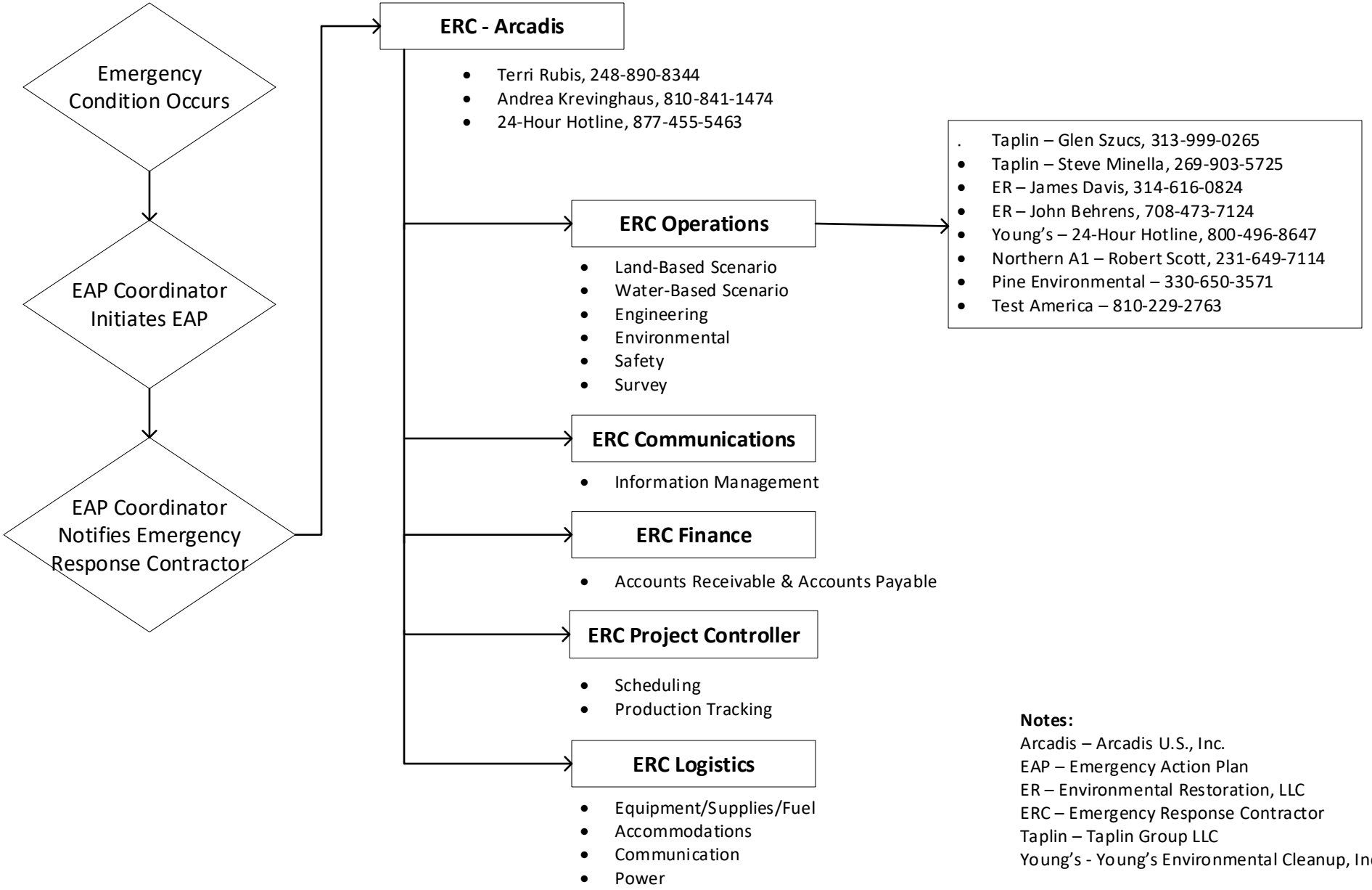


Figure E:
Potential Imminent Failure Condition
Inactive Bottom Ash Basin
Emergency Action Plan
Monroe Power Plant
Monroe, Michigan

October 2024

Figure F – Emergency Response Contractor Organization/Communication Flowchart



Notes:
Arcadis – Arcadis U.S., Inc.
EAP – Emergency Action Plan
ER – Environmental Restoration, LLC
ERC – Emergency Response Contractor
Taplin – Taplin Group LLC
Young's - Young's Environmental Cleanup, Inc.

Table A. SUMMARY OF ROLES AND CONTACT INFORMATION

	Main Contact							Alternate Contact				
Plant/Corporate Title	**Person**	**EAP Title**	**ICS Title**	**Department**	**Office Phone Number**	**Cell Phone Number**	**Alternative Communication Method**	**Person**	**Department**	**Office Phone Number**	**Cell Phone Number**	**Alternative Communication Method**
Plant Shift Supervisor	On-Duty Plant Shift Supervisor	Shift Supervisor	Incident Commander	MONPP Operations	734-384-2235	TBD	250 on plant phone - Emergency Line	Donald (Jim) Feaganes	MONPP Operations	734-384-2477	734-777-3713	donald.feaganes@dteenergy.com
MONPP Operations Manager	Donald (Jim) Feaganes	Operations Manager	Operations Section Chief	MONPP Operations	734-384-2477	734-777-3713	donald.feaganes@dteenergy.com	Dan Casey	MONPP Management	734-384-2207	248-202-2524	daniel.casey@dteenergy.com
Manager - MONPP Performance	Eric Burger	--	Planning Section Chief	MONPP Engineering	734-384-2135	734-735-8450	eric.burger@dteenergy.com	Joseph (Robby) Kuehnlein	MONPP Engineering Supervisor	734-384-2124	734-731-3113	joseph.r.kuehnlein@dteenergy.com
MONPP Admin Leader	Kelly Nowicki	--	Logistics Section Chief	MONPP Administration	734-384-2266	734-347-5031	kelly.nowicki@dteenergy.com	Susan Kozlowicz	MONPP Administration	734-384-2263	734-347-2689	susan.kozlowicz@dteenergy.com
Fuel Supply Manager	Kyle Taylor	Fuel Supply Manager	Fuel Supply Manager	MONPP Fuel Supply	734-384-2219	734-652-7943	kyle.taylor@dteenergy.com	Dave Desbrough	MONPP Fuel Supply	734-384-2360	734-777-4822	david.desbrough@dteenergy.com
Safety Officer	Crissy Calvin	--	Safety Officer	MONPP Corp Safety	--	419-551-1712	cristen.calvin@dteenergy.com	Anthony Tarrance	MONPP Corp Safety	734-276-7990	734-276-7990	anthony.tarrance@dteenergy.com
MONPP Plant Manager	Dan Casey	Plant Manager	Finance Section Chief	MONPP Management	734-384-2207	248-202-2524	daniel.casey@dteenergy.com	Steve Stocker	ENS Controller Supervisor	313-235-5326	734-716-8131	steven.stocker@dteenergy.com
Corp Supply Chain Manager	Scott Darga	--	Supply Chain Manager	Corp Supply Chain	313-235-5787	586-943-3227	scott.darga@dteenergy.com	Jeffrey Conrad	Supply Chain	313-235-7432	313-549-8900	jeffery.conrad@dteenergy.com
Environmental Engineer	Jason Logan	EAP Coordinator Assistant	--	EM&S	313-897-0375	248-201-9921	jason.logan@dteenergy.com	Eric Molnar	EM&S	--	586-318-3814	eric.molnar@dteenergy.com
Environmental Technical Supervisor (Generation)	Chris Paquette	Environmental Compliance Supervisor	Environmental Compliance Supervisor	EM&S	--	810-728-5019	christopher.paquette@dteenergy.com	Jason Logan	EM&S	313-897-0375	248-201-9921	jason.logan@dteenergy.com
EM&S Matrix/Compliance Manager	Todd Baker	EAP Coordinator Assistant	--	EM&S	313-897-0714	734-545-4952	todd.baker@dteenergy.com	Chris Paquette	EM&S	--	810-728-5019	christopher.paquette@dteenergy.com
Arcadis	Andrea Krevinghaus	--	ERC	--	248-994-2282	810-841-1474	andrea.krevinghaus@arcadis.com	Terri Rubis	--	248-994-2242	248-890-8344	terri.rubis@arcadis.com
Taplin Group, LLC	Glen Szucs	--	ERC Operations	--	269-720-3424	313-999-0265	--	--	--	--	--	--
Environmental Restoration LLC	John Behrens	--	ERC Operations	--	708-473-7124	810-397-4823	--	--	--	--	--	--
Young's Environmental, Inc.	Donald Long	--	ERC Operations	--	800-496-8647	--	--	--	--	--	--	--
EM&S Remediation Manager	Rob Lee	SMC Member	--	EM&S	313-235-7815	248-225-7512	robert.lee@dteenergy.com	Chris Scieszka	EM&S CCR SME	313-235-0153	248-408-9855	christopher.scieszka@dteenergy.com
ESO Surveillance Monitoring Committee	Mark Green	ESO SMC Coordinator	ESO SMC Coordinator	ESO	313-484-0125	734-624-1088	mark.green@dteenergy.com	Nicholas Reidenbach	ESO	313-235-8829	734-249-3536	nicholas.reidenbach@dteenergy.com
Geosyntec Consultants	Clinton Carlson	Geotechnical Engineer	Geotechnical Engineer	--	313-209-5613	810-347-6375	ccarlson@geosyntec.com	John Seymour	--	312-416-3919	313-300-3245	jseymour@geosyntec.com
Plant Director	Mike Twomley	Plant Director	EAP Coordinator	MONPP Management	734-384-2203	313-320-7096	michael.twomley@dteenergy.com	Dan Casey	MONPP Management	734-384-2207	248-202-2524	daniel.casey@dteenergy.com
VP of ENS	Inderpal Deol	--	--	ENS/ESO Director	313-235-7802	313-655-8394	inderpal.deol@dteenergy.com	Mike Twomley	MONPP Management	734-384-2203	313-320-7096	michael.twomley@dteenergy.com
VP of EM&S	Shawn Patterson	VP of EM&S	Regional EAP Director	EM&S	313-235-7720	313-819-2417	shawn.patterson@dteenergy.com	Christy Clark	EM&S - Director	313-701-0623	313-701-0623	christy.clark@dteenergy.com
Legal Department	Michael Solo	Legal Department Director	Legal Officer	Legal	313-235-9512	586-899-9297	michael.solo@dteenergy.com	Andrea Hayden	Legal	--	734-546-0179	andrea.hayden@dteenergy.com
Corporate Communication Manager	Colleen Rosso	Public Information Officer	Public Information Officer	Corp Communication	313-235-8859	248-496-3536	colleen.rosso@dteenergy.com	Chris Lamphear	Communications Manager	--	248-425-2331	christopher.lamphear@dteenergy.com
Regional Relations Manager - ENS/EM&S	Molly Luempert-Coy	Regional Relations Manager	Liaison Officer	Regional Relations	734-332-8155	313-820-3881	molly.luempert-coy@dteenergy.com	Barbara Rykwalder	Regional Affairs	734-397-4045	313-806-4586	barbara.rykwalder@dteenergy.com
Corporate Security	Dan Torres	--	Corp Security Coordinator	Security Operations	313-235-6736	734-771-7363	daniel.torres@dteenergy.com	Jeffery Robinson	Security Operations	734-384-2217	734-457-1303	jeffery.robinson@dteenergy.com

	LOCAL AND STATE EMERGENCY AGENCIES											
	Main Contact							Alternate Contact				
Agency	**Person**	**EAP Title**	**ICS Title**	**Department**	**Office Phone Number**	**Cell Phone Number**	**Alternative Communication Method**	**Person**	**Department**	**Office Phone Number**	**Cell Phone Number**	**Alternative Communication Method**
Monroe County Emergency Management Division (MCEMD)	John Conlin	--	--	MCEMD	Emer. Phone Line 734-243-7070	--	--	--	--	--	--	--
Pollution Emergency Alerting System	--	--	--	--	800-292-4706	--	--	--	--	--	--	--
Monroe County Drain Commission (MCDC)	David Thompson	--	--	MCDC	734-240-3101	--	--	--	--	--	--	--
Michigan Environment, Great Lakes, and Energy (EGLE)	Elizabeth Brown	--	--	EGLE	517-284-6551	--	--	--	--	--	--	--
U.S. Army Corps of Engineers (USACE)	Shane McCoy	--	--	Regulatory	313-226-7732	--	--	Donald Reinke	Regulatory	313-226-6812	--	--
U.S. Environmental Protection Agency (EPA)	Jon Gulch	--	--	USEPA	734-214-4892	--	--	--	--	--	--	--
U.S. Coast Guard (USCG)	Herb Oertli	--	--	USCG	419-418-6048	--	--	USCG Detroit Sector	--	313-568-9560	--	--

CCR = Coal Combustion Residuals
EAP = Emergency Action Plan
EM&S = Environmental Management and Safety
ENS = Energy Supply
ERC = Emergency Response Contractor
ESO = Engineering Support Organization
ICS = Incident Command System
MONPP = Monroe Power Plant
SMC = Surveillance Monitoring Committee
SME = Subject Matter Expert

Exhibit 1

Emergency Action Plan
Professional Engineer Certification

Geosyntec consultants
Geosyntec Consultants of Michigan

3011 W Grand Blvd, Suite 2300
Detroit, Michigan 48202
www.geosyntec.com

October 30, 2024

Via Email

Mr. Jason Logan
Environmental Management & Safety
DTE Electric Company
One Energy Plaza
Detroit, MI 48226

Subject: Emergency Action Plan Certification
Monroe Power Plant Inactive Bottom Ash Basin
Monroe, MI

Dear Mr. Logan:

This letter presents Geosyntec Consultants of Michigan's (Geosyntec's) certification for the Emergency Action Plan (EAP) for DTE Electric Company's (DTE's) Monroe Power Plant Inactive Bottom Ash Basin.

BACKGROUND

A certification of the EAP for the Inactive Bottom Ash Basin is required under the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (CCR Rule) 40 CFR 257.73(a)(3)(iv), published on 17 April 2015. Under the CCR Rule, the Inactive Bottom Ash Basin is an "existing surface impoundment" and the EAP must be prepared for an existing surface impoundment that has been identified as either a High Hazard or Significant Hazard Potential under 40 CFR 257.73(a)(2). The EAP must be assessed and certified by a Qualified Professional Engineer in accordance with 40 CFR 257.73(a)(3)(iv).

In March 2024, AECOM and DTE identified that the Inactive Bottom Ash Basin had a Significant Hazard Potential in accordance with 40 CFR 257.73(a)(2). Hazard potential certification was placed in the operating record and posted on a publicly accessible website in accordance with the CCR Rule.

The EAP was prepared by Geosyntec. Updates to the EAP were made by Geosyntec in September and October 2024.

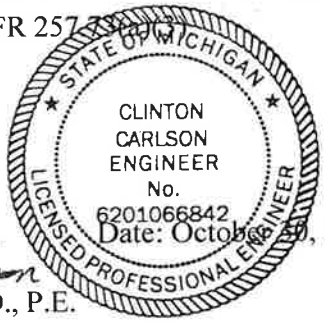
QUALIFICATIONS OF LICENSED PROFESSIONAL ENGINEER

Geosyntec as a company has provided engineering services for the DTE Monroe Power Plant since 2008 and has extensive knowledge of the history of the facility, its design, operational components, and knowledge of the surrounding geographical, cultural and environmental features. Clinton Carlson is a qualified licensed professional engineer in the State of Michigan with ten years of experience in civil and geotechnical engineering associated with dams and landfills. Clinton has provided engineering services for the DTE Monroe Power Plant since 2022 and reviewed the historical documents for the site.

CERTIFICATION

I, Clinton Carlson, am a qualified licensed professional engineer in Michigan. I have evaluated the Inactive Bottom Ash Basin EAP and I certify that the EAP is in accordance with the requirements of 40 CFR 257.73(a)(3).

Certified by:



Date: October 30, 2024

Clinton Carlson, Ph.D., P.E.
Michigan License Number 6201066842
Geotechnical Engineer

Copy to: Chris Paquette (DTE)
Chris Scieszka (DTE)
Mark Green (DTE)
Nick Reidenbach (DTE)

Geosyntec consultants
Geosyntec Consultants of Michigan

Exhibit 2

Initial Hazard Potential Assessment

AECOM
27777 Franklin Road, Suite 2000
Southfield, MI 48034

248.204.5900 tel

April 12, 2018

Mr. Robert Lee
DTE Electric Company
One Energy Plaza
Detroit, MI 48226

RE: CCR Impoundment Hazard Potential Classification Assessment: Inactive Bottom Ash Impoundment (Area 15), Monroe Power Plant, DTE Energy, Monroe, Michigan

Dear Mr. Lee:

As requested by DTE Energy (DTE), AECOM is pleased to present the result of our initial hazard potential classification assessment for the Monroe Power Plant Inactive Bottom Ash Impoundment (Area 15).

Background

On April 17, 2015, the US Environmental Protection Agency (USEPA) published rule 40 CFR Part 257 titled Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule). The CCR Rule requires that an initial hazard potential classification assessment for an inactive CCR surface impoundment be completed by April 17, 2018. 40 CFR §257.100 (e) specifically states:

40 CFR §257.100(e)(3)

- *(v) No later than April 17, 2018, complete the initial hazard potential classification, structural stability, and safety factor assessments as set forth by § 257.73(a)(2), (b), (d), (e), and (f).*

40 CFR §257.73(a)(2)

- *(2) Periodic hazard potential classification assessments. (i) The owner or operator of the CCR unit must conduct initial and periodic hazard potential classification assessments of the CCR unit according to the timeframes specified in paragraph (f) of this section. The owner or operator must document the hazard potential classification of each CCR unit as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment. The owner or operator must also document the basis for each hazard potential classification.*

  (ii) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification specified in paragraph (a)(2)(i) of this section was conducted in accordance with the requirements of this section.

Area 15 is an inactive CCR surface impoundment as defined by 40 CFR §257.53. It consists of a bottom ash impoundment bordered by Lake Erie to the east and the Plant cooling water discharge channel to the west, which discharges cooling water from the Monroe coal power plant to the lake. The impoundment is separated from the cooling water discharge channel and Lake Erie by a perimeter dike. The southern boundary of the ash pond is formed by an earthen divider berm constructed of aggregate material, which separates the ash pond from the process waste and stormwater basin to the south. The normal water surface elevation of Area 15 is approximately 575 ft (NAVD88) and of Lake Erie/the cooling water discharge channel is 572 ft (NAVD88). Industrial process water and storm water discharge from Area 15 into the cooling water discharge channel via an overflow weir.

Hazard Classification

In AECOM's opinion the CCR unit at the Monroe Power Plant should be classified as a **significant** hazard potential CCR surface impoundment.

The definitions section of the CCR Rule states the following (40 CFR §257.53):

> *Hazard potential classification means the possible adverse incremental consequences that result from the release of water or stored contents due to failure of the diked CCR surface impoundment or mis-operation of the diked CCR surface impoundment or its appurtenances. The hazardous potential classifications include high hazard potential CCR surface impoundment, significant hazard potential CCR surface impoundment, and low hazard potential CCR surface impoundment, which terms mean:*
>
> *(1) High hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation will probably cause loss of human life.*
>
> *(2) Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.*
>
> *(3) Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.*

The reason Area 15 is **not** a **high** hazard potential CCR surface impoundment is that it is unlikely that failure of the unit and a resulting release of the impounded water would result in the loss of human life. The impounded water would either be released directly into Lake Erie to the east or into the cooling water discharge channel to the west which would then drain directly into Lake Erie. Neither scenario is likely to cause loss of human life.

The reason Area 15 is **not** a **low** hazard potential CCR surface impoundment is that losses due to an uncontrolled release would not be principally limited to DTE's property. As stated above, the impounded water would either be released directly into Lake Erie to the east or into the cooling water discharge channel to the west which would then drain directly into Lake Erie.

There are, however, environmental concerns with a release from the impoundment. A release of water from the impoundment into Lake Erie would likely be accompanied by a release of at least some of the CCR residuals from the impoundment. This would result in a considerable amount of siltation to the lake and environmental damage. This is the primary reason AECOM regards the unit as a significant hazard potential CCR impoundment.

Conclusion

It is AECOM's opinion Area 15 at the Monroe Power Plant should be classified as a significant hazard potential CCR surface impoundment.

AECOM appreciates this opportunity to provide assistance to DTE at the Monroe Power Plant. Please contact us if you have any questions.

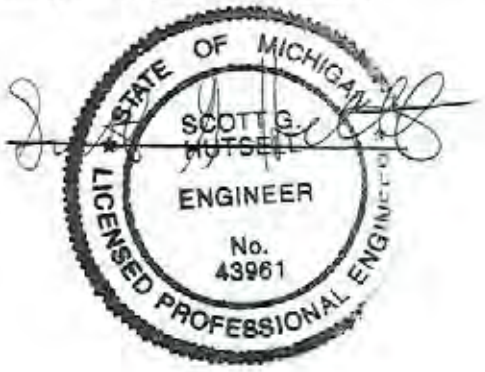
Sincerely,

Scott G. Hutsell, PE
Senior Project Manager

cc: Mark Rokoff, P.E.

Professional Engineer Certification

I, Scott G. Hutsell, being a Registered Professional Engineer, in accordance with the Michigan Professional Engineer's Registration, do hereby certify to the best of my knowledge, information and belief, that this Initial Hazard Potential Classification Assessment, dated April 12, 2018, meets the requirements of 40 C.F.R. § 257.73, is true and correct, and has been prepared in accordance with generally accepted good engineering practices.

SIGNATURE 

DATE 04/16/18

Geosyntec consultants
Geosyntec Consultants of Michigan

Exhibit 3

2024 Hazard Potential Assessment

AECOM
39575 Lewis Drive
Suite 400
Novi, MI 48377
aecom.com

March 4, 2024

Mr. Chris Scieszka
DTE Electric Company
Environmental Management & Safety
One Energy Plaza, 410 G.O.
Detroit, MI 48226

CCR Impoundment Hazard Potential Classification Assessment - Bottom Ash Impoundment, Monroe Power Plant, DTE Energy, Monroe, Michigan

Dear Mr. Scieszka:

As requested by DTE Electric Company (DTE), AECOM is pleased to present the result of the hazard potential classification assessment for the Monroe Power Plant Bottom Ash Impoundment.

Background

On April 17, 2015, the US Environmental Protection Agency (USEPA) published rule 40 CFR Part 257 titled Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule). The CCR Rule requires that periodic updates to the hazard potential classification assessment for inactive CCR surface impoundments be completed every 5-years. 40 CFR §257.73(a)(2) specifically states:

> *- 40 CFR §257.73(a)(2)*
>
> *(2) Periodic hazard potential classification assessments.*
>
> *(i) The owner or operator of the CCR unit must conduct initial and periodic hazard potential classification assessments of the CCR unit according to the timeframes specified in paragraph (f) of this section. The owner or operator must document the hazard potential classification of each CCR unit as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment. The owner or operator must also document the basis for each hazard potential classification.*
>
> *(ii) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification specified in paragraph (a)(2)(i) of this section was conducted in accordance with the requirements of this section.*

The Bottom Ash Impoundment is an inactive CCR surface impoundment as defined by 40 CFR §257.53. The impoundment is bordered by Lake Erie to the east and the Plant cooling water discharge channel to the west, which discharges cooling water from the Monroe Power Plant to Lake Erie. The impoundment is separated from the cooling water discharge channel and Lake Erie by a perimeter dike. The southern boundary of the ash pond is formed by an earthen divider berm constructed of aggregate material, which separates the ash pond from the process waste and stormwater basin to the south. The normal water surface elevation of the bottom ash impoundment is approximately 575 ft (NAVD88) and of Lake Erie/the cooling water discharge channel is 572 ft (NAVD88).

Hazard Classification

In AECOM's opinion the Bottom Ash Impoundment CCR unit at the Monroe Power Plant should be classified as a **significant** hazard potential CCR surface impoundment.

The definitions section of the CCR Rule states the following (40 CFR §257.53):

> *Hazard potential classification means the possible adverse incremental consequences that result from the release of water or stored contents due to failure of the diked CCR surface impoundment or mis-operation of the diked CCR surface impoundment or its appurtenances. The hazardous potential classifications include high hazard potential CCR surface impoundment, significant hazard potential CCR surface impoundment, and low hazard potential CCR surface impoundment, which terms mean:*
>
> *High hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation will probably cause loss of human life.*
>
> *Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.*
>
> *Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.*

The reason the Bottom Ash Impoundment is **not** a **high** hazard potential CCR surface impoundment is that it is unlikely that failure of the unit and a resulting release of the impounded water would result in the loss of human life. The impounded water would either be released directly into Lake Erie to the east or into the cooling water discharge channel to the west which would then drain directly into Lake Erie. Neither scenario is likely to cause loss of human life.

The reason the Bottom Ash Impoundment is **not** a **low** hazard potential CCR surface impoundment is that losses due to an uncontrolled release would not be principally limited to DTE's property. As stated above, the impounded water would either be released directly into Lake Erie to the east or into the cooling water discharge channel to the west which would then drain directly into Lake Erie.

There are, however, environmental concerns with a release from the impoundment. A release of water from the impoundment into Lake Erie would likely be accompanied by a release of at least some of the CCR residuals from the impoundment. This would result in a considerable amount of siltation to the lake and environmental damage. This is the primary reason AECOM regards the unit as a significant hazard potential CCR impoundment.

Conclusion

AECOM's opinion is that the Bottom Ash Impoundment at the Monroe Power Plant falls under the definition of the rule as a significant hazard potential CCR surface impoundment.

AECOM appreciates this opportunity to provide assistance to DTE at the Monroe Power Plant. Please contact us if you have any questions.

Sincerely,

AECOM Technical Services, Inc.

Scott G. Hutsell, PE
Program Manager
AECOM
M: 517.505.1301
E: scott.hutsell@aecom.com

Professional Engineer Certification

Scott G. Hutsell, being a Registered Professional Engineer, in accordance with the Michigan Professional Engineer's Registration.do hereby certify to the best of my knowledge, information and belief. that this Hazard Potential Classification Assessment, dated March 4, 2024, meets the requirements of 40 CFR § 257.73, is true and correct, and has been prepared in accordance with generally accepted good engineering practices.

Signature: _____ Date: 03/04/24

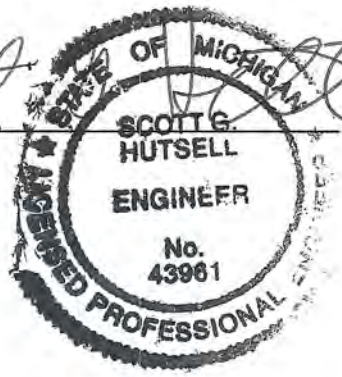


Exhibit 4

CCR Basin Inspection Form

WEEKLY INSPECTION REPORT - CCR SURFACE IMPOUNDMENT

Basin Name: Monroe Power Plant Bottom Ash Basin–Area 15	**Date & Time:**
Owner/Operator: DTE Energy	**Weather:**
Qualified Person:	**Precipitation** (since last inspection):

I. SURFACE IMPOUNDMENT Description of Operation: Inactive CCR Impoundment with continuous flow of process water.

ITEM	Yes	No	Description (indicate problems on map)
1. Are there problems with the rip rap on the outside edge of the east cell that reduce erosion protection?			If yes, describe (size of area, location, severity, etc.)
2. Is there any erosion around the impoundment?			If yes, describe (size of area, location, severity, etc.)
3. Is there excessive CCR build-up above the water surface?			There is a large area of bottom ash deposited above water surface on the north side of the basin. This is unchanged since ceasing placement of CCR material in basin.

II. CREST Description of Crest: Flat unpaved surface on all surfaces except the south side. South side is an aggregate wall with a low point designed to prevent overtopping of the external walls of the impoundment/ basin.

ITEM	Yes	No	Description (indicate problems on map)
1. Any trees or undesired vegetation on crest?			If yes, describe.
2. Are driving surfaces in inadequate condition?			If yes, describe.
3. Any depressions, animal burrows, ruts or holes on crest?			If yes, describe (size, depth, location)
4. Any cracks on crest?			If yes, describe (length and width, location and direction of cracking, etc.

III. WALLS (North, East, and West Sides)

ITEM	Yes	No	Description (indicate problems on map)
1. Any depressions, holes, or erosion?			If yes, describe (size, location, severity, etc.)
2. Is there evidence of riprap erosion on the east and west sides?			If yes, describe (size, location, etc.)
3. Are there any cracks or indication of distress?			If yes, describe (location, severity, etc.)
4. Any observable concerns with sheet piling anchorage?			If yes, describe (location, severity, condition, etc.)

IV. STONE/ AGGREGATE WALL (SOUTH SIDE)

ITEM	Yes	No	Description (indicate problems on map)
1. Any areas of depressions, holes, or erosion of the wall?			If yes, describe (size, location, severity, etc.)
2. Is there evidence that the wall is not stable, sinking/ settling or change in width?			If yes, describe (location, severity, etc.)
3. Are there any cracks or indication of distress?			If yes, describe (size, location, severity).

V. INLET AND OUTLET STRUCTURES – Max Pool Level is 8.12" above the weir due to NPDES permit

1. Is the water level above the weir within normal range (0" – 8")? _____ (Yes/No)

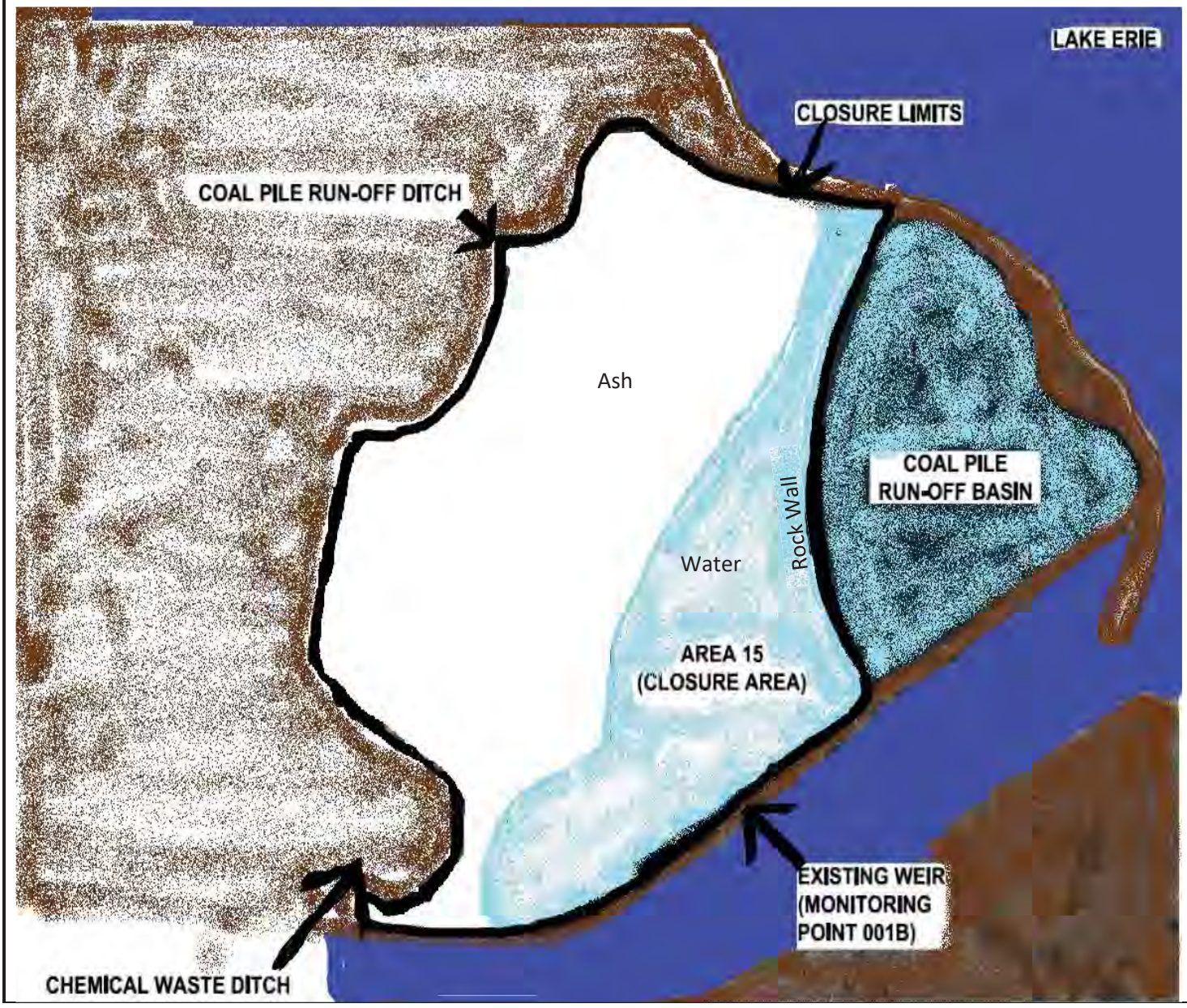
How would you describe the overall condition of …?	Functioning Normally	Not Functional	Deteriorated	Damaged	Other (describe):
2. Inlet Structures					
3. Rip Rap after weir?					
4. Weir					

ITEM	Yes	No	Description (indicate problems on map)
5. Is there erosion present around the outlet riprap?			If yes, describe (size of area, location, severity, etc.)
6. Is there evidence of erosion or settlement around the box culvert?			If yes, describe (size of area, location, severity, etc.)
7. Are there obstructions that prevent free flowing at the weir outlet?			If yes, describe (type of debris, reason for obstruction, etc.)
8. Are there unusual characteristics to the discharge?			If yes, describe (type of debris, reason for obstruction, etc.)

VI. MISCELLANEOUS ITEMS AND OTHER OBSERVATIONS

ITEM	Yes	No	Description (indicate problems on map)
1. Is the water level above the Rock wall on the south side?			If yes, describe.
2. Are the tie lines from the inactive basin and the coal pile run off properly screened?			If no, describe.

3. Other observations (changes since last inspection, etc.):



Geosyntec consultants
Geosyntec Consultants of Michigan

Exhibit 5

Crisis Response Process Coal Ash Pond Failure Communication Plan and Q&A

Crisis Response Process Coal Ash Pond Failure Communication Plan

General Information

Project Title	Crisis Response Process (CRP)- Coal Ash Pond Failure
Planner Name & Phone	Colleen Rosso 248-496-3536 & Chris Lamphear 248-425-2331
Business Partner Name & Phone	Christy Clark – 313.701.0623
Business Partner Organization	Environmental Management and Safety

Background Summary

Project Summary	In preparation for each of the identified Crisis Response Processes (CRP), the lead director and the executive champion have agreed upon the details of a mock scenario that would test the readiness of each of the identified organizations within DTE that would have a role in addressing a crisis. This is one of the scenarios in which Corporate Communications would have a supporting role. This particular mock scenario suggests: • A catastrophic failure of the coal ash pond at the Monroe Power Plant.
Communication Objectives	• Provide information to protect the public • Provide accurate and relevant information about the company and/or the crisis event in order ensure proper context in any public or private discussions about DTE Energy • Control (to the extent possible) the dissemination of information about the scenario to the appropriate audiences identified by DTE Energy
Key Messages	• Safety is the number one priority for DTE; safety of our customers, our employees and the public. • We are investigating the circumstances that led to the event. • We are working with local and state authorities and first responders to secure the site, ensure the safety of everyone involved and mitigate any potential environmental impacts. • We will get to the bottom of this.
Measures	• Total number of favorable/neutral media inquiries within the first 24-48 hours of the event • Total number of favorable/neutral stories published over the life of the story/event • Total number of negative social media posts within the first 12-24 hours of the event • Number of media interviews granted

Risk Analysis	• Engage PR firm: If a designated Public Relations (w/ financial communications expertise) firm is not identified within 24 hours of an escalation of the event, there is a significant risk that DTE will lose initial "control" of the story and will likely be in a "defensive" posture. • Speaking for the company: There needs to be a determination within the process that determines who is authorized to speak to the public following an event like this. In this case, the Reputational Risk Process will account for the initial approach to responding to an event like this. The RRP will likely role up into a Crisis Management Process that will be directed by senior level executives of the company • Stock movement: Any significant injuries, loss of assets or deaths associated with the initial event could have an impact on the company's stock performance in the short term. There will need to be consideration of a stock or customized communication to identified stakeholders in response to the incident.

Team Members

Include Corporate Communications and Business Partner team members

Member Name	Organization & Role	Phone
Jerry Norcia	Chairman and CEO - DTE	313-235-6444
Trevor Lauer	President and COO - DTE	313-605-7275
JoAnn Chavez	Sr. Vice President and Chief Legal Officer	313-930-0941
Mike Solo	General Counsel - DTE	313-235-9512
Shawn Patterson	Vice President - Environmental Management and Safety	313-819-2417
Christy Clark	Director - Environmental Management and Safety	313-701-0623
Fadi Mourad	Director - Environmental Strategy	734-302-8947
Inderpal Deol	Vice President - Energy Supply	313-655-8394
Mike Twomley	Plant Director	313-320-7096
Paula Silver	Sr. Vice President - Communications & Public Affairs - DTE	313-235-4225
Chris Lamphear	Manager Media Relations - DTE	248-425-2331
Colleen Rosso	Communications Manager - DTE	248-496-3536
Daniel Miner	Director - Corporate Communications - DTE	313-235-5525
Daniel Mahoney	Director - Regional Relations - DTE	313-235-5450
Molly Luempert-Coy	Regional Relations - DTE	734-332-8155
Bradley Clark	Manager - Business Performance - DTE	313-235-3764
Andrea Hayden	Legal - DTE	734-546-0179

Recommended Tactics

- Invoke the Stakeholder Communications Process
- Develop Media Response
- Develop Employee and Stakeholder Messages
- Be prepared to respond to questions from the media
- Provide high-level messages to senior executives for
- Engage 3rd party communications consultant for additional resource deployment and consultation (Agency has already been retained)

Q&A about Coal Combustion Residuals

What is coal ash?

-Coal ash is a produced from the burning of coal in coal-fired power plants. Coal ash produces a number of by-products from burning coal, including: Fly ash and bottom ash. Fly ash is a very fine powdery material, with a consistency similar to flour, composed mostly of silica, similar to sand. Bottom ash is a coarse, angular ash that forms in the bottom of the furnace. Other by-products of coal are: boiler slag, flue gas desulfurization material, fluidized bed combustion ash, cenospheres, and scrubber residues.(Environmental Protection Agency, 2015)

What do power plants do with coal ash?

-Coal ash can be recycled, disposed of or used in different ways depending on the type of by-product, the processes at the plant, and the regulations in place the power plant has to follow. The Monroe Power Plant stores its fly ash within its on-site Fly Ash Basin. (Environmental Protection Agency, 2015)

Why is coal ash reused?

-Reusing coal ash creates many different environmental, economic and product benefits. Environmental benefits include: reduced greenhouse gas emissions, reduces the need to dispose in landfills, and reduced use of other materials. Economic benefits include: reduced costs associated with coal ash disposal, increased revenue from the sale of coal ash, and savings from more cost efficient materials. Product benefits include: improved strength, workability, and durability of materials. (Environmental Protection Agency, 2015)

Is fly ash hazardous?

-Fly ash contains many inert substances and residual amounts of minerals that occur naturally in coal, such as arsenic, cadmium, lead, mercury, selenium. It is used in many building products like cement, mortar, stucco, and grout. Contact with wet coal fly ash does not present a serious health risk. Direct skin contact may cause localized irritation and breathing small amounts of fly ash for a short period of time is unlikely to be a health concern. Washing affected areas and removing and washing clothing are simple steps to take to remove the irritation. (Tennessee Valley Authority, 2013)

Are there hazards with skin contact with coal ash?

-Most people never touch coal ash. Skin contact is generally limited to power plant workers and those who produce cement, concrete, autoclaved aerated concrete or some other ash-based product. However, some highway departments use bottom ash for snow and ice control, leaving deposits on roads and in gutters where people or their pets might touch it or track it into their houses. Based on the experience of those who work closely with it, adverse health effects from skin contact with coal ash appear to be extremely unlikely. (American Coal Ash Association, 2014)

Is the air safe?

-Breathing airborne particulates including fly ash over long periods of time can irritate the respiratory system. People with existing lung diseases such as bronchitis, emphysema, and chronic obstructive pulmonary disease (COPD) should avoid breathing coal fly ash dust. (Tennessee Valley Authority, 2013)

What are the potential impacts to human health?

-As a precautionary measure, EPA recommends that people avoid direct contact with the coal ash, including contact with submerged or floating ash. If you make direct contact with coal ash, wash it off with soap and water. While coal ash in this situation is wet and unlikely to become airborne, in instances where coal ash is dry, it can become airborne and pose a potential health hazard if inhaled over a long period of time. (Environmental Protection Agency, 2015)

What are the potential impacts to wildlife?

-Fish, wildlife and other natural resources can be injured when hazardous substances enter the environment. A spill to a river ecosystem can impact aquatic life and animals in different ways. Coal ash can cover the habitat where animals live, or contaminants can potentially cause harm directly to aquatic life. (Environmental Protection Agency, 2015)

References

1) American Coal Ash Association, 2014 - *About Coal Ash, CCP FAQs*.

   Retrieved from http://www.acaa-usa.org/About-Coal-Ash/CCP-FAQs

2) Environmental Protection Agency, April 8, 2015 - *Frequently Asked Questions (FAQs) about the Duke Energy Coal Ash Spill in Eden, NC*.

   Retrieved from http://www2.epa.gov/dukeenergy-coalash/frequently-asked-questions-faqs-about-duke-energy-coal-ash-spill-eden-nc

3) Tennessee Valley Authority, December 5, 2013 - *Kingston Ash Release, Frequently Asked Questions*.

   Retrieved from http://www.tva.gov/kingston/faq.htm

Geosyntec consultants
Geosyntec Consultants of Michigan

Exhibit 6

Crisis Response Plan – Public Information Plan, A.17 Environmental Release

Crisis Response Plan - Public Information Plan

A.17 Environmental Release

Corp Comm contact name & phone	Paula Silver, Sr. VP, Communications & Public Affairs, 248-820-7976 Colleen Rosso, Manager, Corporate Communications, 248-496-3536 Chris Lamphear, Manager, Corporate Communications, 248-425-2331
Business partner name & phone	Shawn Patterson, VP - EM&S, 313-819-2417 Christy Clark, Director - EM&S, 313-701-0623
Business partner organization	Environmental Management and Safety Energy Supply

Background Summary

Project Summary	A breach occurs at the coal ash pond located at DTE's Monroe power plant, spilling ash into Lake Erie and/or land. The spill results in the closure of Interstate 75 and/or impacts the Lake Erie shoreline. Possible public health safety issues, deaths or injuries, major road closures and disruption to transportation. Potential ecological impacts on wildlife, migratory birds, waterfowl and to food and water source for eagles and waterfowl.
Public Information Objectives	• Provide accurate, relevant and timely information about the company and/or the crisis in all contexts • Demonstrate command of the situation through active communication, ensuring business continuity • Maintain consistency, continuity of messages to all key stakeholders • Protect DTE Energy's brand, reputation and valuation
What do we need to know?	• When, where and how did the event occur? • What is the scope of the event? • Are there injuries or deaths? • Are there immediate or long-term public health concerns? • Are there immediate or long-term wildlife/Lake Erie concerns? • Will I-75 closure cause delays of goods and services to Detroit • How much does the media/public know? • Is the issue being discussed on social media? • What is the potential liability for the company? • What impact will this have on DTE's ability to do business? • Impact on regulators? • Impact on employees, customers?

Potential Audiences/ Stakeholders – external *(rank in order of importance)*	NOTE: These stakeholders would be engaged at the appropriate time, based on the escalation of the situation and when there may be an impact. • Media • Public • Government Officials (local, state and federal) • Employees • BOD • Shareholders • Regulators (state and federal) • Customers • Retirees • Community Leaders • Other utility companies/energy companies
What **Information** to provide to theses Audiences/ Stakeholders – **external**	• Scope of event – who, what where, when, why and how of event • Impacts to public health • Impacts to wildlife and water • Impacts to transportation/goods and services • Impacts to the stock price • Impacts to employees • Impacts to communities • Impacts to business • Customer impacts • Estimated time of impact • Geographical region of event, geographical impact of event • Next time for an update, based on scenario and series of events
What **Channels** to utilize for theses Audiences/ Stakeholders – **external**	NOTE: These channels would be used at the appropriate time during the situation, depending on the escalation of the situation and desire to broadly inform internal stakeholders. These may be repeated based on escalating events News media – issuing statement/response when called • Media calls and press conferences • Social media (blog, Facebook and Twitter updates mirror media updates) • DTE Website • E-blast (customers – if rises to a level where service is impacted) • Email • In-person meetings (where/when necessary) • Investor and Retiree communication re: impact to stock prices • Government officials and Community Leaders (meetings, calls and emails)

Potential Audiences/ Stakeholders – internal *(rank in order of importance)*	• Legal • Senior leaders • Corporate and Government Affairs • Investor Relations • Regulatory • Employees • Corporate Secretary • Corporate Finance • Corporate Strategy
What **Information** to provide to theses Audiences/ Stakeholders – **internal**	• Scope of event – who, what where, when, why and how of event • Impact to public health (deaths, injuries, air quality, water quality) • Impact to the environment (wildlife migration, fish, etc.) • Impact to businesses (fishing, marinas, etc.) • Impact to government officials (local, state and federal levels) • Impact to employees • Impact to customers • Impact to regulators • Impact to investors and wall street • Impact to our ability to do business • Immediate action steps as to what the company is doing to resolve issue • Timeline on recovery • Communication timeline for updates on situation
What **Channels** to utilize for theses Audiences/ Stakeholders – **internal**	NOTE: These channels would be used at the appropriate time during the situation, depending on the escalation of the situation and desire to broadly inform internal stakeholders. These may be repeated based on escalating events • Implement Stakeholders Communication Process • DTE Now (immediate message to employees) • Leader Notes (with FAQ for staff) • Quest top story • DTE News updates • Talking points – used with all levels of employees • Face to face leader meetings • Phone update from CEO

Exhibit 7

Spill and Release Reporting

Spill and Release Reporting

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1.0 Applicability

This Environmental Program applies to any DTE Energy organization in Michigan that has the capability of spilling or releasing oil, hazardous materials or polluting materials into the environment.

This program **DOES NOT** apply to the control and cleanup of specific facility spills/releases. Refer to organization/facility specific plans.

This program **DOES NOT** apply to spills of Polychlorinated Biphenyls (PCBs) 50 ppm or greater. Environmental Program 9, *PCB Management*, should be referenced for PCB spills.

This program **DOES NOT** address EPCRA's Continuous Release Reporting requirements due to excess air emissions above a stated air permit limit. Contact the EM&R Emission Quality Group for further guidance if excess air emission above the air permit limit exceeds the 24-hour RQ.

This program **DOES NOT** apply to release reporting of Ozone Depleting Substances. Refer to EP-11, Ozone Depleting Substances, for record keeping requirements for leaks. Release reporting is not required.

This program DOES NOT apply to facilities and projects outside of Michigan; these must have specific spill release and reporting programs and procedures of their own.

2.0 Purpose

This Environmental Program sets policy and provides regulatory compliance guidance and instruction for spill or release reporting within DTE Energy.

3.0 Definitions

3.1 **Corporate** – For the purpose of reporting under this Environmental Program, Corporate means DTE Energy's Corporate Communications or Regional Relations.

3.1 **Environment** – For notification purposes, the environment impacted by a spill or release means one or more of the following:

3.1.1 Soil, grass or gravel.

3.1.2 Navigable water, shoreline, surface water, groundwater or storm sewers connected to waters of the State, or sanitary sewer systems.

3.1.3 Ambient air through volatilization (primarily chlorine or ammonia).

Note: *"Soil, grass or gravel" are synonymous with the terms "ground surface" and "land" for the purposes of this environmental program.*

3.2 **Facility Specific Plans** – Emergency Response plans, as required by regulation. Facilities are

required to comply with facility-specific Emergency Response plans. Plans cover the prevention and control of releases of oil, hazardous materials, polluting materials and regulated storm water.

3.3 **Hazardous Substance** – Any material listed on the CERCLA Hazardous Substance List, 40 CFR 302.4.

3.4 **Hazardous Waste** – A waste regulated under RCRA and NREPA Part 111.

3.5 **Immediate** – Immediate actions include, but are not limited to stopping the spill or release if it can be done safely, enforcing safety and security measures, containing the spill or release if it can be done safely and making notifications.

3.6 **Liquid Industrial Waste** – A waste regulated under NREPA Part 121.

3.7 **Oil** – Oil of any kind or in any form, including any of the following; petroleum, gasoline, fuel oil, grease, oily sludge, oil refuse, oil mixed with waste.

3.8 **Polluting Material** – Oil, salt or any material listed on the Michigan Part 5 list of polluting materials (R324.2009, Table 1).

3.9 **Release** – A spill, leak, discharge, emission, or leaching of a polluting material or hazardous substance, or abandonment of drums of a hazardous substance, into the environment that is equal to or greater than its reportable quantity within a 24 hour period.

Note: *If a spill, leak or discharge has the potential to become a release, it should be reported as if it was an actual release.*

3.10 **Salt** – Sodium chloride, potassium chloride, calcium chloride, magnesium chloride and solutions or mixtures of these compounds in solid or liquid form.

3.11 **Spill -** A discharge of a substance that contacts the environment.

3.12 **Suspected Release (Underground Storage Tanks)** – Is defined as:

3.12.1 Interstitial alarm (double-walled tanks and/or piping).

3.12.2 Inventory reconciliation out of tolerance for two consecutive months (single-walled tanks).

3.12.3 Unexplained water in tank (single-walled tanks).

3.12.4 Unexplained failure of monthly leak test (single-walled tanks).

3.12.5 Unexplained presence of a regulated substance in underground structures (e.g., conduit, basements) at or near the location of an underground storage tank.

3.12.6 Unusual operating conditions, such as erratic behavior of product dispensing equipment or the sudden loss of product from the tank, unless the system equipment is found to be defective but not leaking and is immediately repaired or replaced.

3.12.7 Visual or olfactory evidence of a release.

4.0 Requirements

CAUTION: **REGARDLESS OF THE NOTIFICATION REQUIREMENTS BELOW, CLEAN UP SPILL IN ACCORDANCE WITH EXISTING EMERGENCY PLANS AND PROCEDURES.**

4.1 Notification Exemptions

4.1.1 General exemptions from notifications are:

A. Leaks from personal vehicles.
B. Spills on asphalt, concrete, or any impervious surface.
C. Spills of demineralized water.
D. Lawn watering.
E. Fire header flushing and testing.
F. Building washing – using no detergents, soaps or other additives.

Note: *Michigan's Part 5 Rules allow for certain exemptions from spill reporting requirements. If a Michigan Part 5 Rules polluting material is released in quantities under the Threshold Reporting Quantity (TRQ), within a 24 hour period, no reporting is required. Begin notifications immediately if release of a TRQ cannot be immediately determined.*

4.1.2 Specific reporting exemptions for Michigan Part 5 Rules include:

A. Spilling, leaking or discharging less than 1,000 gallons of a polluting material into a secondary containment structure that complies with the Part 5 Rules, if recovery of the material is initiated within 24 hours of detection, is completed as soon as practicable, but not more than 72 hours after detection and if no polluting materials are released directly or indirectly to any public sewer system or to the surface waters or groundwater of the state.
B. Spilling, leaking or discharging less than 55 gallons of oil to the ground surface, if the spill, leak or discharge is detected and the oil recovered within 24 hours of the spill, leak, or discharge, and if oil is not released directly or indirectly to a public sewer system or to the surface waters or groundwater's of the state.
C. Spills or leaks from installed electrical equipment. Examples of electrical equipment include transformers, capacitors, reclosures, voltage regulators, rectifiers, circuit breakers, and bushings.

Note: Spills or leaks from installed electrical equipment are NOT exempt from internal reporting within the Company, and MUST be reported to the on-call DO contact at (313) 235-8122.

D. A permitted release in compliance with an applicable, legally enforceable permit issued under state law.
E. A lawful and authorized discharge into a permitted waste treatment facility.
F. A federally permitted release as defined by CERCLA.

4.2 Spill Notifications

4.2.1 If a spill reaches the environment and is not exempt from notification, use the *SPILL NOTIFICATION FLOWCHART* (Attachment 1) to determine required external notifications.

CAUTION: IF SPILL ENTERS AN NPDES OR SANITARY SEWER SYSTEM (E.G., DETROIT WATER AND SEWERAGE DEPARTMENT, OR DWSD), FOLLOW SPECIFIC PERMIT NOTIFICATION REQUIREMENTS.

4.2.2 Perform external notifications, in accordance with Attachment 1 immediately.

4.2.3 If Attachment 1 indicates that notification is not required, disregard remainder of section 4 and arrange for cleanup.

CAUTION: IMMEDIATELY NOTIFY THE NATIONAL RESPONSE CENTER (NRC) AND/OR LOCAL EMERGENCY PLANNING COMMITTEE (LEPC).

A. Provide the Michigan Department of Environmental Quality (MDEQ) and the NRC and/or LEPC (if required) the following information:

1. Released material,
2. Discovery date and time,
3. Location of the release (NRC requires specific information),
4. Estimated amount of release,
5. Waterway contacted, if any,
6. Description of the source of the release (e.g., transformer, tank),
7. Description of any spill mitigation/cleanup that has been started.

B. Obtain name or operator number of agency representative responding to your call.

C. For NRC notifications, obtain case number for tracking purposes.

D. MDEQ Underground Storage Tanks (UST) notifications:

1. Written/verbal notification is required within 24 hours of suspected or confirmed releases.
2. Contact EM&R to complete this notification.
3. The MDEQ's Release Report (EQP 3826) must be completed. This form is also available on the EM&R Master Forms list.

CAUTION: IF UNTREATED OR PARTIALLY TREATED SEWAGE IS DISCHARGED ONTO LAND OR INTO WATERS OF THE STATE, THE FOLLOWING NOTIFICATIONS SHALL BE MADE WITHIN 24 HOURS:

- **MDEQ,**
- **Local Health Department, and**
- **A daily newspaper of general circulation in the county in which discharge occurred or is occurring. Note: This notification is made by Corporate Communications.**

REFER TO SECTION 6.0 (REFERENCES) OF THIS EP FOR DETAILS.

4.2.4 The facility EM&R or Environmental Affairs representative shall contact the appropriate corporate EM&R SME no later than one calendar day following the spill or release and follow the corrective action requirements below:

A. The facility EM&R or Environmental Affairs representative shall enter the date, location, polluting material released and estimated amount released into Maximo as a Corrective Action within one calendar day following the spill or release. Enter "CENREL" in the classification section of the Corrective Action.

B. Determine who should be lead for the Corrective Action, and request that the Corrective Action be assigned to the appropriate person. This person may be a facility employee, the facility EM&R or Environmental Affairs representative, or the applicable EM&R SME. In all cases, the facility EM&R or Environmental Affairs representative, and/or applicable EM&R SME will be a team member if not the Corrective Action lead.

C. At a minimum, create one activity in the Activities/Action Plan tab for submitting the applicable follow up report by the required date; see Section 4.3 for specific requirements. Assign this activity to the EM&R employee; in most cases this will be the applicable EM&R SME. Additional activities, if known, may be entered at this stage of the corrective action. Work with the Corrective Action lead to ensure that the proper activities are developed as information becomes available regarding the spill or release.

4.2.5 For spills or releases having a potential for significant environmental effect or which may result in media attention, contact Corporate Communications 24-hour media line at 313-235-5555 and Regional Relations at 313-235-3522**.**

4.2.6 Document the notification.

A. Use the ***SPILL OR RELEASE REPORT and NOTIFICATION FORM*** (Example 1). A blank form is available on the EM&R Master Forms list and as a Company eForm.

B. **If the spill is reported under OPA**, follow spill reporting requirements identified in the facility-specific OPA Facility Response Plan.

C. Forward documentation to EM&R within 3 calendar days.

4.2.7 In accordance with agreements between the International Transmission Company (ITC) and the DTE Energy Company, the following oil spill reporting steps shall take place when a spill occurs on the mats at Fossil Generation sites:

Note: *In the interest of environmental protection, DTE Energy may lend assistance in mitigating an ITC spill from reaching navigable waters until adequate resources are available through ITC; however it is not DTE Energy's obligation to clean up and dispose of the material contaminated by the spill.*

A. If a DTE Energy employee (e.g., operator) observes an oil spill from an ITC-owned piece of equipment, they shall report the spill to the Shift Supervisor.

B. The Shift Supervisor will report the spill to the Central System Supervisor.

C. The Central System Supervisor will report the incident to ITC's Operation Resource Control center in Novi.

D. It is ITC's responsibility to report the spill to any regulatory authorities (if applicable) and to respond and clean up the oil spill.

4.2.8 Specific to Distribution Operations spill reporting, when an operator observes an oil spill from an ITC-owned piece of equipment or when a spill from DTE Energy equipment will impact ITC property or equipment, the following actions will take place:

A. The Distribution Operations operator shall report the spill to the DTE Energy Oil Spill Hotline at (313) 235-8122.

B. The Oil Spill Hotline environmental professional will report the incident to ITC's Operation Resource Control center in Novi.

C. It is ITC's responsibility to report the spill to any regulatory authorities (if applicable) and to respond and clean up the oil spill.

4.2.9 Courtesy Notifications to Regulatory Agencies:

A. There are occasions when a spill does not require notification to a regulatory agency, yet the Company may decide to make a notification to one or more agencies as a courtesy to inform the agency of the spill.

B. Notifications, and follow up reports (if applicable), will be made on a case-by-case basis between EM&R and the applicable business unit.

C. The SPILL OR RELEASE REPORT and NOTIFICATION FORM (Example 1) is recommended to be used to document the spill and notifications.

D. Examples of events where courtesy notifications may be appropriate include but are not limited to:

1. Spills of fly ash or other coal combustion residuals on a roadway;

2. Spills of soil and debris on a roadway that were removed in conjunction with a pipeline replacement project.

3. Spills of chemicals that are below the TRQ, but may be in environmentally sensitive areas.

4. Spills to secondary containment that are below the TRQ but have the potential to escalate or draw regulatory attention if not addressed expeditiously.

4.3 Follow-up Reports

4.3.1 EM&R shall submit a follow-up report to regulatory agencies. The Maximo Corrective Action/Activity will be closed when the follow up report is submitted. Closure comments will include pertinent information.

4.3.2 Follow-up reports will be provided to regulatory agencies using the following timeframes:

Agency Notified	Follow-up Report Due
MDEQ – MI Part 5 Report	10 days
NRC	None
(Hazardous Substances and Extremely Hazardous Substances) SERC (through PEAS) and the applicable LEPC	7 days (report must also be submitted to the State Emergency Response Committee (the Michigan SARA Title III program accepts on behalf of the SERC), the applicable LEPC and DTE Energy Legal).
LEPC	7 days (report must also be submitted to the State Emergency Response Committee and DTE Energy Legal).
EPA Region 5 Administrator	60 days after oil release to water from a facility (one spill of 1,000 gallons or more, or two spills of more than 42 gallons from same facility within any 12 month period).
(Hazardous Waste) MDEQ – RMD LEPC and SERC	15 days for Large Quantity Generators and TSDFs if the contingency plan had to be implemented. As soon as practicable (7 days) if the RQ of the waste code has been exceeded and the waste has gone offsite
(UST) MDEQ – RMD	14 working days for either confirmed or retracting a suspected UST release.
County Health Department	10 days, concurrent with MI Part 5 Rules report
MDEQ RMD	30 day report, if requested, for LIW releases.
ITC	5 days
DWSD	5 days
(Sanitary Sewage) MDEQ – RMD County Health Department and Local LEPC and SERC	24 hours (see sections 6.11 and 6.12 for details)

4.3.3 Forward any external spill correspondence received to EM&R.

4.4 Training

4.4.1 Only trained personnel will initiate response to the spill and clean up.

4.4.2 Personnel, who could potentially encounter a spill, should have a general understanding of what they are required to do.

A. DTE Energy, Fossil Generation personnel are required to successfully complete an Environmental Awareness computer-based training module at least once. Fossil Generation personnel who may encounter a spill or release must successfully complete this computer-based or instructor-led training module annually.

5.0 Responsibilities

5.1 **Organization Management** is responsible for:

5.1.1 Ensuring spill or release notifications are made in accordance with this environmental program.

5.1.2 Ensuring organization-specific notification procedures and facility-specific response plans are maintained, as applicable.

5.1.3 Contacting EM&R immediately, if there are reporting or notification questions.

5.2 **Corporate Environmental Management & Resources** is responsible for:

5.2.1 Periodically reviewing and revising this environmental program, as necessary

5.2.2 Submitting follow-up reports as needed.

6.0 References

6.1 40 CFR 302.4, "Designation of Hazardous Substances".

6.2 40 CFR 112, "Oil Pollution Prevention".

6.3 40 CFR 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities", Subpart C and D, or 40 CFR 262.34, "Accumulation Time".

6.4 Michigan Part 5 list of polluting materials (R 324.2009 Table 1).

6.5 Facility-specific National Pollutant Discharge Elimination System (NPDES) Permits.

6.6 Section 3111b of Part 31, Water Resources Protection (911 and Local Health Department Notification)

6.7 Michigan Department of Environmental Quality, Water Resources Division, Part 5 Rules, "Spillage of Oil and Polluting Materials".

6.8 Part 5 Rules Operational Guidance (POG #3) for Installations of Oil Containing Electrical Equipment.

6.9 Facility-specific POTW Permits.

6.10 Section 324.12111 of Michigan Part 121 of 1994 Public Act (P.A). 451, as amended; Liquid Industrial Wastes.

6.11 Section 324.3112a of Michigan Part 31 of 1994 P.A. 451, as amended; Discharge of untreated sewage from sewer system et al.

6.12 MDEQ, Water Resources Division – Report of Discharge, form EQP 5857.

7.0 Implementation Plan

This Program revision is effective when approved. Organizations should review and revise any procedures to implement this Program, as applicable. There is nothing in this Program that precludes organizations from identifying additional organizational requirements or expectations.

Environmental Program approval will be communicated to all organizations by Corporate Communications.

8.1 Attachments (all forms are electronically available through the EM&R forms list)

8.2 Attachment 1, Spill Notification Flowchart

- 8.2.1 Attachment 1(a), Polluting Material Spill
- 8.2.2 Attachment 1(b), Hazardous Substance Spill
- 8.2.3 Attachment 1(c), Oil Spill
- 8.2.4 Attachment 1(d), Underground Storage Tank Release
- 8.2.5 Attachment 1(e), Sanitary Sewage Discharge
- 8.2.6 Attachment 1(f), Liquid Industrial Waste

8.3 Attachment 2, Hazardous Substance Reporting guidance

8.4 Attachment 3, Acronym List

8.5 Example 1, Spill or Release Report and Notification Form

9.0 Revision History (maintain 3 year revision history, minimally)

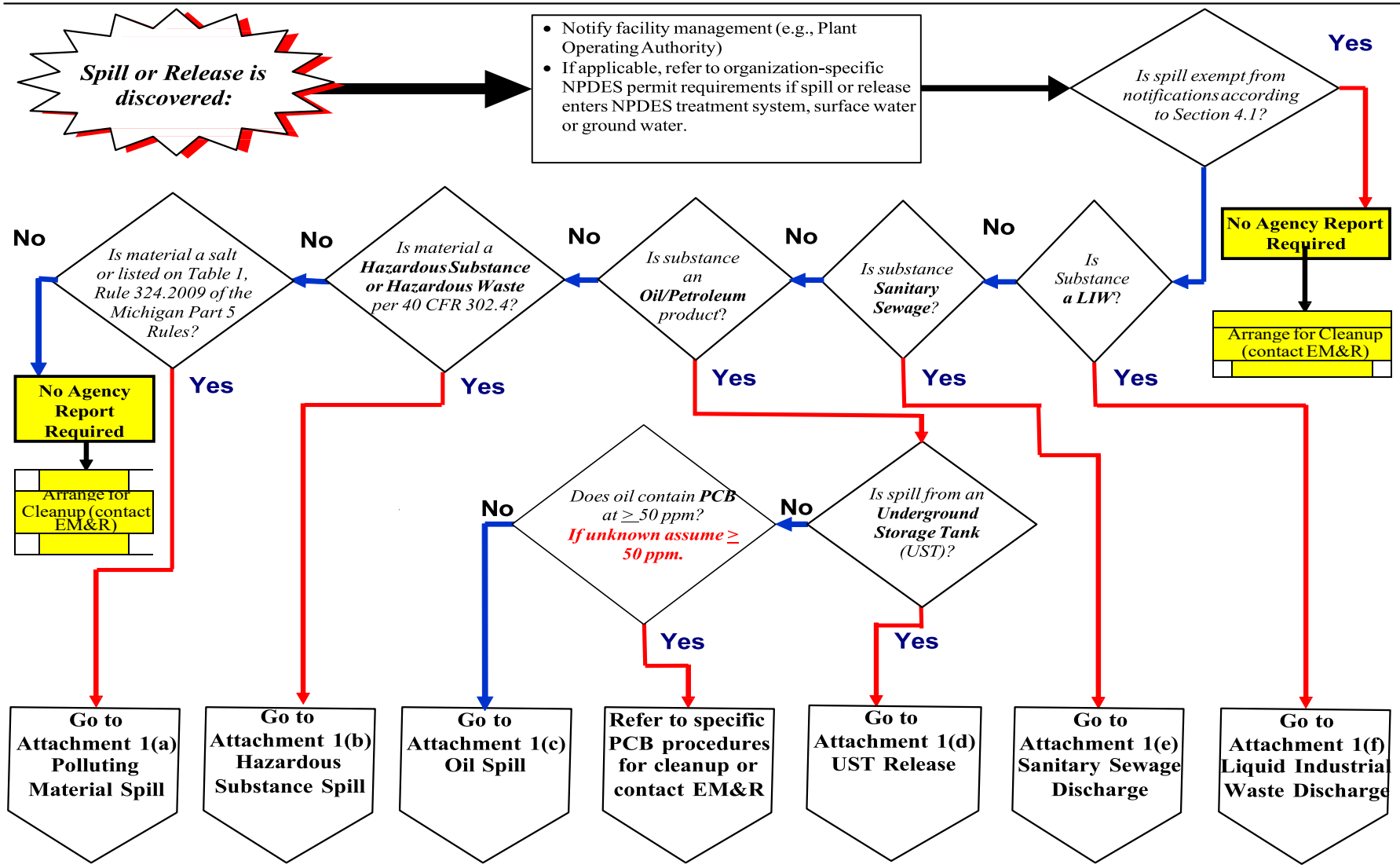
Revision No.	Changes	Author	Date
0	New Environmental Program	Mary Hana	9/28/11
1	Changed Environmental Contact from Mary Hana to Nicholas Chuey at the beginning of this EP. Added CAUTION note to section 4.2.3 regarding discharge of untreated sewage or partially treated sewage. Changed Detroit Edison to DTE Energy throughout the document. Added a line on the table in section 4.3.2, and references in section 6.0 for sanitary sewage discharges. Revised Attachment 1, and added Attachment 1e, to include sanitary sewage discharges.	N. Chuey	3/14/14
2	Clarified the term "Environment" in section 3.1. Modify the exemption description in 4.1.2.B to match Part 5 language. Added note in 4.2.3 and Attachment 1(e) to clarify notifications in the event of a sewage discharge. Expanded and clarified section 4.2.4 to include all DTE business units that are covered by this environmental program. Revised Attachments 1(a) and 1(c) to clarify the steps for spills to containment.	N. Chuey	10/6/14
3	Revised the title and Section 1.0 to describe the applicability more clearly. Modified subsection 3.1.3 to include the word "Ambient". Added subsection 4.2.9 to describe the guidance for making courtesy notifications to regulatory agencies. Added the terms "environment" or "surface" on Attachments 1(b), 1(c) and 1(d), and added an explanatory note to Attachment 1(b). Removed reference to Marysville Power Plant from Attachment 1(c). Replaced the definition of the Resource Management Division with the Office of Waste Management and Radiological Protection, and added the Water Resources Division on Attachment 3. Updated the phone and fax numbers for the Saginaw Bay District office of the MDEQ on Example 1.	N. Chuey	7/8/16

Skiles W. Boyd /s/ 7/8/2016

Approved For Use: **Date**

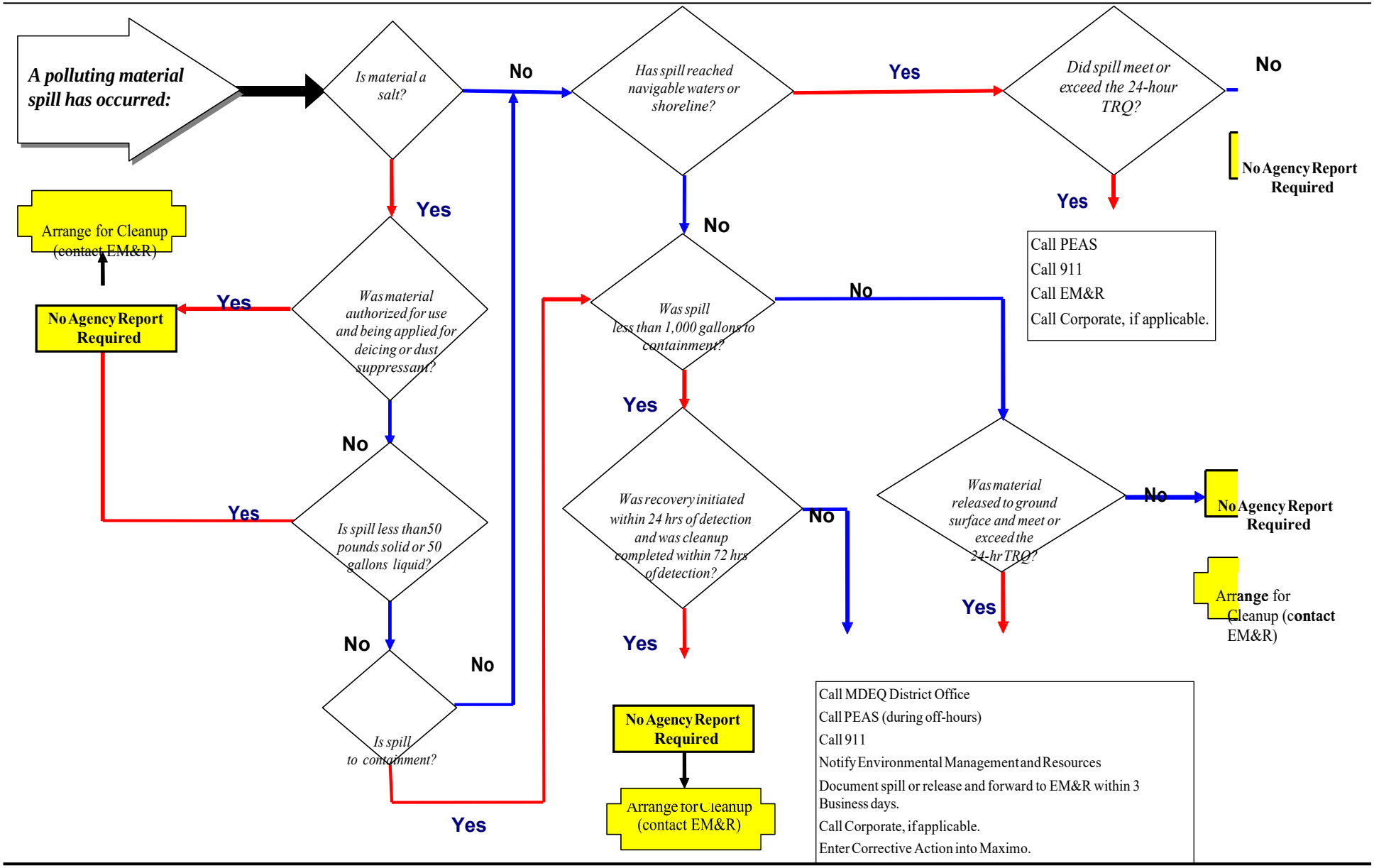
Skiles W. Boyd
Vice President, Environmental Management & Resources
DTE Energy Corporate Services, LLC

Attachment 1
SPILL NOTIFICATION FLOWCHART

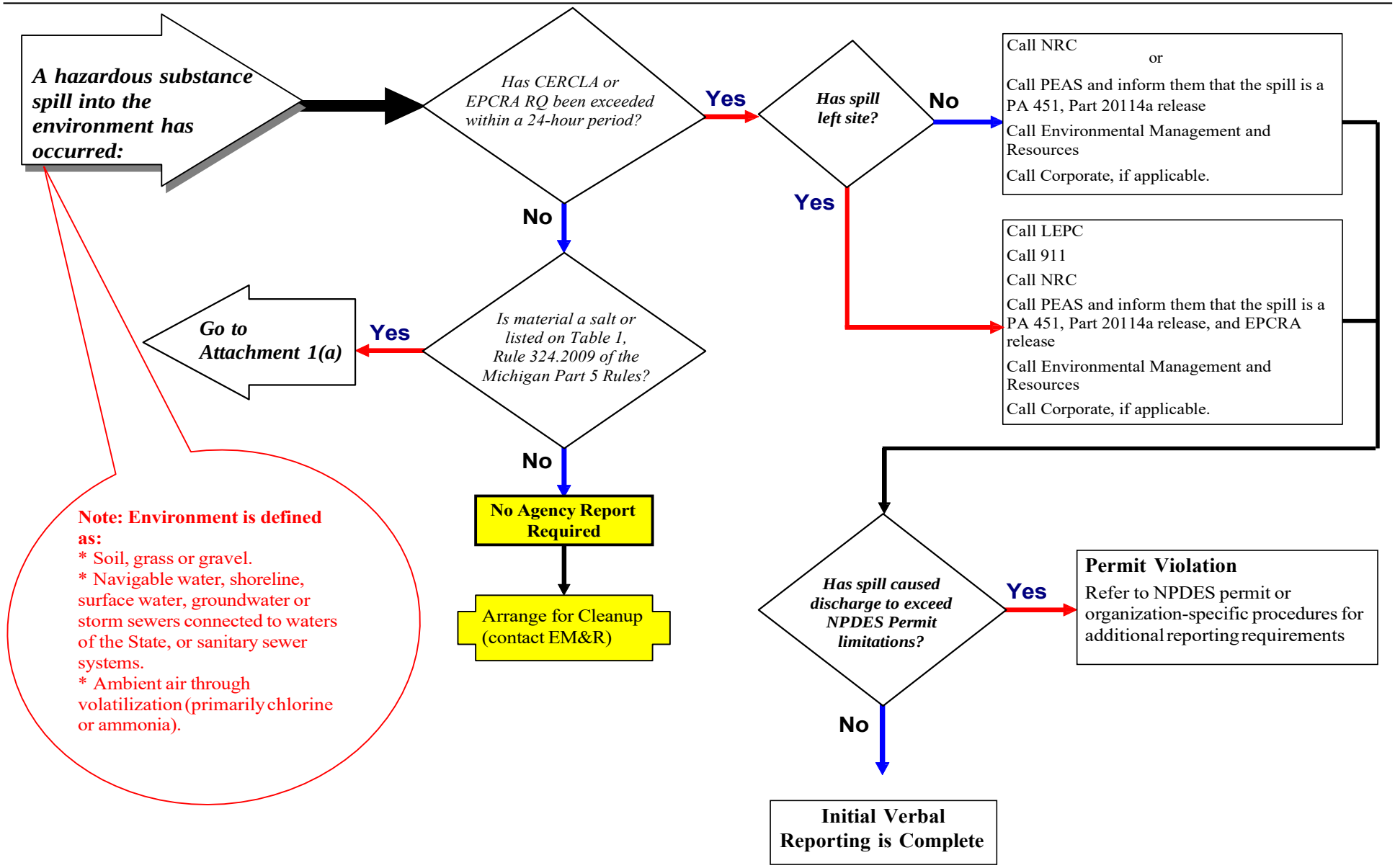


Attachment 1(a)

SPILL NOTIFICATION FLOWCHART

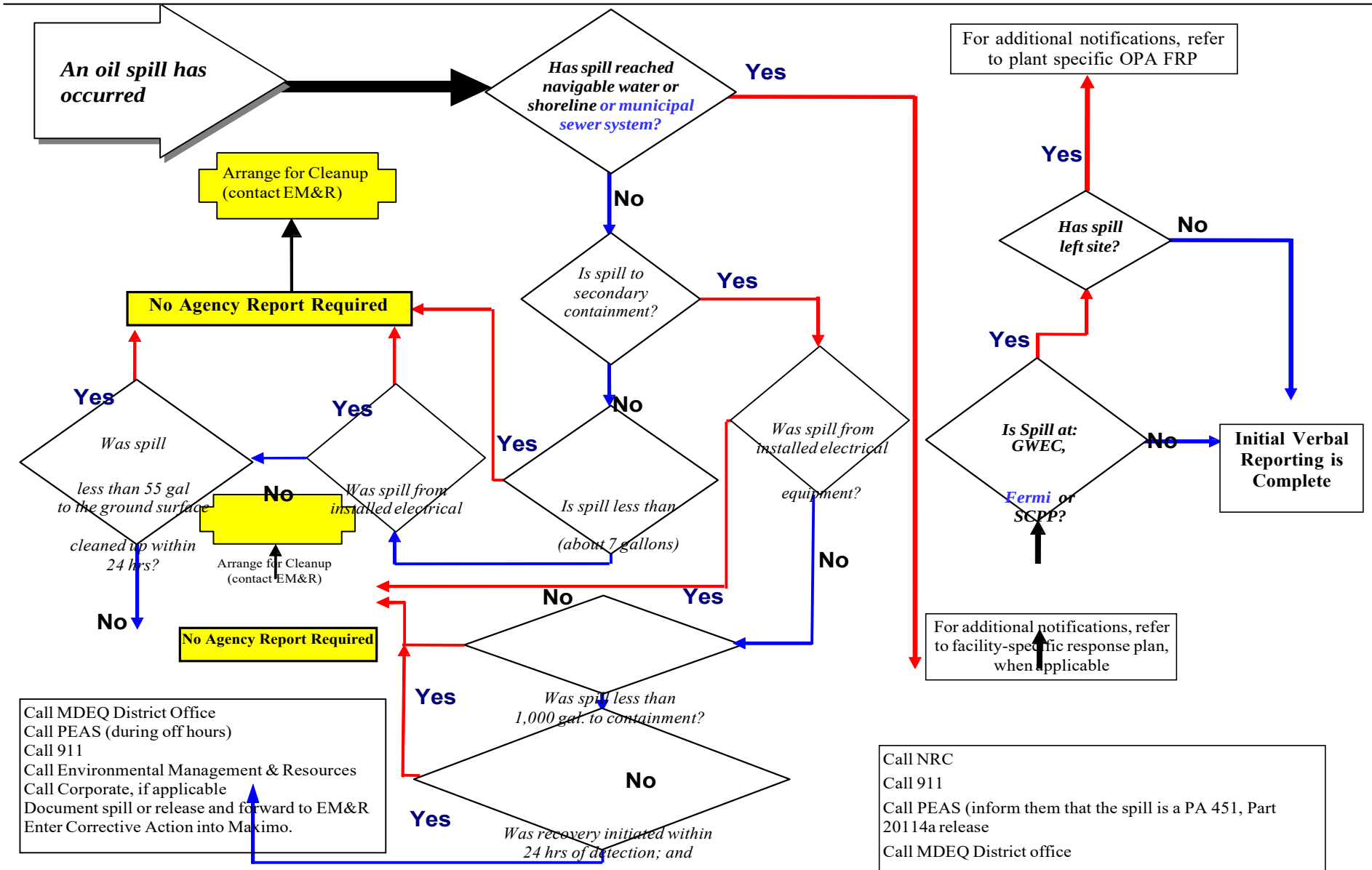


Attachment 1(b)
SPILL NOTIFICATION FLOWCHART



Attachment 1(c)

SPILL NOTIFICATION FLOWCHART



Attachment 1(c)

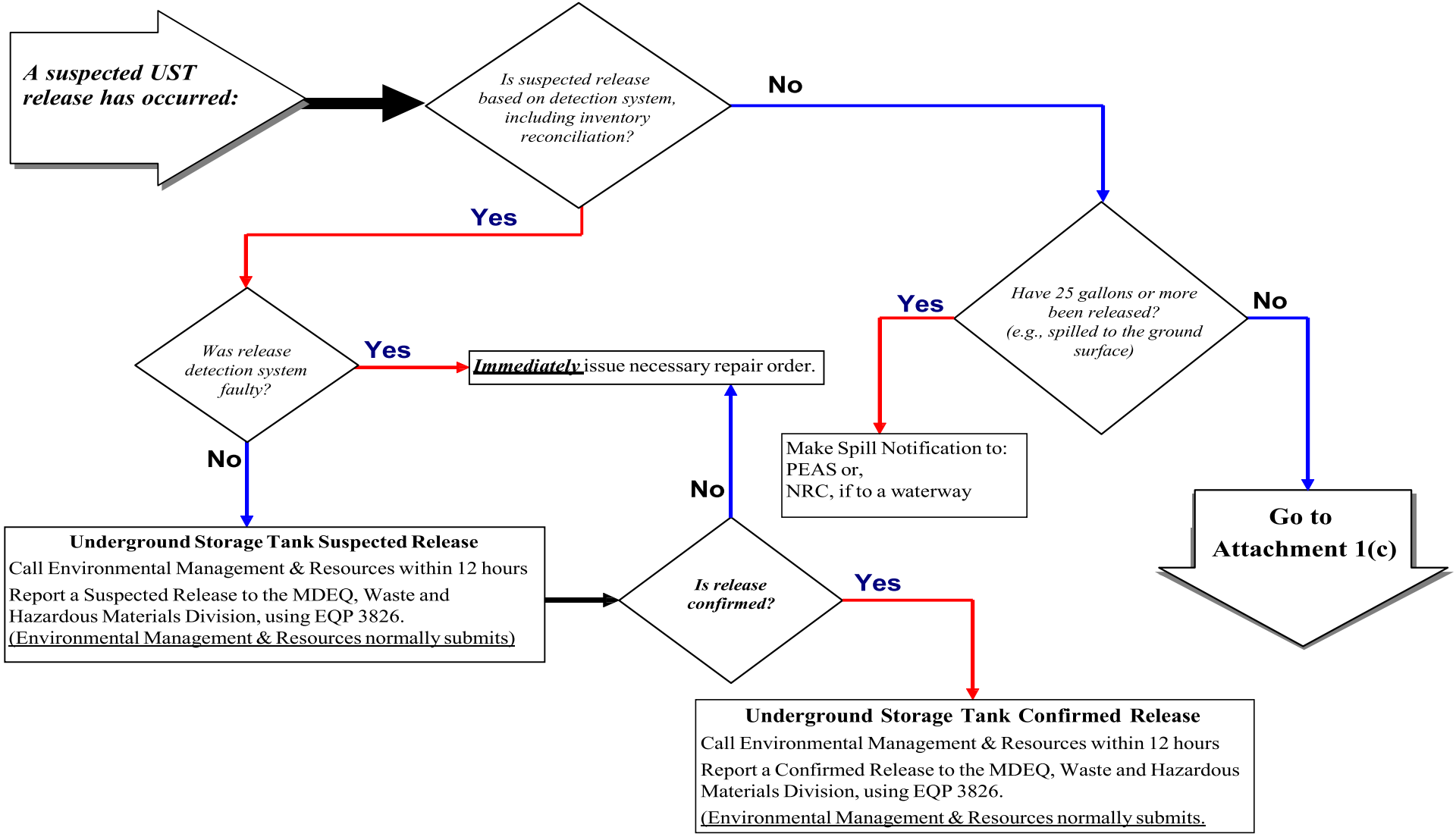
SPILL NOTIFICATION FLOWCHART

cleanup completed within 72 hrs of detection?

No

Attachment 1(d)

SPILL NOTIFICATION FLOWCHART

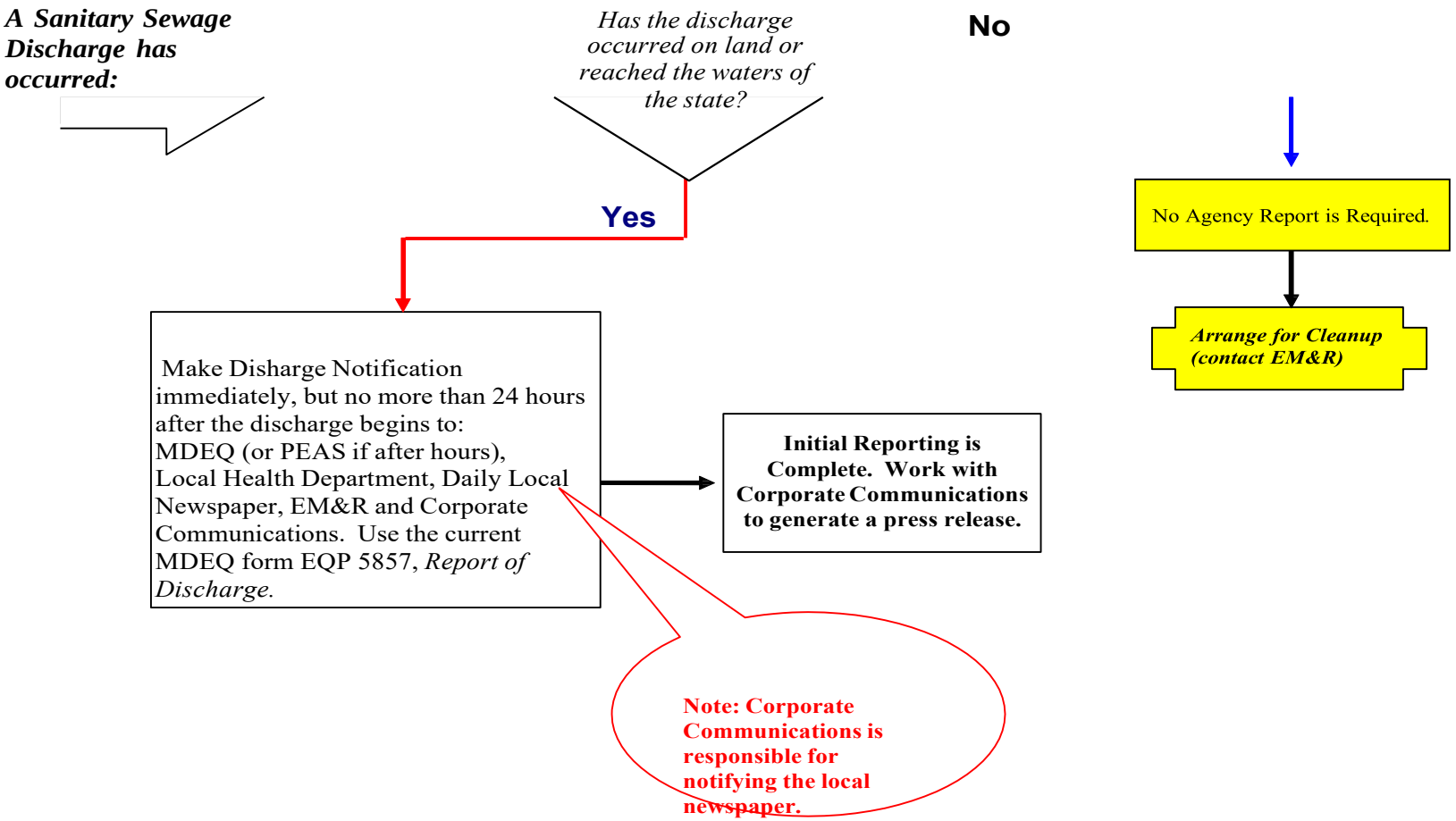


Attachment 1(d)

SPILL NOTIFICATION FLOWCHART

Attachment 1(e)

SPILL NOTIFICATION FLOWCHART

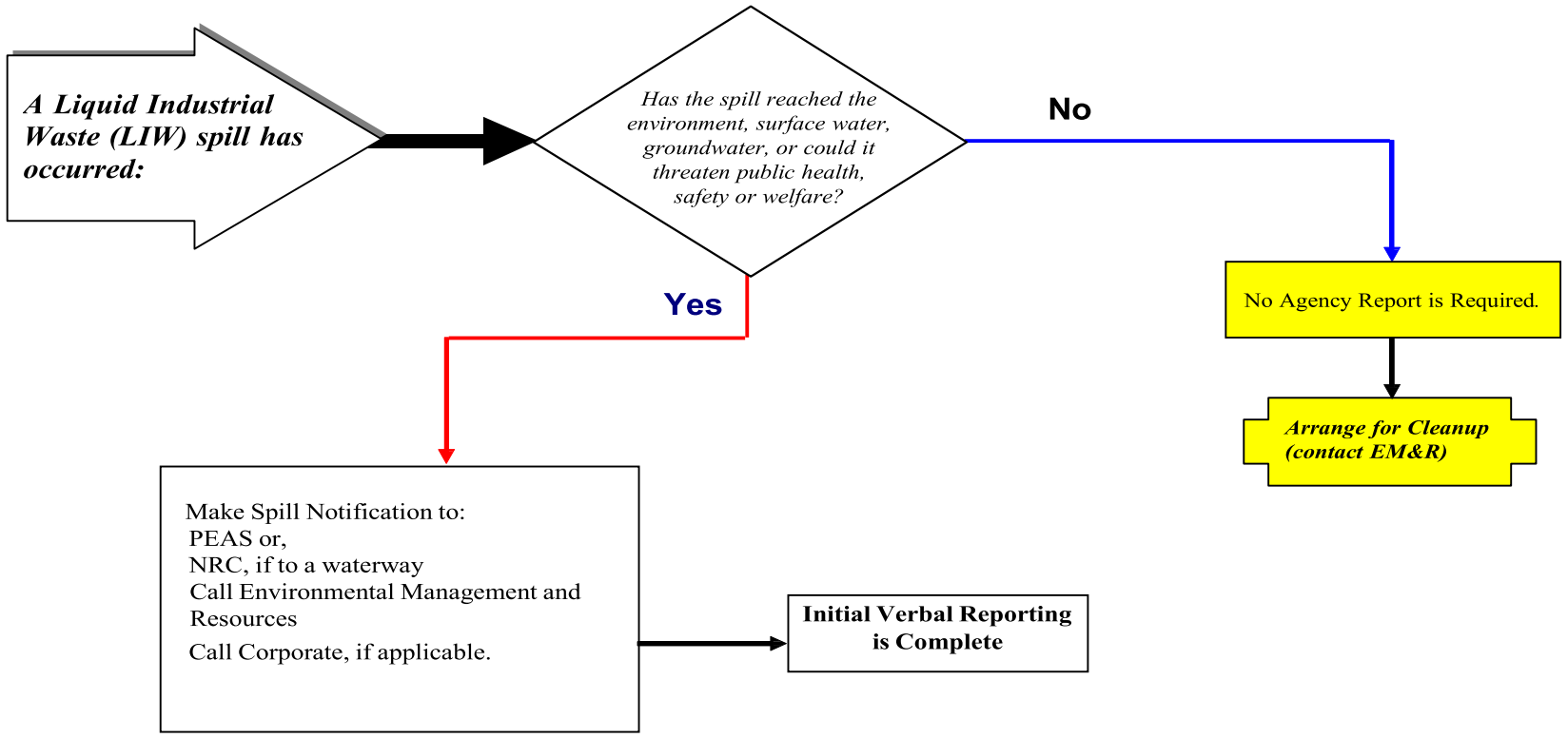


Attachment 1(e)

SPILL NOTIFICATION FLOWCHART

Attachment 1(f)

SPILL NOTIFICATION FLOWCHART



Attachment 2

Hazardous Substance Reporting Guide (not all-inclusive)

Hazardous Substance	MI Part 5 Reportable Quantity (pounds)	Spillage to reach State RQ (in gallons or as indicated)	CERCLA RQ (pounds)	Offsite Spillage to reach Federal RQ (in gallons or as indicated)
Asbestos	1	Accident-related release to air from any suspect Asbestos containing source	1	Accident-related release to air from any suspect Asbestos containing source
Aluminum Sulfate 50%	500	100	5,000	1,035
Ammonium Hydroxide 30%	100	43	1,000	430
Anhydrous Ammonia	10	Any release to air	100	Any release to air
Aqueous Ammonia 20 % or greater	10	6.5	1,000	650
Ethylene Glycol 50%	500	113	5,000	1,136
Ferric Chloride 45%	100	19.5	1,000	195
Hydrazine 5%	1	2.5	1	3
Hydrazine 35%	1	2.5 pints	1	2.5 pints
Mercury	1	1.1 fluid ounce	1	1.1 fluid ounce
Oxides of Nitrogen (NOx)	NA	NA	10	10 pounds of excess emission above air permit limitation
PCB Askarel (Pure PCB)	1	0.5 pint	1	0.5 pint
PCBs between 50 and 499 PPM	1	270	1	270
Sodium Bisulfite 42%	500	114.5	5,000	1,145
Sodium Hydroxide 20%	100	39	1,000	390
Sodium Hydroxide 50%	100	15	1,000	150
Sulfuric Acid 93%	100	7	1,000	70
Sodium Hypochlorite 15%	10	6.5	100	650

Attachment 3
Acronym List

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Was created to protect the environment from heavily contaminated toxic waste sites that have been abandoned and provides broad federal authority to clean up releases or threatened releases of hazardous substances that may endanger public health or the environment.

Detroit Water and Sewage Division (DWSD) – A local authority having jurisdiction to permit point source discharges of pollutants to wastewater system.

Emergency Planning and Community Right–to- Know Act (EPCRA) – was enacted by Congress as the national legislation on community safety shortly after the Bhopal India incident which released methyl isocyanate and killed nearly 3,800 residents. This law is designed to help local communities protect public health, safety and the environment from chemical hazards. Each state appoints a State Emergency Response Commission (SERC). The SERC, in turn, divides the states into meaningful emergency planning districts and names a Local Emergency Planning Committee (LEPC). EPCRA also defines Extremely Hazardous Substances along with a reportable quantity for offsite releases.

Liquid Industrial Waste (LIW) - Any brine, by-product, industrial wastewater, leachate, off-specification commercial chemical product, sludge, sanitary sewer clean-out residue, storm sewer clean-out residue, grease trap clean-out residue, spill residue, used oil, or other liquid waste that is produced by, is incident to, or results from industrial, commercial, or governmental activity or any other activity or enterprise determined to be liquid by method 9095 (paint filter liquids test) as described in "Test methods for evaluating solid wastes, physical/chemical methods," United States environmental protection agency publication no. SW-846, and which is discarded.

Local Emergency Planning Committee (LEPC) - Provides a forum for emergency management agencies, responders, industry and the public to work together to evaluate, understand and communicate chemical hazards in the community and develop emergency plans in case of accidental release of these chemicals. Local industries must provide information to the LEPC's about chemical hazards.

Michigan Department of Environmental Quality (MDEQ) – an agency of the state government charged with ensuring compliance with State environmental regulations.

National Pollutant Discharge Elimination System (NPDES) - a point source that is permitted to discharge pollutants to surface waters. This system is managed by the United States Environmental Protection Agency (EPA) in partnership with state environmental agencies. The MDEQ has been delegated authority for permitting in the state of Michigan.

National Response Center (NRC) - the sole federal point of contact for reporting oil and chemical spills. The NRC operates 24 hours a day, 7 days a week, 365 days a year.

Office of Waste Management and Radiological Protection – A office of the MDEQ that is responsible for program areas that deal with solid, liquid, biosolids, medical and hazardous waste; hazardous products; radioactive materials; and recycling programs.

Attachment 3 (continued)
Acronym List

Oil Pollution Act (OPA) – Federal regulations that establish and expand the federal government's ability, and provide the money and resources necessary, to respond to oil spills. The OPA provided new requirements for contingency planning both by government and industry. Owners or operators of certain facilities that pose a serious threat to the environment must prepare Facility Response Plans.

Pollution Emergency Alerting System Information (PEAS) – A State (Michigan) environmental emergency hotline used to report environmental pollution emergencies such as tanker accidents, pipeline breaks, and releases of reportable quantities of hazardous substances as required.

Polychlorinated biphenyls (PCBs) - A class of organic compounds. The chemical formula for all PCBs is $C_{12}H_{10-x}Cl_x$. PCBs were used as coolants and insulating fluids for transformers and capacitors, stabilizing additives in flexible PVC coatings of electrical wiring and electronic components, pesticide extenders, cutting oils, flame retardants, hydraulic fluids, sealants (used in caulking, etc.), adhesives, wood floor finishes, paints, de-dusting agents, and in carbonless copy paper.

Publicly owned treatment works (POTW) - "Publicly owned treatment works" means a treatment works that is owned by a municipality and includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. The term also includes sewers, pipes, and other conveyances if they convey wastewater to a publicly owned treatment works. The term also means the municipality that has jurisdiction over the indirect discharges to, and the discharges from, a treatment works.

State Emergency Response Committee (SERC) – A State (Michigan) commission tasked with facilitating the preparation and implementation of LEPC emergency response plans, management of LEPCs and for receiving and responding to requests from the public regarding emergency response plans, Material Safety Data Sheets (MSDS), inventory and toxic chemical release forms and emergency release notices.

Threshold Reporting Quantity (TRQ) - An amount of a hazardous chemical or polluting material equal to or greater than specifically identified threshold limits established by the EPA and MDEQ.

Treatment, Storage and Disposal Facility (TSDF) - Facilities engaged in the treatment, storage, or disposal of hazardous waste. These facilities are the last link in the cradle-to-grave hazardous waste management system.

U.S. Environmental Protection Agency (EPA or USEPA) - an agency of the federal government of the United States charged with protecting human health and with safeguarding the natural environment: air, water, and land.

Water Resources Division (WRD) – A division of the MDEQ this is responsible for protecting and monitoring Michigan's waters by establishing water quality standards, assessing the health of aquatic communities, issuing permits to regulate wastewater discharges, and overseeing aquatic invasive species concerns and significant water withdrawals.

Example 1
SPILL OR RELEASE REPORT and NOTIFICATION FORM (front)

NAME OF PERSON REPORTING SPILL			TELEPHONE NUMBER (*provide area code*)
STREET ADDRESS	NAME OF FACILITY		SPILL LOCATION (*Be specific*)
CITY	STATE	ZIP CODE	REPORT No.
	MI		

☐

RELEASE DATA. *Complete all applicable categories. **Check all the boxes** that apply to the release. Provide the best available information regarding the release and its impacts. Attach additional pages if necessary.*

Date & Time of Release (*if known*)	**Date & Time of Discovery**	**Duration of Release** (*if known*)	**TYPE OF INCIDENT**
		Days hours minutes	☐ Explosion ☐ Fire ☐ Leaking container ☐ Loading/unloading ☐ Pipe/valve leak or rupture ☐ Vehicle accident ☐ Other (*explain*):
HOURS	HOURS		

Material Release (***Chemical or trade name***)	**CAS # (if known)**	**RQ exceeded within 24- hours?**	**Estimated Quantity Released** (***indicate unit, e.g. lbs, gals, cu.ft. or yds.***)	**Physical State Release** (***indicate if solid, liquid, or gas***)
		☐ Yes ☐ No		
		☐ Yes ☐ No		
		☐ Yes ☐ No		
		Yes No		

Factors Contributing to Release:

☐ Equipment failure ☐ Operator error ☐ Faulty process design ☐ Training ☐ Weather conditions ☐ Other (*explain*):

Source of Loss:

☐ Container ☐ Equipment ☐ Pipeline ☐ Ship ☐ Tank ☐ Tanker ☐ Truck/Van ☐ Other (*explain*):

Type of Material released:

☐ Oil ☐ Flammable or Combustible ☐ Waste/Solvent

Material Listed on:

☐ CERCLA list (*40 CFR 302.4*) ☐ Extremely Hazardous Substance- EPCRA Section 302 list (*40 CFR 355*)

Immediate Actions Taken:

☐ Containment ☐ Dilution ☐ System shut down ☐ Diversion of release to treatment ☐ Decontamination of persons or equipment

☐ Polluting Material ☐ Hazardous substance ☐ Other (*explain*): ☐ Table 1, R 324.2009, Mi Part 5 Rules ☐ RCRA listed hazardous waste ☐ Other list (*explain*): ☐ Evacuation ☐ Hazard removal ☐ Neutralization ☐ Monitoring ☐ Other (*explain*):

SPILL/RELEASE REACHED:

☐ Surface waters (*include name of river, lake, drain, etc involved*): Distance from spill location to surface water, in feet :

☐ Drain connected to offsite sanitary sewer (*include name of wastewater treatment plant and/or street drain, if known*):

☐ Drain connected to storm sewer (*include name of drain or waterbody it discharges into, if known*) :

☐ ~~Groundwater (*include name of aquifer, if known*):~~

Soils (*include type e.g. clay, sand, loam, etc. if known*):

Air

Other (*explain*):

A computer-generated copy of this form is available on the Environmental Management & Resources Master Forms List, http://quest.dteco.com/emr/pdfs/referenceMaterial/emrFormsList.pdf and as an eForm, http://quest.dteco.com/eforms/

SPILL OR RELEASE REPORT and NOTIFICATION FORM (back)

EXTENT OF INJURIES, IF ANY:	**WAS ANYONE HOSPITALIZED?** ☐ Yes, Number Hospitalized: ☐ No

Describe the incident, the type of equipment involved in the release, how the volume of loss was determined, along with any resulting environmental damage caused by the release. Identify who immediately responded to the incident and who did further cleanup activities (Company employees or contractors - include cleanup company name, contact person, and telephone number),

Estimated quantity of any recovered materials and description of how those materials were managed (include disposal method if applicable):

Associated Health Risks and Precautions:

REGULATORY AGENCY/COMPANY NOTIFICATIONS Refer to Spill Notification Flowchart (Attachment 1) for whom, specifically, to notify.	Time Contacted	Date Contacted	Person Contacted	By Whom
☐ **National Response Center (NRC)** (800) 424-8802 Case No.:				
☐ **PEAS**: (800) 292-4706 Operator Number Assigned:				
DEQ District Office or Division (0900-1700 hrs.) *(Voicemail not acceptable, call PEAS)*				
☐ **Jackson** Ph: (517) 780-7690, Fax: (517) 780-7855				
☐ **Saginaw Bay** Ph:(989) 894-6200, Fax: (989) 891-9237				
☐ **Southeast Michigan (Warren)** Ph: (586) 753-3700, Fax: (586) 751-4690				
☐ **Underground Storage Tank** Ph: (517) 335-7279, FAX: (517) 335-2245				
☐ **Local Emergency Planning Committee (LEPC)** **(See phone numbers below)**				
☐ **Wastewater Treatment Plant Authority**				
☐ **Company Approved Pollution Control Firms** _____ (Company Name) _____ (Company Name)				
☐ **Environmental Management & Resources** Call 313-268-1191 if after hours emergency (4pm – 7am weekdays; 24 hours weekends)				
DTE Energy Corporate Contacts: ☐ **Communications** (24-hour line) (313)-235-5555 ☐ **Regional Relations** (313) 235-3522				
☐ **Other (i.e., 911, etc.)**				

Contacts are conducted by telephone only

_____
Signature of Person Reporting Spill

☐ (Print Name) Check and Print Name if submitted Electronically

LEPCs: St. Clair County LEPC **(810) 989-6327** Wayne County LEPC**(734) 942 - 5289** Monroe County LEPC **(734) 240 – 3135**
Huron County LEPC **(989) 269 – 6421** City of Detroit LEPC **(313) 596 – 5562**

Current LEPC Mailing Addresses Can Be Found At: http://www.michigan.gov/documents/deq/deq-ess-sara-lepcroster_269474_7.pdf

Exhibit 8

Bottom Ash Safety Data Sheet

Safety Data Sheet

Section 1
Identification of the Substance and of the Supplier

1.1 Product Identifier

Product Name/Identification:	Bottom Ash
Synonyms:	Coal Bottom Ash, Boiler Slag
Product Code:	N/A
Formula:	UVCB Substance

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses:	Aggregate, Light Weight Block Aggregate, Ice Control
Uses Advised Against:	Any uses not meeting appropriate engineering specifications

1.3 Details of the Supplier of the SDS

Manufacturer/Supplier:	Headwaters Resources, Inc.
Street Address:	10701 South Riverfront Parkway
City, State and Zip Code:	South Jordan, UT 84095
Customer Service Telephone:	801.984.9400
Website Address:	flyash.com

1.4 Emergency Telephone Number

Emergency Phone Number:	877.347.8096
Hours Available:	24 hours/7 days a week

Section 2
Hazards Identification

2.1 Classification of the Substance

GHS Classification(s) according to OSHA Hazard Communication Standard (29 CFR 1910.1200):

- STOT-SE Category 3 (Respiratory Irritation).
- STOT-RE Category 2.

2.2 Label Elements

Labeling according to 29 CFR 1910.1200 Appendices A, B and C*	
Hazard Pictogram(s):	
Signal Word:	Danger
Hazard Statement(s):	May cause respiratory irritation. May cause damage to lungs after repeated/prolonged exposure via inhalation.
Precautionary Statement(s):	Do not breathe dust. Use outdoors or in a well ventilated area. If inhaled: Remove to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell. Store in a secure area. Dispose of product in accordance with local/national regulations.

* *Bottom ash and other coal combustion products (CCPs) are UVCB substances (substance of unknown or variable composition or biological). Various CCPs, noted as Ashes; Ash; Ash residues; Ashes, residues, bottom; bottom ash; bottom ash residues; waste solids, ashes under TSCA are defined by the US EPA as: "The residuum from the burning of a combination of carbonaceous materials. The following elements may be present as oxides: aluminum, calcium, iron, magnesium, nickel, phosphorus, potassium, silicon, sulfur, titanium, and vanadium." Ashe,s including bottom ash and fluidized bed combustion ash, are identified by CAS number 68131-74-8. The exact composition of the ash is dependent on the fuel source and flue additives composed of a large number of constituents. The classification of the final substance is dependent on the presence of specific identified oxides as well as other trace elements.*

2.3 Other Hazards

Listed Carcinogens: Respirable Crystalline Silica

IARC: Yes **NTP:** Yes **OSHA:** No **Other:** No

Section 3
Composition/Information on Ingredients

Substance	CAS No.	Percentage (%)	GHS Classification
Aluminosilicates	Various: See note 1	70-95	Single Exposure STOT, Category 3
Crystalline Silica	14808-60-7	<10	Repeat Dose STOT, Category 2
Silica, crystalline respirable (RCS)	14808-60-7	See note 2	Repeat Dose STOT, Category 2
Calcium oxide (CaO)	1305-78-8	<2%	Skin Irritant Category 2 Eye irritant Category 2B

Substance	CAS No.	Percentage (%)	GHS Classification
Manganese dioxide (MnO_2)	1313-13-9	<2%	Skin Irritant Category 2 Eye irritant Category 2B
Phosphorus pentoxide (P_2O_5)	1314-56-3	<2%	Skin Irritant Category 2 Eye irritant Category 2B
Potassium oxide (K_2O)	12136-45-7	<2%	Skin Irritant Category 2 Eye irritant Category 2B
Magnesium sulfate	7487-88-9	<2%	Skin Irritant Category 2 Eye irritant Category 2B

1. *Aluminosilicates (CAS# 1327-36-2) may be in the form of mullite (CAS# 1302-93-8); aluminosilicate glass; pozzolans (CAS# 71243-67-9); or calcium aluminosilicates such as tricalcium aluminate (C_3A), or calcium sulfoaluminate (C_4A_3S). The form is dependent on the source of the coal and or the process used to create the CCP. Pulverized coal combustion would be more likely to create high levels of pozzolans. Aluminosilicates may have inclusions of calcium, titanium, iron, potassium, phosphorus, magnesium and other metal oxides.*
2. *RSC in the CCP has not been determined.*

Section 4
First Aid Measures

4.1 Description of First Aid Measures

Inhalation	If product is inhaled and irritation of the nose or coughing occurs, remove person to fresh air. Get medical advice/attention if respiratory symptoms persist.
Skin Contact	If skin exposure occurs, wash with soap and water.
Eye Contact	If product gets into the eye, rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical attention/advice if irritation occurs or persists.
Ingestion	No specific first aid measures are required.

4.2 Most Important Health Effects, Both Acute and Delayed

Acute Effects	Direct exposure may cause respiratory irritation, eye irritation and skin irritation. The product dust can dry and irritate the skin and cause dermatitis and can irritate eyes and skin through mechanical abrasion.
Chronic Effects	Chronic exposure may cause lung damage from repeated exposure. Chronic inhalation of dusts containing respirable crystalline silica may result in silicosis.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Seek first aid or call a doctor or Poison Control Center if contact with eyes occurs and irritation remains after rinsing.

Section 5
Firefighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media:	Product is not flammable. Use extinguishing media appropriate for surrounding fire.
Unsuitable Extinguishing Media:	Not applicable; the product is not flammable.

5.2 Special Hazards Arising From the Substance or Mixture

Hazardous Combustion Products:	None known.

5.3 Advice for Firefighters

Special Protective Equipment and Precautions for Firefighters:	As with any fire, wear self-contained breathing apparatus (NIOSH-approved or equivalent) and full protective gear.

Section 6
Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

6.1.1 Personal Precautions/Protective Equipment

See Section 8.2.2 “Personal Protective Equipment”. For concentrations exceeding Occupational Exposure Levels (OELs), use a self-contained breathing apparatus (SCBA).

6.1.2 Emergency Procedures

Use scooping, water spraying/flushing/misting or ventilated vacuum cleaning systems to clean up spills. Do not use pressurized air.

6.2 Environmental Precautions

Prevent contamination of drains or waterways and dispose of according to local and national regulations.

6.3 Methods and Material for Containment and Cleaning Up

Do not use brooms or compressed air to clean surfaces. Use dust collection vacuum and extraction systems.

Large spills of dry product should be removed by a vacuum system. Dampened material should be removed by mechanical means and recycled or disposed of according to local and national regulations.

See Sections 8 and 13 for additional information on exposure controls and disposal.

Section 7
Handling and Storage

7.1 Precautions for Safe Handling

Practice good housekeeping. Use adequate exhaust ventilation, dust collection and/or water mist to maintain airborne dust concentrations below permissible exposure limits. (Note: respirable crystalline silica dust may be in the air without a visible dust cloud.)

Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain and test ventilation and dust collection equipment. In cases of insufficient ventilation, wear a NIOSH-approved respirator for silica dust when handling or disposing dust from this product. Avoid contact with skin and eyes. Wash or vacuum clothing that has become dusty. Avoid eating, smoking, or drinking while handling the material.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Minimize dust produced during loading and unloading.

Section 8
Exposure Controls/Personal Protection

8.1 Control Parameters

OCCUPATIONAL EXPOSURE LIMITS					
SUBSTANCE		**OSHA PEL TWA (mg/m^3)**	**NIOSH REL TWA (mg/m^3)**	**ACGIH TLV TWA (mg/m^3)**	**CA - OSHA PEL (mg/m^3)**
Calcium oxide		5	2	2	2
Particulates Not Otherwise Regulated	Total	15	15	-	10
	Respirable	5	5	-	5
Crystalline Silica	Total Quartz	30 ÷ (%SiO_2+2) (Total Quartz)	-	-	0.3
	Respirable Crystalline Silica	10 ÷ (%SiO_2+2)	0.05	0.025 (α-quartz & cristobalite)	0.1
	Cristobalite	-	0.05	0.025 (α-quartz & cristobalite)	0.05 (respirable)
Manganese dioxide (as manganese compounds)	Total	5 (Ceiling)	1 3 (STEL)	0.1	0.2
	Respirable	-	-	0.02	-

8.2 Exposure Controls

8.2.1 Engineering Controls

Provide ventilation to maintain the ambient workplace atmosphere below the occupational exposure limit(s). Use general and local exhaust ventilation and dust collection systems as necessary to minimize exposure.

8.2.2 Personal Protective Equipment (PPE)

Respiratory protection:	Wear a NIOSH-approved particulate respirator if exposure to airborne particulates is unavoidable and where occupational exposure limits may be exceeded. If airborne exposures are anticipated to exceed applicable PELs or TLVs, a self-contained breathing apparatus or airline respirator is recommended.
Eye and face protection:	If eye contact is possible, wear protective glasses with side shields or dust goggles, as appropriate. Avoid contact lenses.
Hand and skin protection:	Wear gloves and protective clothing. Wash hands with soap and water after contact with material.

Section 9
Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Property: Value	**Property:** Value
Appearance (physical state, color, etc.): light gray/tan to dark gray/brown particulate. Fine sand to stone sized solid.	**Upper/Lower Flammability or Explosive Limits:** Not applicable
Odor: Odorless	**Vapor Pressure (Pa):** Not applicable
Odor Threshold: Not applicable	**Vapor Density:** Not applicable
pH (25°C): Not applicable	**Specific Gravity:** 2.2 - 2.8
Melting Point/Freezing Point (°C): Not applicable	**Water Solubility:** Slight
Initial Boiling Point and Boiling Range (°C): Not applicable	**Partition Coefficient: n-octane/water:** Not determined
Flash Point (°C): Not determined	**Auto Ignition Temperature (°C):** Not applicable
Evaporation Rate: Not applicable	**Decomposition Temperature (°C):** Not determined
Flammability (solid, gas): Not combustible	**Viscosity:** Not applicable

9.2 Other Information

None.

Section 10
Stability and Reactivity

10.1 Reactivity

The material is an inert, inorganic material primarily composed of elemental oxides.

10.2 Chemical Stability

The material is stable under normal use conditions.

10.3 Possibility of Hazardous Reactions

The material is a relatively stable, inert material. Polymerization will not occur.

10.4 Conditions to Avoid

Product can become airborne in moderate winds.

10.5 Incompatible Materials

None known.

10. 6 Hazardous Decomposition Products

None known.

Section 11
Toxicological Information

11.1 Information on Toxicological Effects

Endpoint	Data
Acute oral toxicity	LD50 > 2000 mg/kg
Acute dermal toxicity	LD50 > 2000 mg/kg
Acute inhalation toxicity	LC50 > 5.0 mg/L
Skin corrosion/irritation	Not irritating to skin.
Eye damage/irritation	Slight but reversible eye irritation.
Respiratory/skin sensitization	Not a respiratory or dermal sensitizer.
Germ cell mutagenicity	Not mutagenic in *in vitro* and *in vivo* assays with or without metabolic activation.
Carcinogenicity	Not available. Respirable crystalline silica has been identified as a carcinogen by NTP and IARC.

Endpoint	Data
Reproductive toxicity	An animal study with a CCP has indicated some effects on male and female reproductive organs and parameters without a clear dose response, while studies with other CCPs have not shown reproductive effects. Therefore, there is not enough evidence available to classify according to reproductive toxicity. No developmental toxicity has been observed in available animal studies.
STOT-SE	No specific target organ toxicity after a single exposure to the substance is expected; however, presence as a nuisance dust may result in respiratory irritation.
STOT-RE	NOAEC = 4.2 mg/m^3 bottom ash dust; as no effects were observed at the highest dose tested during the 180-day inhalation study, it is not possible to assess the level at which toxicologically significant effects may occur. Repeated inhalation exposures to high levels of respirable crystalline silica may result in lung damage (i.e., silicosis).
Aspiration Hazard	Not applicable based on product form.

Section 12
Ecological Information

12.1 Toxicity

Coal Ash CAS# 68131-74-8	
Toxicity to fish	LC50 >100 mg/L
Toxicity to invertebrates	Data indicates that the test substance is not toxic to *Daphnia magna* (EC50 undetermined)
Toxicity to algae and plants	EC50 = 10 mg/L

Calcium oxide CAS# 1305-78-8	
Toxicity to fish	LC50 = 50.6 mg/L The findings were closely related to the pH of the test solutions; therefore, pH is considered to be the main reason for the effects.
Toxicity to invertebrates	EC50 = 49.1 mg/L The findings were closely related to the pH of the test solutions; therefore, pH is considered to be the main reason for the effects.
Toxicity to algae and plants	NOEC =48 mg/L @ 72 hours based on $Ca(OH)_2$ The initial pH of the test medium was not directly related to the biologically relevant effects. The formation of precipitates is likely the result of the reaction between CO_2 dissolved in the medium.

12.2 Persistence and Degradability

Not relevant for inorganic materials.

12.3 Bioaccumulative Potential

No data available.

12.4 Mobility in Soil

No data available.

12.5 Results of PBT and vPvB Assessment

No data available.

12.6 Other Adverse Effects

None known.

Section 13
Disposal Considerations

See Sections 7 and 8 above for safe handling and use, including appropriate hygienic practices.

Dispose of all waste product and containers in accordance with federal, state and local regulations.

Section 14
Transport Information

Regulatory entity: U.S. DOT	Shipping Name:	Not Regulated
	Hazard Class:	Not Regulated
	ID Number:	Not Regulated
	Packing Group:	Not Regulated

Section 15
Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Mixture

- **TSCA Inventory Status**

  All components are listed on the TSCA Inventory.

- **California Proposition 65**

  The following substances are known to the State of California to be carcinogens and/or reproductive toxicants:

  - Respirable crystalline silica
  - Titanium dioxide (airborne particles)

- **State Right-to-Know (RTK)**

Component	CAS	MA[1, 2]	NJ[3, 4]	PA[5]	RI[6]
Calcium oxide	1305-78-8	Yes	Yes	Yes	No
Iron oxide	1309-37-1	Yes	Yes	Yes	No
Magnesium oxide	1309-48-4	No	Yes	No	No
Phosphorus pentoxide (or phosphorus oxide)	1314-56-3	Yes	Yes	Yes	No
Potassium oxide	12136-45-7	No	Yes	No	No
Silica-crystalline (SiO_2), quartz	14808-60-7	Yes	Yes	Yes	No
Titanium dioxide	13463-67-7	Yes	Yes	Yes	No

[1] *Massachusetts Department of Public Health, no date*
[2] *189th General Court of The Commonwealth of Massachusetts, no date*
[3] *New Jersey Department of Health and Senior Services, 2010a*
[4] *New Jersey Department of Health, 2010b*
[5] *Pennsylvania Code, 1986*
[6] *Rhode Island Department of Labor and Training, no date*

- **Coal bottom ash is not a SARA 313 substance**.

  Bottom ash is required for SARA Tier II (311/312) reporting when in sufficient quantities. Trace elements in bottom ash should be considered in TRI reporting.

Section 16
Other Information, Including Date of Preparation or Last Revision

16.1 Indication of Changes

Date of preparation or last revision: May 27, 2015

16.2 Abbreviations and Acronyms

ACGIH:	American Conference of Industrial Hygienists
ANSI:	American National Standards Institute
CA:	California
CAA:	Clean Air Act
CAS:	Chemical Abstract Services
CCP:	Coal Combustion Product
CFR:	Code of Federal Regulations
EPA:	Environmental Protection Agency
GHS:	Globally Harmonized System of Classification and Labeling
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
LC50:	Concentration resulting in the mortality of 50% of an animal population
LD50:	Dose resulting in the mortality of 50% of an animal population
LEL:	Lower explosive limit
MA:	Massachusetts
NA:	Not Applicable
NJ:	New Jersey
NOEC:	No observed effect concentration
NIOSH:	National Institute of Occupational Safety and Health
NOx:	Nitrogen oxides
NTP:	US National Toxicology Program
OEL:	Occupational Exposure Limit
OSHA:	Occupational Safety and Health Administration
PA:	Pennsylvania
Pa:	Paschal
PBT:	Persistent, Toxic and Bioaccumulative
PEL:	Permissible exposure limit
PPE:	Personal Protective Equipment
REL:	Recommended exposure limit
RI:	Rhode Island
RCS:	Respirable Crystalline Silica
RTK:	Right-to-Know
SARA:	Superfund Amendments and Reauthorization Act
SCBA:	Self-contained breathing apparatus
SDS:	Safety Data Sheet
STEL:	Short-term exposure limit
STOT-RE:	Specific target organ toxicity-repeated exposure
STOT-SE:	Specific target organ toxicity-single exposure
TLV:	Threshold limit value
TSCA:	Toxic Substances Control Act
TWA:	Time-weighted average
UEL:	Upper explosive limit
UVCB:	Unknown or Variable Composition/Biological
U.S.:	United States
U.S. DOT:	United States of Department of Transportation
vPvB:	Very Persistent and Very Bioaccumulative

16.3 Other Hazards

Table 1: Bottom Ash

Hazardous Materials Identification System (HMIS)			Degree of hazard (0 = Low; 4= Extreme)
Health: 1*	**Flammability:** 0	**Reactivity:** 1	**Personal Protection:** -

** Chronic Health Effects*

DISCLAIMER:

This SDS has been prepared in accordance with the Hazard Communication Rule 29 CFR 1910.1200. Information herein is based on data considered to be accurate as of date prepared. No warranty or representation, express or implied, is made as to the accuracy or completeness of this data and safety information. No responsibility can be assumed for any damage or injury resulting from abnormal use, failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

Exhibit 9

Training Seminar Logs

Training Seminar Logs

Date of Training: _____

Type of Training Completed:

- ☐ Orientation Seminar
- ☐ Tabletop Exercises
- ☐ Other: _____

Emergency Conditions Considered:

Meeting Minutes:

Lessons Learned:

EAP Updated Needed (Circle One)? YES NO If Yes, Date Update Completed: _____

Instructor's Name	Instructor's Signature
Participant's Name	**Participant's Signature**

Exhibit 10

Records of Revisions

This plan supersedes all previous plans.

Record of Revisions

The following is a list of revisions made to the Inactive Bottom Ash Basin EAP. This chart tracks the date that changes were made, reason for the changes, updated pages, and who made the revision.

Date	Reason for Revision	Page Numbers	Revised By
8/4/2020	Updated Business Unit to reflect change from EM&R to EM&S/Environmental Management & Safety	All	DTE Environmental – A. Kosch
9/25/2024	Included information referenced in the Fly Ash Basin EAP instead of references to EAP. Updated communication flowcharts and contact information.	All	Geosyntec – C. Carlson