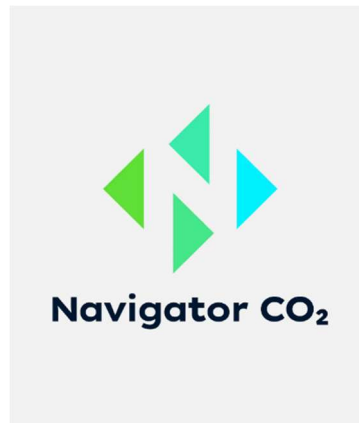



# **Navigator CO<sub>2</sub> Ventures LLC**




## **PIPELINE EMERGENCY RESPONSE PLAN**

**VERSION 0.0 – DRAFT**


	Pipeline Emergency Response Plan	
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## INTRODUCTION

Navigator CO<sub>2</sub> Ventures LLC (the Company) and its management strive to operate all pipelines and facilities safely, reliably, and in full compliance with all applicable federal and state regulations and recommended safety practices.

The Navigator CO<sub>2</sub> Ventures' Heartland Greenway carbon dioxide pipeline is approximately 1,350 miles in length and spans five states. The CO<sub>2</sub> pipeline will serve 20 or more ethanol and fertilizer plants, and transport 15 million metric tons of CO<sub>2</sub> annually across South Dakota, Minnesota, Iowa, Nebraska, and Illinois to underground storage in Illinois.

This Emergency Response Plan (ERP) for Navigator's Heartland Greenway carbon dioxide pipeline is to be used in conjunction with the following Company plans for this pipeline:

- Operations & Maintenance Manual (O&M)
- HSE Manual
- Integrity Management Program Manual
- Environmental Response Plan for CO<sub>2</sub>
- Control Room Management Plan
- Damage Prevention Plan
- Public Awareness Program
- Drug & Alcohol Testing Program (49 CFR 199)

### Emergency Types Covered:

- **Pipeline emergency response:** Since liquid CO<sub>2</sub> becomes a non-flammable gas when released to the atmosphere, this plan addresses an emergency response to a carbon dioxide release due to pipeline leak or rupture. Because the density of carbon dioxide is greater than air, this plan covers safety risks involved in oxygen-deficient atmospheres where CO<sub>2</sub> might settle in low-lying areas.

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*ADVISORY: Throughout this Plan, references to "leak"—including within regulatory quotations—should be understood to indicate or apply to a release of CO<sub>2</sub>, which rapidly changes from a liquid to a gaseous state.*


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- **Environmental emergency response.** Responses to releases of CO<sub>2</sub> that could potentially affect groundwater, rivers, and lakes, pose a hazard to wildlife, or require cleanup are addressed in the Navigator CO<sub>2</sub> Environmental Response Plan.

**Federal and State Regulations for Emergency Response.** The Company has developed this *Emergency Response Plan (ERP)* to meet the emergency response requirements for hazardous liquids pipeline according to the following federal and state regulations. Jurisdictional status over inspections and enforcement for carbon dioxide pipelines in this plan is federal (PHMSA) unless noted below according to each state.

- **Federal Regulations for Pipeline Emergency Response:**
  - 49 CFR Part 195–Transportation of Hazardous Liquids by Pipeline
    - 49 CFR § 195.402 Procedural manual for operations, maintenance, and emergencies.



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- 49 CFR § 195.403 Emergency response training.

- **Illinois**

- The Illinois Commerce Commission has jurisdiction over intrastate gas pipelines only. 220 ILCS 75/310 states PHMSA has inspection and enforcement jurisdiction over CO<sub>2</sub> pipelines in the State of Illinois. See the Notification and Isolation Procedure for the State of Illinois.

- **Iowa**

- The Iowa Utilities Board has jurisdiction over intrastate gas pipelines only. PHMSA has inspection and enforcement jurisdiction over hazardous liquids pipelines. See the Notification and Isolation Procedure for the State of Iowa.

- **Minnesota:** - MINN. STAT. 299J (2022)

- The Minnesota Office of Pipeline Safety has inspection and enforcement jurisdiction over intrastate pipelines and facilities (both gas and hazardous liquids) and requires accident reporting to the state for both.
- Minnesota has severe penalties for failure to report all emergency releases to the Minnesota Office of Pipeline Safety. See the Notification and Isolation Procedure for the State of Minnesota.

- **Nebraska**

- Nebraska State Fire Marshal, Fuels Division, Pipeline Safety Section has jurisdiction over intrastate gas pipelines only. See the Notification and Isolation Procedure for the State of Nebraska. PHMSA has inspection and enforcement jurisdiction over hazardous liquids pipelines.

- **South Dakota**

- The South Dakota Public Utilities Commission has jurisdiction over intrastate gas pipelines only. See the Notification and Isolation Procedure for the State of South Dakota. PHMSA has inspection and enforcement jurisdiction over hazardous liquids pipelines.


**Note:** *Notification and Isolation Procedures* have state- and county-specific notifications to be made as soon as there is discovery of a potential pipeline accident or leak. Pipeline isolation procedures to be followed are included that are specific to the pipeline segments located in that state.

## Purpose

The purpose of this plan is to assist Navigator CO<sub>2</sub> Ventures LLC personnel to prepare for and respond quickly and safely to an accident on their carbon dioxide pipeline and associated facilities. The plan provides techniques and guidelines for achieving an efficient, coordinated, and effective response to a pipeline accident which may occur on the pipeline facility.

The specific objectives of the plan are to:

- Establish an emergency response team, assign and train individuals to fill the positions on the teams, and define the roles and responsibilities of team members.
- Define notification, activation, and mobilization procedures to be followed when a pipeline accident or leak occurs.

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- Define organizational lines of responsibility to be adhered to during a response operation.
- Document emergency response equipment, personnel, and other resources available to assist with the response.
- Ensure managers and supervisors responsible for pipeline safety in Operations and Maintenance, Control Center, and Integrity Management Program are trained and knowledgeable about their roles in emergency response to a pipeline accident.

## Scope

This plan as a governing standard applies to steel pipelines and associated facilities (as defined by the Hazardous Liquid Pipeline Rule) across Navigator CO<sub>2</sub> Ventures LLC's operating region. This includes, but is not limited to, line pipe, valves and other appurtenances connected to the line pipe, metering and delivery stations, and pump stations.

## Pipeline Maps

Pipeline route maps and valve location maps will be included with the *Notification and Isolation Procedures* for each state.

## Plan Requirements

When an emergency condition arises that could adversely affect the normal, safe operation of Navigator's CO<sub>2</sub> pipeline system and associated facilities, it is essential that a predetermined course of action be implemented to ensure protection of the general public, Company and contractor personnel, private and public property, and the environment.


Including the procurement of certain equipment and supplies, all preparation and training must be completed in advance of a pipeline emergency. Everyone who may have duties and responsibilities in emergency situations must have access to the most recent version of this Emergency Response Plan and its associated procedures.

Communications regarding this Pipeline Emergency Response Plan should be directed to:)			
Name of Contact:		Title:	
Company/Department			
Email:		Phone:	

## Roles and Responsibilities

All personnel who are responsible for pipeline safety compliance, those who manage operations and maintenance, supervisory personnel in charge of repairs or inspections, and pipeline emergency response personnel should read and understand this manual. All personnel are expected to become familiar with the sections of this manual that are applicable to their area of responsibility and comply accordingly. This includes contacting the Company's appropriate county response coordinator, as listed in Appendix D.

The Company requires that all supervisory personnel having responsibility for emergency response activities read, study, and become well-versed with this manual and the associated regulations so

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they may effectively ensure that personnel responsible for implementing the requirements herein are appropriately adhering to procedures.

**Development of Incident Command System.** An Incident Command System (ICS) shall be developed with the appointment of an Incident Commander (IC) who is knowledgeable of pipeline operations and understands how to respond to abnormal operating conditions.

- The Incident Commander shall appoint a team member who can serve as an alternate IC.
- The IC shall appoint other ICS team members who are qualified to respond to pipeline emergencies; and
- Team members who will be responsible for notification and submission of accident reporting to federal and state agencies.


The Incident Commander shall be responsible for ensuring that team members are properly trained in their roles and responsibilities. The IC is responsible for ensuring that ICS team members and pipeline response personnel participate in Company emergency response drills and local, county, or state-sponsored drills.

The IC is responsible to ensure that all training and response activities of ICS team members are documented and that the records are retained.


Table 1 outlines the program administration roles and responsibilities related to this manual. Additional responsibilities are detailed within specific Plan sections, procedures, and referenced documents.

**Table 1: Roles and Responsibilities**

Role	Responsibility
Executive Management	<ul style="list-style-type: none"> <li>• Support Incident Commander, Operations Manager, Control Room Manager, and Supervisors in the implementation of this program</li> <li>• Fund initiatives as necessary to ensure the safe operation of pipeline facilities</li> <li>• Be accountable for compliance with regulatory requirements</li> <li>• Ensure lessons learned and corrective and mitigative actions are incorporated into the ERP and pipeline safety procedures</li> </ul>
Operations Manager and Supervisors	<ul style="list-style-type: none"> <li>• Ensure Incident Commander receives all information from operations, maintenance, repairs, integrity assessments and pipeline surveys that could affect pipeline safety and that will ensure awareness of potential risk to pipeline</li> <li>• Notify Incident Commander of unanticipated and unexplained pipeline pressure loss or change in flow rate, or unanticipated or unexplained rapid release of a large volume</li> <li>• Maintain a thorough knowledge of this manual and related procedures</li> <li>• Ensure training of field personnel and participation in emergency response drills</li> <li>• Ensure third-party contractors review and follow applicable procedures</li> <li>• Provide feedback for continuous improvement</li> </ul>

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Role	Responsibility
Field Operations Personnel	<ul style="list-style-type: none"> <li>• Ensure Operations Supervisors are made aware of any geohazards (erosion, changing climate, earth movement, soil stability, etc.) that have been identified and documented during pipeline surveys</li> <li>• Report to the Operations Manager any unanticipated or unexplained rapid release of a large volume of hazardous liquid, a fire, or an explosion, in the immediate vicinity of the CO<sub>2</sub> pipeline</li> <li>• Maintain a thorough knowledge of the Emergency Response (ER) manual and related procedures for which they are responsible</li> <li>• Implement activities for which they are responsible</li> <li>• Attend and participate in Company and area emergency response drills</li> <li>• Provide feedback for continuous improvement</li> </ul>
Control Center Manager / Lead Controller	<ul style="list-style-type: none"> <li>• Ensure Operations Manager/Supervisors and Incident Commander are notified immediately when there is an unanticipated or unexplained pressure loss outside of the pipeline's normal operating pressures, unanticipated or unexplained flow rate change, unanticipated or unexplained rapid release of a large volume</li> <li>• Ensure procedures in the Control Room Management (CRM) manual are reviewed annually and after a pipeline failure or accident to reflect corrective actions taken</li> <li>• Ensure controllers participate in Company and area emergency response drills</li> </ul>
Regulatory Compliance Coordinator	<ul style="list-style-type: none"> <li>• Conduct annual reviews to ensure compliance of manual and procedures</li> <li>• Serve as sole point of contact to regulatory agencies for reporting and notifications</li> <li>• Ensure ERP stays current with changing federal and state requirements for CO<sub>2</sub> pipeline safety</li> </ul>

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Role	Responsibility
<b>INCIDENT COMMAND SYSTEM</b>	
Incident Commander for Pipeline Accident	<ul style="list-style-type: none"> <li>• Ensure National Response Center (NRC) accident reporting is done within 1 hour</li> <li>• Ensure applicable state agencies are properly notified of accident or release</li> <li>• Ensure county emergency management personnel are notified of accident or release</li> <li>• Ensure Navigator has adequate communication resources to communicate with agencies and responders during an accident response</li> <li>• Appoint backup and Incident Command System (ICS) team members and ensure training is effective to respond to a pipeline accident</li> <li>• Ensure Navigator has essential emergency response resources including an air monitoring plan</li> <li>• Communicate with local responders to evacuate and set out barricades if needed</li> <li>• Review pipeline risk analyses to ensure knowledge of pipeline areas of risk</li> <li>• Review pipeline patrol reports after heavy rainfall, earth movement, geohazards have been identified</li> <li>• Review pipe weld repairs and other repairs to the pipeline to ensure awareness of areas of risk</li> <li>• Ensure ICS team have been trained to respond to a CO<sub>2</sub> pipeline accident</li> <li>• Develop and maintain liaison with local ER providers to ensure their knowledge of the CO<sub>2</sub> pipeline and how to respond to an accident or leak</li> <li>• Develop and conduct ER drills (announced and unannounced) with company personnel and local responders</li> <li>• Develop After Action Report following drills to evaluate response and determine corrective actions</li> <li>• Ensure Navigator operations and response personnel participate in announced area drills and document participation</li> <li>• Ensure Company safety monitors are trained to respond to a CO<sub>2</sub> release</li> </ul>
IC Alternate	<ul style="list-style-type: none"> <li>• Ensure alternate is trained on all the responsibilities of the Incident Commander and can assist or step in when needed</li> </ul>
Other ICS roles to consider for pipeline emergency response	<ul style="list-style-type: none"> <li>• Information Officer (response to media)</li> <li>• Liaison Officer (contact point for agency representatives)</li> <li>• Safety Officer (participate in planning meetings and reviewing safety plan)</li> <li>• Legal Officer (participate in meetings, advise on legal issues)</li> <li>• Operations Section Chief (supervise pipeline operations response)</li> <li>• Planning Section Chief (collect and process situation information for accident)</li> <li>• Logistics Section Chief (assign work locations and identify resources)</li> <li>• Finance/Administration Section Chief (manage financial aspects of accident)</li> <li>• Unified Command (includes Incident Commanders from major organizations)</li> </ul>
Note:	A detailed discussion of the Incident Command System setup can be found in the Navigator CO <sub>2</sub> Environmental Response Plan.


## Plan Distribution List and Plan Distribution Procedures

Appropriate parts of the plan shall be kept at locations where operations and maintenance activities are conducted. The Compliance Coordinator is responsible for maintenance and distribution of the plan. Distribution will be handled in the following manner:

- Distribution of the plan is controlled by the number on the cover page. The distribution list is included in Table 2 to facilitate control.
- Company personnel who may be called upon to provide assistance during pipeline emergency response activities will have access to a copy of the plan for their use and training.
- Any person holding a copy of the plan shall ensure that the copy is transferred to their replacement in the event of reassignment or change in responsibility.
- Various regulatory agencies will also receive a copy(s) of the plan. The list of agencies shall be documented in Table 2.

**Table 2: Plan Distribution List**

Copy No.	Name	Role	Location
1 (Master)			
2 (Electronic)			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
<b>Note:</b> The Distribution of this plan is controlled by the Copy Number located on the front cover. The Plan Distribution Procedures provided in this section and the Plan Review and Update Procedures provided in Section 1.2.11.2 should be followed when making any and all changes.			

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## SECTION 1. PROGRAM DOCUMENTATION & REVIEW

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*REGULATION: Per 49 CFR § 195.402(a), the Company prepared before initial pipeline operations commenced and follows (for each pipeline system) this written manual of procedures for handling emergencies; and Company keeps appropriate parts of the document at locations where emergency response activities occur.*

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This section describes the Company's process for annual reviews and *ad hoc* updates of all plan programs, manuals, standards, and associated procedures that are required by 49 CFR Part 195, Subpart F—Operations and Maintenance.

### 1.1. Applicability

The annual review extends to all procedures and processes required for the plan, regardless of whether they reside in this manual or in a separate document. To ensure the safe operation of Navigator's CO<sub>2</sub> pipeline and safety awareness by personnel responsible for response to pipeline emergencies, the following plans are subject to annual review:

- Emergency Response Plan
- Environmental Response Plan for CO<sub>2</sub>
- Operations & Maintenance Plan
- Integrity Management Plan
- Control Room Management Plan
- Damage Prevention Plan
- Public Awareness Plan
- Drug & Alcohol Testing Plan

Required reviews include participation by relevant stakeholders to ensure that the standards and procedures remain effective, current, and accurate. Per the results of the review, the Company makes appropriate changes as necessary to ensure that the manual is effective and compliant with regulations.

All management and supervisory personnel with responsibility for pipeline safety and emergency response shall review and document their review of revisions made to the plans above when safety requirements (federal and state) have been revised as part of the review.


### 1.2. Annual Program Review of the Emergency Response Plan

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*REGULATION: Per §195.402(a), the Company reviews this document at least once each calendar year, not to exceed 15 months; and keeps appropriate parts of the document at locations where emergency response activities occur.*

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### 1.2.1. Internal Review and Update

The annual review is not intended to be a line-by-line examination of every part of the plan and its ancillary documents, but rather it is an evaluation to address potential deficiencies identified through review of the following:

- Results of periodic reviews of personnel response to abnormal and emergency operations to determine the effectiveness of response activities (outlined in the *Navigator CO<sub>2</sub> Ventures LLC Operations & Maintenance [O&M] Plan*);
- Results of post-accident reviews of personnel activities to determine the effectiveness of emergency procedures;
- After Action Reports developed with corrective actions following announced and unannounced area response drills, tabletop drills, and Company emergency drills;
- Changes in regulations or applicable industry standards;
- Regulatory agency advisory bulletins and other guidance;
- Lessons learned from incidents and accidents of other operators;
- Administrative MOCs for interim review and update of a procedure;
- MOCs for operational or asset changes; and
- Internal or external audit findings.

The annual review process may include individual or team reviews.

The Pipeline Operations Manager will coordinate the following plan review and update procedures:

- At least once each year, at intervals not to exceed 15 months, review and make appropriate revisions as required by operational or organizational changes.
- At the same frequency, review and make appropriate revisions as required for changes in the names and telephone numbers detailed in Appendix B.
- Review and make appropriate revisions as required by improved procedures or deficiencies identified during response team tabletop exercises or actual emergency responses.
- Coordinate the word processing, publication, and distribution efforts to complete the revisions and maintain the plan.

#### 1.2.1.1. Incorporation of Plan Revisions


Upon receipt of any revisions, the plan holder shall:

- Review and insert the revised pages into the plan.
- Discard the obsolete pages.
- Record this action on the Revision History page in Appendix D.

### 1.3. Management of Change

When program review identifies deficiencies, the Company applies appropriate revisions and updates to the applicable part of the *Navigator CO<sub>2</sub> Ventures LLC Emergency Response Plan* (including ancillary documents) in a timely manner and in accordance with the Company's MOC



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procedure. Any changes to the plan must be communicated through a Management of Change (MOC) notice so all affected personnel are notified of the changes.

Results of risk analyses, integrity assessments and inspections completed on the pipeline, and records of pipeline surveys after heavy rainfall and ground shifting (geohazards) shall be communicated through a MOC notice to the Company Incident Commander (IC) to ensure awareness of potential threats.

The Company Incident Commander will ensure that managers and supervisors responsible for responding to pipeline accidents and emergencies receive copies of MOC notices pertaining to pipeline safety.


## 1.4. Documentation

The Company documents program reviews and keeps the documentation on file for at least three (3) years. Documentation of the reviews should include at least the following:

- Name and signature of reviewers
- Name and signature of person who will make changes to the plan
- Date of review
- Topics covered, including discussion notes
- List of all documents and supplemental material reviewed
- Action items, including resolution (where possible)
- Recommendations of changes and/or enhancements, including justification for rejected recommendations.

Prior to publication of updated revisions, the Company updates the County-Specific Incident Contacts

Revision History at the end of the plan with a description of the changes made, including justification when necessary.

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## SECTION 2. PIPELINE ACCIDENT REPORTING

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*49 CFR § 195.50 Reporting accidents. An accident report is required for each failure in a pipeline system subject to this part in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following events.*

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Review the appropriate state-specific *Notification and Isolation Procedure* when a pipeline emergency or failure has occurred to ensure timely reporting of accidents to federal and state agencies. County emergency management office contact information is included in the procedure.

Isolation procedures have been developed to provide location information for each pipeline segment as well as population information and other data that could assist in providing response information to agencies and emergency responders. Federal accident reporting definitions and notification procedures continue below. Safety-related condition reporting shall be submitted according to the procedure in the Pipeline Operations and Maintenance (O&M) Manual.

### 2.1. Reporting Pipeline Accidents to PHMSA


PHMSA defines pipeline system failures and accidents in 49 CFR § 195.50. An accident report is required for each failure in a pipeline system subject to 49 CFR Part 195 in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following:

- Explosion or fire not intentionally set by the operator
- Release of 5 gallons (19 liters) or more of hazardous liquid or carbon dioxide, except that no report is required for a release of less than 5 barrels (0.8 cubic meters) resulting from a pipeline maintenance activity if the release is:
  - Not otherwise reportable under this section;
  - Not one described in § 195.52(a)(4) (see Section 2.2);
  - Confined to company property or pipeline right-of-way; and
  - Cleaned up promptly.
- Death of any person;
- Personal injury necessitating hospitalization;
- Estimated property damage, including cost of clean-up and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding \$50,000.

### 2.2. Immediate Notice of Certain Accidents

**49 CFR § 195.52(a) Notice requirements.** At the earliest practicable moment following discovery, of a release of the hazardous liquid or carbon dioxide transported resulting in an event described in § 195.50 (see Section 2.1), but no later than one hour after confirmed discovery, the operator of the system must give notice, in accordance with § 195.52(b) of any failure that:

- Caused a death or a personal injury requiring hospitalization;
- Resulted in either a fire or explosion not intentionally set by the operator;

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- Caused estimated property damage including cost of cleanup and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding \$50,000;
- Resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines; or
- In the judgment of other operator was significant even though it did not meet the criteria of any other paragraphs of § 195.52.

**49 CFR § 195.52(b) Information required.** Each notice required by § 195.52(a) must be made to the National Response Center (NRC) either by telephone to 800.424.8802 (in Washington, DC 202.267.2675) or electronically at: <http://www.nrs.uscg.mil> and must include the following information:

- Name, address and identification number of the operator;
- Name and telephone number of the reporter;
- The location of the failure;
- The time of the failure;
- The fatalities and personal injuries, if any;
- The initial estimate of amount of product released in accordance with § 195.52(c); and
- All other significant facts known by the operator that are relevant to the cause of the failure or extent of the damages.

**49 CFR § 195.52(c) Calculation.** A pipeline operator must have a written procedure to calculate and provide a reasonable initial estimate of the amount of released product.

**49 CFR § 195.52(d) New information.**


- Within 48 hours after the confirmed discovery of an accident, to the extent practicable, an operator must revise or confirm its initial telephonic notice required by § 195.52(b) with a revised estimate of the amount of product released, location of the failure, time of the failure, a revised estimate of the number of fatalities and injuries, and all other significant facts that are known by the operator that are relevant to the cause of the accident or extent of the damages.
- If there are no changes or revisions to the initial report, the operator must confirm the estimates in its initial report.

**49 CFR § 195.54 Accident reports.**

- The operator that experiences an accident that is required to be reported under 49 CFR § 195.50 must, as soon as practicable, but not later than 30 days after discovery of the accidents, file an accident report on DOT Form 7000-1.
- Whenever the operator receives any changes in the information reported or additions to the original report on DOT Form 7000-1, it shall file a supplemental report within 30 days.

## 2.3. Reporting Safety-Related Conditions

**49 CFR § 195.55(a).** Except as provided in § 195.55(b), each operator shall report in accordance with § 195.56 the existence of any of the following safety-related conditions involving pipelines in service:

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- General corrosion that has reduced the wall thickness to less than that required for the maximum operating pressure, and localized corrosion pitting to a degree where leakage might result.
- Unintended movement or abnormal loading of a pipeline by environmental causes, such as an earthquake, landslide, or flood, that impairs its serviceability.
- Any material defect or physical damage that impairs the serviceability of a pipeline.
- Any malfunction or operating error that causes the pressure of a pipeline to rise above 110 percent of its maximum operating pressure.
- A leak in a pipeline that constitutes an emergency.
- Any safety-related condition that could lead to an imminent hazard and causes (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent or more reduction in operating pressure or shutdown of operation of a pipeline.

**49 CFR § 195.55(b).** A report is not required for any safety-related condition that:


- Exists on a pipeline that is more than 220 yards (200 meters) from any building intended for human occupancy or outdoor place of assembly, except that reports are required for conditions within the right-of-way of an active railroad, paved road, street, or highway, or that occur offshore or at onshore locations where a loss of hazardous liquid could reasonably be expected to pollute any stream, river, lake, reservoir, or other body of water;
- Is an accident that is required to be reported under § 195.50 or results in such an accident before the deadline for filing the safety-related condition report; or
- Is corrected by repair or replacement in accordance with applicable safety standards before the deadline for filing the safety-related condition report, except that reports are required for all conditions under § 195.55(a)(1) other than localized corrosion pitting on an effectively coated and cathodically protected pipeline.

### 2.3.1. Filing safety-related condition reports

Each report of a safety-related condition under § 195.55(a) must be filed (received by OPS) within five (5) working days (not including Saturday, Sunday, or federal holidays) after the day a representative of the operator first determines that the condition exists, but not later than ten (10) working days after the day a representative of the operator discovers the condition. Separate conditions may be described in a single report if they are closely related. Reports may be transmitted by electronic mail to: [InformationResourcesManager@dot.gov](mailto:InformationResourcesManager@dot.gov), or by facsimile at (202) 366–7128.

The report must be headed “Safety-Related Condition Report” and provide the following information:

- Name and principal address of operator.
- Date of report.
- Name, job title, and business telephone number of person submitting the report.
- Name, job title, and business telephone number of person who determined that the condition exists.
- Date condition was discovered and date condition was first determined to exist.

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- Location of condition, with reference to the state (and town, city, or county) or offshore site, and as appropriate nearest street address, offshore platform, survey station number, milepost, landmark, or name of pipeline.
- Description of the condition, including circumstances leading to its discovery, any significant effects of the condition on safety, and the name of the commodity transported or stored.
- The corrective action taken (including reduction of pressure or shutdown) before the report is submitted and the planned follow-up or future corrective action, including the anticipated schedule for starting and concluding such action.

### 2.3.2. Report submission requirements

**General.** Except as provided in § 195.55(b) and (e), the operator must submit each report required by Part 195 electronically to PHMSA at <http://opsweb.phmsa.dot.gov> unless an alternative reporting method is authorized in accordance with § 195.55(d).

**Exceptions.** The operator is not required to submit a safety-related condition report (§ 195.56) electronically.

**Safety-related conditions.** The operator must submit concurrently to the applicable state agency a safety-related condition report required by § 195.55 for an intrastate pipeline or when the state agency acts as an agent of the Secretary with respect to interstate pipelines.


**Alternate Reporting Method.** If electronic reporting imposes an undue burden and hardship, the operator may submit a written request for an alternative reporting method to the Information Resources Manager, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, PHP-20, 1200 New Jersey Avenue, SE, Washington, DC 20590. The request must describe the undue burden and hardship. PHMSA will review the request and may authorize, in writing, an alternative reporting method. The operator must contact PHMSA at (202) 366-8075 or electronically to "[informationresourcesmanager@dot.gov](mailto:informationresourcesmanager@dot.gov)" to make arrangements for submitting a report that is due after a request for alternative reporting is submitted but before an authorization or denial is received.

## 2.4. Minnesota Office of Pipeline Safety Reporting

### 2.4.1. General Requirements

The Minnesota Office of Pipeline Safety (MNOPS) has inspection and enforcement jurisdiction over intrastate pipelines and facilities. This Office also has Federal Agent Status for the inspection and incident/accident investigation for interstate pipelines and facilities.

All operators of pipelines and facilities are to make telephonic notice to the Minnesota Duty Officer (MNDO) for notifying this office if an emergency release (299J, subd.5 and 299J.07), reportable incident/accident, safety-related condition or a reportable event occurs. Pipeline operators are also required to make immediate notification of a discharge, accidental or otherwise, of any substance or material which may cause water pollution. (115.061)

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24 HOUR MINNESOTA DUTY OFFICER (MNDO)		
<i>Report ALL emergency releases, reportable incident/accidents, safety-related conditions, reportable events, or pollution discharge notifications to the MNDO.</i>		
<b>If there is an immediate threat to life or property, call 911 first.</b>		
STATE-WIDE	METRO & OUT OF STATE	FAX
800.422.0798	651.649.5451	651.296.2300

The MNDO will request the following information (if available):

- Name of caller
- Date, time and location of the accident
- Telephone number for call-backs at the scene or facility
- Whether local officials (fire, police, sheriff) have been notified of the accident

**Requesting state assistance for accidents.** The MNDO will request additional information in the following special circumstances:

- Type of assistance requested (informational specialized team assets, etc.)
- Name of requesting agency/facility
- Materials, quantity and personnel involved in the incident
- Whether all local, county, and mutual aid resources have been utilized

**Making notifications of spills/accidents.** The MNDO will request additional information in the following special circumstances:

- Materials and quantity involved in the accident
- Accident location (physical address, intersections, etc.)
- Responsible party of accident (property/business owner)
- Telephone number of responsible party
- Any surface waters or sewers impacted
- What has happened and present situation


**Minnesota Duty Officer.** The Minnesota Duty Officer Program provides a single answering point for local and state agencies to contact regarding state-level assistance for emergencies, serious accidents, or incidents or for reporting hazardous materials and petroleum spills. The duty officer is available 24 hours per day, seven days a week.

## 2.4.2. Penalties for Failing to Report Emergency Release – Minnesota Statute §299J.07

### 2.4.2.1. Subdivision 1 – Duty to Report

The pipeline operator shall immediately report by telephone to the emergency response center established by the commissioner of public safety an emergency release from the operator's pipeline.



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#### 2.4.2.2. Subdivision 2 – Felony

(a) An employee of a pipeline operator who has responsibility to make the report under subdivision 1 is guilty of a felony if:

1. The employee knows or has reason to know that an emergency release exists;
2. The employee does not immediately report the release to the commissioner of public safety; and
3. The emergency release causes the death of an individual or great bodily harm as defined in section 609.02, subdivision 8\*.

(b) A person convicted under this subdivision may be sentenced to imprisonment for not more than seven years or payment of a fine of not more than \$14,000, or both.

\*Great bodily harm means bodily injury which creates a high probability of death, or which causes serious permanent disfigurement, or which causes a permanent or protracted loss or impairment of the function of any bodily member or organ or other serious bodily harm. Minn. Stat. §609.02, Subd. 8:

#### 2.4.3. Written Reports and Amendments

49 CFR §§ 191.3, 191.5, 191.23, 195.50 and 195.52 accident-incident reporting criteria must be used by the operators. When written reports or amendments are required by respective 49 CFR Parts 191 or 195, copies of the federal incident/accident reporting form should be sent to the MNOPS.


MINNESOTA OFFICE OF PIPELINE SAFETY (MNOPS)		
ADDRESS	PHONE	FAX
445 Minnesota Street, Ste. 147 St. Paul, MN 55101-5147	651.201.7230	651.296.9641

*MNOPS Alert Notice-02-2022: Executive Order 22-20 issued by Governor Tim Walz: New Cybersecurity Requirements for MN Pipeline Operators*

Pipeline systems and facilities that use control rooms, supervisory control and data acquisition (SCADA), or other electronic controls that may be vulnerable to cybersecurity issues will be required to take actions to protect their system security. These types of cybersecurity issues should be considered as threats to pipeline/facility infrastructure where applicable in pipeline integrity programs as well as procedures related to control rooms.

Personnel responsible for system ownership, system operations, and cybersecurity are expected to register at MNFC, and there is no limit to how many you may register. Register under “Partners Membership” and complete the biographic information. Then select the Critical Infrastructure Key Resources Sector Energy. IT and cyber security personnel should select “Information Technology” and a sector. Registration questions can be directed to [mn.fc@state.mn.us](mailto:mn.fc@state.mn.us).


What do pipeline operators need to do?	
1	Start to register your system and identified staff with MN Fusion Center at MNFC.
2	Report cyber-attacks to the Minnesota Fusion Center at <a href="mailto:mn.fc@state.mn.us">mn.fc@state.mn.us</a> or 651.793.3730.

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3	Additional information can be found at the Executive Order 22-20 Frequently Asked Questions website for additional resources on implementing cybersecurity best practices and developing critical cybersecurity self-assessments: <a href="https://mn.gov/mnit/government/policies/security/eo22-20.jsp">https://mn.gov/mnit/government/policies/security/eo22-20.jsp</a>
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## SECTION 3. EMERGENCY PLANNING AND RESPONSE

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*REGULATION: Per 49 CFR § 195.402(e), the plan includes specific, written procedures for handling emergencies.*

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### 3.1. Emergency Conditions


An emergency is defined as an unforeseen combination of circumstances that calls for immediate action to assure the safety of the general public and minimize the time requirements necessary to isolate, blowdown, repair, and reactivate affected facilities. The following are emergency conditions that could occur on a pipeline facility:

**Leak.** A leak due to a rupture must be given immediate attention to protect the public, Company or contractor personnel who may be working in the vicinity of the pipeline leak.

**Major fire and/or explosion.** Carbon dioxide is not flammable, but precautions must be taken if a major fire or explosion in the vicinity could affect the pipeline.

**Abnormal pressure conditions:**

- **Over-pressure.** When pressures exceeding the maximum operating pressures (MOP) of components on a system are experienced, action must be taken to eliminate conditions that might endanger life or property.
- **Under-pressure.** When there is substantial reduction in pressure of CO<sub>2</sub>, in either the liquid or supercritical phase (e.g., during a leak), it will change its state to the vapor phase losing its solvency capacity thus liberating any impurities within the stream which were previously held in suspension. This could lead to deposition of any non-gaseous substances around the release point over an extended period of time.
  - Depressurization of a dense phase CO<sub>2</sub> pipeline can, if not carefully controlled, result in a significant proportion of the original inventory being deposited as solid CO<sub>2</sub> at low points within the pipeline. At atmospheric pressure these solids will be at -109°F and could result in the potential for metallurgical damage to occur. Also, if the solid CO<sub>2</sub> is then warmed rapidly (e.g., by the reintroduction of dense phase CO<sub>2</sub>), there is a likelihood of pipeline over-pressurization due to the rapid increase in volume as the solid sublimates into the vapor phase.
  - Depressurizing a pipeline in a manner that prevents solid formation and excessive material cooling can be achieved during normal operations. Should an uncontrolled depressurization occur (e.g., due to a leak), the solids and cooling issues will occur and should have been considered in the design phase.
- **Low temperatures and solid CO<sub>2</sub> formation.** Liquid CO<sub>2</sub> when depressurized may, depending on the initial pressure and temperature conditions and final conditions, change phase to be a pure vapor, a two-phase liquid and vapor mixtures, a two-phase solid and vapor mixture, or a three-phase solid, liquid, and vapor mixture. CO<sub>2</sub> cannot persist at atmospheric pressure in its liquid phase. The depressurization of CO<sub>2</sub> by design or by accident can result in temperatures within and near systems at or below -109°F the sublimation temperature of solid CO<sub>2</sub>.

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- **Hydrates.** Hydrates may cause ice plugs which could clog the pipeline system. There is a degree of uncertainty as to whether free water in dense phase CO<sub>2</sub> will form hydrates before carbonic acid, but there will be a dependency on the CO<sub>2</sub> pressure, temperature and, not the least, the water content. If the pressure is high, there is a higher risk for hydrate formation. If the pressure is low, there is a higher likelihood for corrosion.

**Natural disaster.** Disasters such as floods, tornadoes and high winds might cause various operational problems for a pipeline system. Pipeline field technicians should monitor environmental conditions and changing weather patterns in proximity to the Navigator pipeline system and evaluate soil stability that may have been adversely impacted. Emergency procedures must be employed to survey the system (including increasing patrol intervals in areas identified as higher risk) and eliminate conditions that might endanger life or property.

**Large earth movement.** Slope instability, subsidence, frost heave, soil settlement, erosion, earthquakes and other dynamic geologic conditions may pose a safety risk to the pipeline. Right-of-way patrol technicians should be trained on how to detect and report conditions that may lead to or exhibit ground movement.

### 3.2. Notification of a Potential Rupture


A notification of potential rupture refers to the notification to, or observation by, an operator (e.g., by or to its controller(s) in a control room, field personnel, nearby pipeline or utility personnel, the public, local responders, or public authorities) of one or more of the below indicia of a potential unintentional or uncontrolled release of a large volume of hazardous liquids from the pipeline:

- An unanticipated or unexplained pressure loss outside of the pipeline's normal operating pressures, as defined in the operator's written procedures in the O&M manual. The Company must establish in its written procedures that an unanticipated or unplanned pressure loss is outside of the pipeline's normal operating pressures when there is a pressure loss greater than 10 percent occurring within a time interval of 15 minutes or less, unless the operator has documented in its written procedures the operational need for a greater pressure-change threshold due to pipeline flow dynamics (including changes in operating pressure, flow rate, or volume), that are caused by fluctuations in a product demand, receipts, or deliveries;
- An unanticipated or unexplained flow rate change, pressure change, equipment function, or other pipeline instrumentation indication at the upstream or downstream station that may be representative of an event meeting the paragraph above (first bullet point); or
- Any unanticipated or unexplained rapid release of a large volume of hazardous liquid, a fire, or an explosion, in the immediate vicinity of the pipeline.

The Control Room shall immediately notify the Manager of Operations and the Incident Commander when discovering any of the above events. If field personnel or other company personnel discover or receive notice of any of the above events, the Manager of Operations and the Incident Commander shall be notified immediately. Any notification of potential rupture occurs when an operator first receives notice of or observes an event specified in this section.


### 3.3. Response Measures to Mitigate Pipeline Accidents

The CO<sub>2</sub> Emergency Response Plan shall work in conjunction with the procedures found in the Company O&M manual for responding to abnormal operations and mitigating pipeline accidents.

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The Company shall have the following procedures developed to respond to and mitigate pipeline accidents:


- **Communication requirements.** Ensure a procedure is in place and personnel assigned to the Incident Command System (ICS) are trained in proper communication practices contacting emergency operations centers (9-1-1) when the services of the following responders are needed: Fire Department, EMS for injuries, Sheriff and Local Police (for public evacuations and setting up barricades to traffic), County Emergency Management personnel (for response assistance), and Tribal Liaisons.
  - A liaison should be established by the Incident Commander with appropriate local emergency coordinating agencies to ensure responders are aware of the pipeline route and product transported and to determine their capabilities in responding to a pipeline accident.
  - All communications with emergency responders, public officials, responding agencies shall be documented with name of contact, date of contact, subject discussed and name of Company personnel who made the contact.
  - All lessons learned post-accident / post-failure shall be communicated to local responders and documented.
- **Investigation of fires or explosion near the Navigator pipeline.** Fires or explosions (other emergencies detailed below) that occur near or directly involving the Navigator CO<sub>2</sub> pipeline shall be investigated and documented as follows:
  - Type of emergency: fire, explosion, accidental release of hazardous liquid or carbon dioxide from a pipeline facility, operational failure causing a hazardous condition, and natural disaster or geohazards
  - After investigation of the emergency situation, the Company shall document the following: type of emergency, location (proximity to the Navigator pipeline), date and time of accident, cause (if known), name of contact, date and time of investigation, person investigating, public officials notified.
- **Inventory of response equipment.** The Incident Commander shall keep an inventory of Company and environmental/emergency response equipment and PPE required to respond to a CO<sub>2</sub> pipeline accident or leak and review the lists on a consistent basis to ensure availability for emergencies. An inventory of response equipment to be provided by local responders and County Emergency Management agencies shall be developed and maintained.
- **Rupture identification and response procedure.** The Company shall develop a written rupture identification and response procedure to minimize hazards of released carbon dioxide to life, property or the environment per §195.402(e)(4).
  - The procedures shall provide the method for evaluating and identifying whether a notification of a potential rupture, as defined in § 195.2, is an actual rupture event or non-rupture event.
  - These procedures must, at a minimum, specify the sources of information, operational factors, and other criteria that operator personnel use to evaluate a notification of a potential rupture, as defined in § 195.2.

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- For operators installing valves in accordance with §§ 195.258(c) and 195.258(d), or that are subject to the requirements in § 195.418, those procedures should provide for rupture identification as soon as practicable.
- **Train field operations personnel to minimize hazards.** The Company shall develop a procedure to train field operations personnel to minimize hazards at an accident scene by controlling the amount of carbon dioxide released (including possible intentional ignition in the cases of flammable highly volatile liquid).
- **Assist responders with evacuation of residents.** The Company shall minimize public exposure to injury and possibility of accidental ignition or breathing carbon dioxide vapors by assisting emergency responders with evacuation of residents and assisting with halting traffic on roads and railroads in the affected area or taking other appropriate action. The Incident Commander shall meet with local responders to ensure their response capabilities.
- **Coordinate emergency response by sharing pipeline accident location and product information with emergency responders.** The Incident Commander (or designee) shall contact local responders and coordinate emergency response by sharing the following information: product leaked, location of the release, responses taken and responses planned, and any additional precautions necessary where a carbon dioxide release has occurred.
  - The Incident Commander (or designee) shall immediately and directly notify the appropriate public safety answering point or other coordinating agency for the communities and jurisdiction(s) in which the pipeline is located after notification of a potential rupture (as defined in § 195.2) has occurred to coordinate and share information to determine the location of the release, regardless of whether the segment is subject to the requirements of §§ 195.258(c) or (d), 195.418 or 195.419.
- **Assessing extent and coverage of vapor cloud.** The Incident Commander and HSE Manager shall ensure that in case of an accidental release of carbon dioxide, trained HSE personnel shall use appropriate instruments to assess the extent and coverage of the vapor cloud and determine the hazardous areas.
- **Conduct post-accident review.** The Incident Commander shall ensure that a post-accident review of employee activities is developed to determine whether the procedures were effective in each emergency and take corrective action where deficiencies are found.
- **Control Center Documentation of Response Activities.** Control Center personnel shall follow CRM procedures for response to a pipeline accident or release in accordance with written procedures (see § 195.446). The Control Center Manager shall ensure that all response activities are documented and reviewed for deficiencies post-accident and lessons learned are shared with the Manager of Operations, HSE Manager and the Incident Commander.

The Pipeline Operations Manager shall take these additional safety measures to ensure these factors that could affect response time to pipeline accidents have been mitigated.

- **Pipeline Markers.** The Pipeline Operations Manager shall ensure that field operations personnel are identifying correct placement and maintaining the proper number of pipeline markers and with adequate visibility to ensure the public and emergency responders are able to identify Navigator's carbon dioxide pipeline in case of an emergency.

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- **Field Surveys.** The Pipeline Operations Manager shall ensure that field surveys are conducted after heavy, prolonged rainfall and results shared with the Incident Commander (IC) to ensure awareness of potential risks to the pipeline caused by flooding.
  - Field pipeline technicians should document any other geohazards or changes to the pipeline right-of-way that could affect pipeline safety, document the changes.
  - Initial and recurring field surveys shall include notation of topography (and changes in topography) along the pipeline route that have low-lying areas where released carbon dioxide could settle. The location of these areas identified as potential risks shall be added to the state-specific Notification and Isolation Procedures.
  - All potential risks to pipeline safety identified and documented during pipeline surveys shall be shared in writing with the IC, the Integrity Management Program Manager, and the Control Center Manager.
- **Firefighting Equipment.** The Pipeline Operations Manager shall ensure that firefighting equipment to be stationed at each pump station and breakout tank area is adequate for emergency response, in proper operating condition at all times, plainly marked so that its identity as firefighting equipment is clear; field personnel are properly trained to use the equipment, and equipment is located so that it is easily accessible during a fire.
- **Response Time Validation Drills.** The Pipeline Operations Manager shall ensure that the results of response time validation drills (see § 195.420(e)) are shared in writing with the Incident Commander and the Control Center Manager.


### 3.4. CO<sub>2</sub> Properties and Safety Concerns

Carbon dioxide has properties that can cause serious accidents, injuries and even death if proper precautions are not followed. Before handling carbon dioxide or operating and maintaining a carbon dioxide pipeline, be sure to review the safety precautions described in this plan and the safety data sheet (SDS) for risks associated with carbon dioxide exposure.

Properties of Carbon Dioxide	
✓	Typically found in a gaseous state under atmospheric conditions
✓	Colorless, odorless, tasteless
✓	Pressurized into liquid state
✓	DOT Placard: Green, category 2, non-flammable
✓	NFPA 704 Marking System: 3 Health, 0 Fire, 0 Reactivity, 0 Special Hazard
✓	Expansion ratio nearly 3000 to 1
✓	Displaces O <sub>2</sub> , asphyxiant (creates oxygen-deficient atmosphere where CO <sub>2</sub> might settle in low-lying areas)
✓	Cryogenic

- Concentrated CO<sub>2</sub> acidifies water; therefore, pipeline leaks or ruptures can acidify wells, aquifers, and surface waters like lakes and rivers.
- Liquefied CO<sub>2</sub> sinks and spreads, needing wind and weather conditions to disperse it.
- Upon release, CO<sub>2</sub> transitions from a liquid to a gaseous phase resulting in a refrigeration effect and will continue to vent into the atmosphere even after the pipeline is shut down.
- Since CO<sub>2</sub> is heavier than air (CO<sub>2</sub> has a density approximately 1.53 times that of air in standard atmospheric conditions) it will follow a path to low-lying areas (ditches, ravines,



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valleys, etc.). The CO<sub>2</sub> will continue to follow that path if there are no significant winds to disperse it.

**Concentrated amounts of CO<sub>2</sub>.** Reviewing and identifying land topography is an important task to complete for emergency responders to understand the risk of carbon dioxide settling in low-lying areas. Field operations personnel and emergency responders should be trained to identify and report this hazardous situation.

**Exposure Routes:** Inhalation, skin, and/or eye contact (liquid/solid)

**Symptoms:** headache, dizziness, restlessness, paresthesia, dyspnea (breathing difficulty), sweating, malaise (vague feeling of discomfort), increased heart rate, cardiac output, blood pressure, coma, asphyxia, convulsions, frostbite (liquid, dry ice)

**Target Organs:** respiratory system, cardiovascular system

**Incompatibilities and Reactivities:** dusts of various metals, such as magnesium, zirconium, titanium, aluminum, chromium and manganese are ignitable and explosive when suspended in carbon dioxide; forms carbonic acid in water.

#### 3.4.1. Safety Data Sheets

The Incident Commander shall ensure that ERP binders kept by Company emergency responders, the ICS team, and field technicians have multiple copies of the Safety Data Sheets (SDS) for the transport product from each delivery facility in each state. The IC or designee shall provide safety data sheets to the Federal On-Scene Coordinator and appropriate state and local emergency responders within six (6) hours of a telephonic or electronic notice of the accident to the National Response Center.

**Federal On-Scene Coordinator.** The term “Federal On-Scene Coordinator” has the meaning given such term in Section 311(a) of the Federal Water Pollution Control Act (33 U.S.C. 1321(a)).

**National Response Center.** The term “National Response Center” means the center described under 40 CFR § 300.125(a).


**Safety data sheet.** The term “safety data sheet” means a safety data sheet required under 29 CFR § 1910.1200.

#### 3.4.2. Air Monitoring

The Incident Commander (IC) shall work with the Company HSE Manager to determine the proper air monitoring equipment to be used by Company emergency responders (Safety Monitors or trained field pipeline technicians) who will be the first to be deployed to the pipeline accident or leak location.

The IC will be responsible for ensuring the air monitoring equipment is on a calibration schedule, is stored at locations for quickly dispensing to the site of a pipeline leak. The IC will determine if trained field technicians shall keep air monitors with them at all times in their vehicles.

Meetings with county emergency management officials and area responders should discuss the availability of air monitors in their organizations for emergency response to a carbon dioxide pipeline release. Availability and number of air monitors and location of equipment shall be investigated and documented by the IC per state by county officials and local responders.

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Post-discovery period. The IC is responsible to work with the HSE Manager to ensure industrial hygiene monitoring is conducted and documented. The IC and HSE Manager shall ensure that the Company safety manual has procedures for decontamination after exposure and that response personnel understand decontamination requirements as part of their training as an emergency responder to carbon dioxide pipeline releases that may contain toxins.

The IC will be responsible for ensuring response personnel have the proper equipment to conduct the following atmospheric testing in this order of testing when arriving at the scene of a CO<sub>2</sub> vapor release:

- **First test:** Test for oxygen-deficient atmosphere
- **Second test:** Test for combustible gasses
- **Third test:** Test for toxic gasses and vapors


Air monitoring measurements to be made prior to entry into a spill or vapor release area:		
1	Oxygen content	Oxygen readings below 19.5% require the use of air supplied respiratory protection
2	Lower explosive limit (LEL)	LEL readings above 10% require immediate evacuation of the area and elimination of ignition sources.
3	Benzene	After assuring that there are no hazards relating to oxygen depletion or explosion, sampling for benzene shall dictate the appropriate respiratory devices to be used by persons entering the area as follows for benzene:
		0.50 PPM or less      None required
		0.50 to 1.0 PPM      Half-face air purifying
		to 50.0 PPM      Full-face air purifying
		50.0 PPM or greater      Pressure demand SCBA

### 3.4.3. Personal Protective Equipment (PPE)

PPE for pipeline accident emergency responders will be evaluated and determined by the Operations Manager, HSE Manager and the IC. PPE requirements for CO<sub>2</sub> pipeline accident responses (leaks and ruptures) will be documented in the Company HSE Manual and provided to all trained pipeline operations personnel.

PPE required by environmental responders and cleanup contractors in the event of a CO<sub>2</sub> release includes the following, as a minimum, per U.S. Environmental Protection Agency (EPA) Level D standards:

- Gloves
- Coveralls
- Safety glasses
- Face shield
- Chemical-resistant, steel-toe boots or shoes
- Additionally—beyond Level D basics—air monitoring tests and self-contained breathing apparatus (SCBA), as needed


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EPA Level D represents the minimum protection required. Level D protection may be sufficient when no contaminants are present or work operations preclude splashes, immersion, or the potential for unexpected inhalation or contact with hazardous levels of chemicals.

### 3.5. Initial Response to Existing or Potential Emergency

When investigating and responding to the following emergency situations, the Incident Commander should be notified as soon as possible upon receiving news of a potential pipeline emergency. The state-specific *Notification and Isolation Procedure* should be reviewed as soon as possible to ensure all notifications to federal and state agencies are made within the time frame allowed (within one hour after discovery for National Response Center).

All response activities must be documented including a response timeline. Photographs included shall be retained as a record of the emergency. Determination of a root cause and corrective actions should be included in the investigation.

 <b>CAUTION</b>	<b>First responders must have an oxygen sensor and the required PPE before responding to a CO<sub>2</sub> release. If a hot zone has been set up by the Incident Commander, then SCBA will be required before responding.</b>
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#### 3.5.1. Responding to Releases of CO<sub>2</sub>

When information indicates a leak on the pipeline exists, a trained pipeline field technician shall be dispatched to the leak location immediately. While Company response personnel are *enroute*, every reasonable effort should be made to provide them with pertinent information so they can begin assessment of the danger as soon as they arrive at the site of the leak.


The Pipeline Control Center Manager or Controller shall notify the Incident Commander of the potential leak. When the on-site assessment is made by the field technician and the information relayed to the Operations Manager and the IC, the following steps should be completed by the IC or qualified member of the ICS as designated by the IC (using the appropriate state-specific Notification and Isolation Procedure):

- Determine whether the escaping product is sufficient to require immediate evacuation. If the situation requires emergency assistance, inform the IC to call 9-1-1.
- Determine whether the area should be barricaded from personnel or traffic. If traffic should be re-routed, contact the local police or county sheriff's department for assistance.
- With the assistance of local emergency responders, determine if any nearby populated areas should be evacuated.
- The IC shall appoint an ICS team member to document the response times and activities.
- After determining how much and how quickly product is escaping, the Incident Commander will request additional manpower, equipment and materials needed to repair the pipeline and stop the leak.

#### Communication process during a leak.

- The Operations Manager, Control Room Manager and Incident Commander should be in communication during the investigative process to determine the isolation method to be



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used. The means selected to control a leak will be influenced by protecting the safety of personnel and the public first, then property and the environment.

- The Operations Manager shall communicate with trained pipeline field technician(s) the appropriate steps to take to mitigate the emergency and stop the leak.

### 3.5.2. Responding to Major Fire or Explosion

When responding to a report of a major fire or explosion, the primary consideration shall be safety to the public, Company personnel and contractor personnel. Although carbon dioxide is not flammable, major fires or explosions in the vicinity of the CO<sub>2</sub> pipeline can result in an emergency situation. Personnel required to respond to this type of call shall be thoroughly trained in investigating and controlling the incident.

CO<sub>2</sub> density is sensitive to temperature changes especially close to critical point conditions (i.e., 80°F). This can result in systems over-pressurizing should an isolated (i.e., contained) inventory of liquid phase CO<sub>2</sub> increase in temperature due to heat radiation from the sun or flame impingement from an adjacent fire event.

The following actions and procedures shall be considered (using the appropriate state-specific Notification and Isolation Procedure):

- Immediately establish contact with any fire and law enforcement personnel on the scene;
- It must be determined as soon as possible if gas is directly involved in the fire or explosions are near the CO<sub>2</sub> pipeline. If gas is not involved but is in close proximity, action shall be taken to ensure the protection of the public and the affected facilities.
- The pipeline field technicians shall conduct tests by accepted leak detection methods if needed to determine the presence of gas.
- If gas is involved and the presence is such that there is immediate danger to the public and property, the area shall be evacuated and the emergency response plan for the pipeline should be followed. Request assistance from local emergency response providers if evacuations are needed.


### 3.5.3. Abnormal Pressure Conditions

One of the most serious conditions that can be encountered on a pipeline is an over-pressured system. Normally this would be caused by a malfunctioning pressure relief device or erroneous valve operations. The Company uses *[insert description of Control Room Management procedure and O&M procedure here.]*.

### 3.5.4. Natural Disaster

In the event of a natural disaster such as a tornado, flood, or earthquakes and large land movements, emergency procedures shall be implemented to maintain or resume service. As soon as possible, after a geological event has occurred, the Operations Manager shall ensure that a trained pipeline field technician investigates the pipeline to assess the severity of the situation.

Pipeline field technicians shall ensure they have proper PPE and air monitoring equipment to respond to a CO<sub>2</sub> release in case there is the possibility of a pipeline rupture. As soon as practicable, a broader investigation to assess damage to pipeline facilities should be conducted

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by the pipeline field technician. The pipeline field technician should inspect regulator stations and control lines for damage and over-pressurization and conduct a leak survey.

The Control Center Manager shall inform the Incident Commander as soon as possible after receiving the field assessment to determine if assistance is needed by local responders and notification required to the federal and state agencies.

### 3.6. Post-Accident Review

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*REGULATION: Per 49 CFR § 195.195.402(e)(9), the Company reviews the plan to evaluate its effectiveness.*

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The Company must incorporate lessons learned from a post-failure and post-accident review into its written procedures, including in pertinent operator personnel training and qualifications programs, as well as in design, construction, testing, maintenance, operations, and emergency procedures, manuals, and specifications.


#### 3.6.1. Review of Operational Response

All operational responses to emergency conditions for hazardous liquid and CO<sub>2</sub> pipelines are required to be reviewed to determine the adequacy of the procedures in responding to the different types of emergencies.

This section provides procedures and information useful to pipeline operations personnel and emergency responders for post-accident/exercise review and evaluation. Post-accident/exercise reviews should be conducted in a timely manner following an accident/exercise. The plan should be evaluated to determine its usefulness during the accident/exercise and appropriate revisions should be made. All accident/exercise documentation should be included in the plan evaluation process.

The following actions should be taken following a pipeline accident:

- The Company shall investigate and analyze pipeline accidents and failures, including sending failed pipe, component, or equipment for laboratory testing or examination where appropriate, to determine the causes(s) and contributing factors of the failure and to minimize the possibility of a recurrence.
  - **Post-failure and -accident lessons learned.** The Company must develop, implement, and incorporate lessons learned from a post-failure and accident review into its written procedures, including pertinent operator personnel training and qualifications programs, and in design, construction, testing, maintenance, operations, and emergency procedure manuals and specifications.
  - **Analysis of rupture and valve shut-offs; preventive and mitigative measures.** If a failure or accident on an onshore hazardous liquid or carbon dioxide pipeline involves the closure of a rupture-mitigation valve (RMV), and defined in § 195.2, or the closure of an alternative equivalent technology, the operator of the pipeline must also conduct a post-failure or -accident analysis of all the factors that may have impacted the release volume and the consequences of the release and identify and implement operations and maintenance measures to minimize the consequences of a future failure or incident. The analysis must include all relevant


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factors impacting the release volume and consequences, including, but not limited to, the following:

- Detection, identification, operational response, system shut-off, and emergency-response communications, based on the type and volume of the release or failure event;
  - Appropriateness and effectiveness of procedures and pipeline systems, including supervisory control and data acquisition (SCADA), communications, valve shut-off, and operator personnel.
  - Actual response time from identifying a rupture following a notification of potential rupture, as defined at § 195.2, to initiation of mitigative actions and isolation of the segment, and the appropriateness and effectiveness of the mitigative actions taken;
  - Location and timeliness of actuation of all RMVs or alternative equivalent technologies; and
  - All other factors the operator deems appropriate.
- **Rupture post-failure and accident summary.** If a failure or -accident on an onshore hazardous liquid or carbon dioxide pipeline involves the identification of a rupture following a notification of potential rupture; the closure of an RMV, as those terms are defined in § 195.2; or the closure of an alternative equivalent technology, the Company must complete a summary of the post-failure or -accident review required by § 195.402(c)(5)(ii) within ninety (90) days of the failure or accident. While the investigation is pending, the Company must conduct quarterly status reviews until the investigation is completed and a final post-failure or -accident review is prepared.
- The final post-failure or -accident summary and all other reviews and analyses produced under the requirements of § 195.402 must be reviewed, dated, and signed by the Company's appropriate senior executive officer.
  - The Company must keep, for the useful life of the pipeline, the final post-failure or -accident summary, all investigation and analysis documents used to prepare it, and records of lessons learned.

### 3.7. Controller Responsibilities

See the *Navigator CO<sub>2</sub> Ventures LLC Control Room Management Plan* for actions required in accordance with §195.446. The IC shall ensure that the Control Room Manager records Control Room activities and responses prior to and during a pipeline accident or leak and that lessons learned post-accident and post-drill are documented and included in revisions to the CRM plan. The Control Room Manager shall notify the Operations Manager, Integrity Manager and the Incident Commander of revisions made via the MOC process.


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### 3.8. Documentation of Response Actions

Initial Response personnel should maintain a log that documents the history of the events and communications that occur during the response and the timeline of events when communications occurred.

When recording this information, it is important to remember that the log may become instrumental in legal proceedings, therefore:

- Record only facts, do not speculate.
- Do not criticize the efforts and/or methods of other people/operations.
- Do not speculate on the cause of the spill.
- Do not skip lines between entries or make erasures. If an error is made, draw a line through it, add the correct entry above or below it, and initial the change.
- Record the recommendations, instructions, and actions taken by government/regulatory officials.
- Document conversations (telephone or in person) with government/regulatory officials.
- Request that government/regulatory officials document and sign their recommendations or orders (especially if company personnel do not agree with the suggestions, instructions, or actions).

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## SECTION 4. EMERGENCY RESPONSE TRAINING AND DRILLS

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*REGULATION: Per 49 CFR § 195.403(a), the Company has established a continuing training program to instruct emergency response personnel.*

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This section outlines the Company's continuing training program for emergency response personnel, which includes the following elements:

- Emergency Procedures – Related to personnel assignments.
- Characteristics and Hazards – Associated with transported products.
- Emergency Recognition – Conditions likely to cause emergencies, including prediction of potential consequences.
- Initial Response – Steps to control release and minimize impact
- Fire Training – Potential causes, types, sizes, and consequences of fire and use of equipment


### 4.1. Emergency Response Personnel Training

The Company has established and will conduct a continuing training program to instruct emergency response personnel to:

- Carry out the emergency procedures established under § 195.402 that relate to their assignments;
- Know the characteristics and hazards of carbon dioxide being transported (including in case of flammable HVL, flammability of mixtures with air, odorless vapors, and water reactions);
- Recognize conditions that are likely to cause emergencies, predict the consequences of facility malfunctions or failures and hazardous liquids or carbon dioxide spills, and take appropriate corrective action;
- Take steps necessary to control any accidental release of hazardous liquid or carbon dioxide and to minimize the potential for fire, explosion, toxicity, or environmental damage; and
- Learn the potential causes, types, sizes, and consequences of fire and the appropriate use of portable fire extinguishers and other on-site fire control equipment, including, where feasible, a simulated pipeline emergency condition.

At the intervals not exceeding 15 months, but at least once each calendar year, the Company shall:

- Review with personnel their performance in meeting the objectives of the emergency response training program set forth in § 195.403(a); and
- Make appropriate changes to the emergency response training program as necessary to ensure that it is effective.

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The Company shall require and verify that its supervisors maintain a thorough knowledge of that portion of the emergency response procedures established under § 195.402 for which they are responsible to ensure compliance.

The Pipeline Operations Manager and Incident Commander shall determine the employees who will be trained in response to a pipeline emergency and the level of training for each employee (or group of employees) according to defined tasks.

#### 4.1.1. Incident Command System Training

Response team members will receive ICS training and may also receive supplemental training in other related general topics. The Incident Commander shall develop procedures to be used in a pipeline emergency, assign responsibilities, and determine training required for each role.

#### 4.2. Annual Training Review

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*REGULATION: Per 49 CFR § 195.403(b), the Company regularly reviews the continuing training program for emergency response personnel.*

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Once each calendar year, not to exceed 15 months, the Company performs the following:

- *Performance Review:* Review with personnel emergency response performance in meeting training program objectives.
- *Training Program Update:* To ensure effectiveness.

#### 4.3. Supervisor Training

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*REGULATION: Per 49 CFR § 195.403(c), the Company ensures that supervisors have a thorough knowledge of emergency response procedures.*

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The Company ensures that supervisors gain and maintain thorough knowledge of the emergency response procedures they must supervise.

#### 4.4. Training Instructor Qualifications

As no formalized method of certifying training instructors has been established, the Company ensures the competency of its instructors and training organizations by selecting trainers and/or organizations with professional reputations and extensive hands-on and classroom experience in their subject matter. The Company personnel with responsibility to coordinate the training program also conduct periodic informal audits of training courses selected for the Company training program to ensure their suitability for the program.

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## Appendix A Safety Data Sheets

### A.1. CO<sub>2</sub>

*[Add SDS supplied by each delivery facility in each state.]*

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## Appendix B Contact Information—Personnel and Agency

### B.1. Internal Notification References for Pipeline Response

Position	Name	Location	Office	Mobile
Incident Commander (IC)				
IC Alternate				
Pipeline Operations Manager				
Pipeline Compliance Manager				
Control Room Manager				
Pipeline Integrity Manager				
HSE Manager				
Environmental Response Manager				

### B.2. External Notification References for Pipeline Emergencies


Organization	Timeframe	Telephone Number	Type of Contact
National Response Center (NRC)	Within 30 minutes (do not exceed 1 hour)	(800) 424-8802	
Illinois			Gas only
Iowa			Gas only
Minnesota Office of Pipeline Safety	Immediate	State-wide (800) 422-0798; metro & out-of-state (651) 649-5451	24 Hour Minnesota Duty Officer (MNDO)
Nebraska			Gas only
South Dakota			Gas only

### B.3. National Response Center (for Incident/Accident Notification)

Information is provided for Part 195 hazardous liquids in general. Certain details might not apply to CO2 pipelines or releases.

c/o United States Coast Guard (CG-3RPF-2) 2100 2nd Street Southwest, Room 2111-B Washington, DC 20593-0001	(800) 424-8802 (24 Hours) (202) 267-2675 (Direct) (202) 267-1322 (Fax)
<b>Reporting Requirements</b> <b>Discharges of Oil to Navigable Waters</b> For all facilities, immediately report all discharges of oil or refined petroleum product into, or likely to reach, navigable waters of the United States (including streams, lakes, rivers, and reservoirs). <b>Note:</b> Notification of the regional Coast Guard Captain of the Port is also recommended if release has affected or might affect a navigable waterway.	



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### Discharges of Hazardous Liquids or CO<sub>2</sub> From Pipeline

49 CFR §§ 195.50; 195.52; 195.54; 195.402(c)(2)

Advisory Bulletin (ADB-02-04)

For a DOT pipeline or facility, immediately report (within 1 hour of discovery) any release of a hazardous liquid or carbon dioxide that:

- Results in an unintentional fire or explosion;
- Causes a death or personal injury requiring hospitalization;
- Causes property damage, including clean-up costs exceeding \$50,000;
- Is significant in other respects; or
- Is 5 gallons or more.

**Note:** However, the First Notification Form is required for internal reporting of all releases of 3 gallons or more to land.

**Note:** If the operator does not provide a spill amount, the NRC will assume that a major spill of 1,000 barrels has occurred.

Prompt follow-up reports during the emergency phase of a response are required for the following significant changes:

- An increase or decrease in the number of previously reported injuries or fatalities;
- A revised estimate of the product release amount that is at least 10 times greater than the amount reported; and
- A revised estimate of the property damage that is at least 10 times greater than the reported property damage estimate.

**Note:** An operator should tell the NRC representative if a previous report was filed for the incident and provide the NRC Report Number of the original telephonic.

For DOT pipelines or facilities, a written report (DOT Form 7000-1) must be filed with the DOT within 30 days after discovery of the accident (fire or explosion, death or personal injury requiring hospitalization and estimated property damage including clean-up costs exceeding \$50,000). This form must also be filed within 30 days for any spill that results in a loss of 5 or more gallons of hazardous liquid, carbon dioxide, or highly volatile liquids (HVL), except for releases of less than 5 barrels (0.8 cubic meters) resulting from a pipeline maintenance activity if the release is:

- Not otherwise reportable
- Does not impact a body of water
- Confined to company property or ROW
- Cleaned up promptly

**Note:** Be sure to review incident for possible employee drug and alcohol testing.


### CERCLA Reporting

Immediately report any release of a *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) hazardous substance exceeding the reportable quantity (RQ). 40 CFR 302.4 lists the CERCLA hazardous substances with RQs. MSDSs may also be used to determine if a spilled substance is reportable under CERCLA.

**Note:** Under the CERCLA petroleum exclusion, refined petroleum product and crude oil spills do not have to be reported even though these products may contain hazardous substances.


## B.4. State and Local Agencies

See attached state-specific notification procedures and requirements.

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## B.5. Other Potential Required Notifications (Federal)

<b>Occupational Safety and Health Administration (OSHA)</b> 200 Constitution Avenue Washington, DC 20210	(800) 321-6742
<b>Reporting Requirements</b> <b>Type:</b> Fatality from a work-related incident or the inpatient hospitalization of three or more employees as a result of a work-related incident. <b>Verbal:</b> Immediately. <b>Written:</b> As may be requested by the agency.	
<b>U.S. Coast Guard – Sectors</b>	(800) 221-8724
<b>Reporting Requirements</b> <b>Type:</b> Immediately for all spills that impact or threaten navigable water or adjoining shoreline. <b>Verbal:</b> Notification to the USCG is typically accomplished by the call to the NRC. <b>Written:</b> As the agency may request depending on circumstances.	
<b>U.S. Environmental Protection Agency Region</b> 77 W Jackson Blvd, Ste 1600 Chicago, IL	(312) 353 2000 (800) 300-2193 (Emergency No.)
<b>Reporting Requirements</b> <b>Type:</b> Immediately for spills that impact or threaten navigable water or adjoining shoreline. <b>Verbal:</b> Notification to the EPA is typically accomplished by the call to the NRC. <b>Written:</b> Per SPCC requirements, a written report must be submitted within 60 days for a spill in excess of 1,000 gallons (approximately 24 Bbl) in a single event or two spill events within a 12-month period into or upon navigable waters of the United States or adjoining shorelines. The written report should contain all of the elements listed in 40 CFR 112.4(a). As per RCRA regulations, a written report on the incident must be submitted to the Regional Administrator within 15 days from the date of the incident. The report must include the following: <ol style="list-style-type: none"> <li>1. Name, address, and telephone number of the owner or operator</li> <li>2. Name, address, and telephone number of the Facility</li> <li>3. Date, time, and type of incident (e.g., fire, explosion)</li> <li>4. Name and quantity of material(s) involved</li> <li>5. The extent of injuries, if any</li> <li>6. An assessment of actual or potential hazards to human health or the environment, where this is applicable</li> <li>7. Estimated quantity and disposition of recovered material that resulted from the incident</li> </ol>	

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<b>U.S. Fish and Wildlife Services</b> 1849 C Street NW Washington, DC 20240-0002	(202) 208-3100
<b>Reporting Requirements</b> <b>Type:</b> Wildlife Protection/Rehabilitation. <b>Verbal:</b> Immediately. <b>Written:</b> As the agency may request depending on circumstances.	

**B.6. Assistance/Advisory Notifications**

Agency	Location	Telephone

**B.7. Local Contacts**

Name	Address/City	Telephone
Local Emergency Services		<b>DIAL 911 for All Police, Fire, and Ambulance Emergencies</b>

**B.8. Media Notifications**


Agency	Location	Telephone

## B.9. Hazmat Removal Organizations

Company	Response Time	Location	Telephone

## B.10. Per State and County—Local Assistance/Reporting


Agency	Location	Telephone

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## B.11. Initial Response Checklists


First Company Person Notified/On Scene	
	Follow the appropriate Specific Incident Response Checklist and Product Specific Response Considerations.
	Notify Management of the incident.
	Utilize local emergency services as necessary (police, fire, medical).
	Notify the Refinery/Pipeline Control Room, as appropriate.
Management	
	Evaluate the Severity, Potential Impact, Safety Concerns, and Response Requirements based on the initial data provided by the first person on scene.
	Assume the role of Incident Commander.
	Confirm safety aspects at site, including need for personal protective equipment, sources of ignition, and potential need for evacuation.
	Activate the Local Response Team and primary response contractors, as the situation demands.
	Coordinate/perform activation of additional spill response contractors, as the situation demands (telephone reference is provided in Appendix B).
	Perform notifications as per Section 3.2
	Direct and coordinate response and clean-up operations.
	Direct containment, dispersion, and/or clean-up operations in accordance with the Product Specific Response Considerations provided in Section 3.4.
Local Response Team	
	Assigned personnel will immediately respond to a discharge from the site, as the situation demands.
	Perform response/clean-up operations as directed or coordinated by the Incident Commander.

Area Personnel Responsibilities	
	Making an initial response.
	Defining the problem.
	Controlling the situation.
	Cleaning up and repairing the damage.
After notification of an incident, area personnel should:	
	Dispatch one or more area/contract employees to the release site and establish the Incident Command System (ICS).
	Complete a Site Safety Plan
	Secure the area for safety concerns:
	<ul style="list-style-type: none"> <li>Human Life</li> </ul>
	<ul style="list-style-type: none"> <li>Explosion (including rectifiers)</li> </ul>
	<ul style="list-style-type: none"> <li>Fire</li> </ul>
	<ul style="list-style-type: none"> <li>Health (vapors, water contamination, etc.)</li> </ul>
	Assemble response equipment and personnel. Dispatch resources to release site.

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	Define the problem:
	<ul style="list-style-type: none"> <li>• Locate the head (leading end) of the release.</li> </ul>
	<ul style="list-style-type: none"> <li>• Monitor the area to identify all existing hazards and extent of the exposed area.</li> </ul>
	<ul style="list-style-type: none"> <li>• Monitor the area to identify any environmental impact (wildlife, water supplies, etc.)</li> </ul>
	<ul style="list-style-type: none"> <li>• Determine the necessary personal protective equipment and precautions (oxygen, deficiencies, thermal exposure, high Lower Explosive Limit (LELs), and Permissible Exposure Limit (PELs).</li> </ul>
	Control the situation:
	<ul style="list-style-type: none"> <li>• Secure the manual valves.</li> </ul>
	<ul style="list-style-type: none"> <li>• Take measures to prevent accidents associated with product movement, vapor clouds, or fire.</li> </ul>
	In highly populated areas:
	<ul style="list-style-type: none"> <li>• Eliminate potential sources of ignition, and</li> </ul>
	<ul style="list-style-type: none"> <li>• Use police, fire department and utility groups to help with evacuation, security, and protection</li> </ul>
	In high traffic areas:
	<ul style="list-style-type: none"> <li>• Divert or stop all traffic in the immediate area, and</li> </ul>
	<ul style="list-style-type: none"> <li>• Use police, fire department, and utility groups to help with traffic or crowd control.</li> </ul>
	<ul style="list-style-type: none"> <li>• Activate contract employees and equipment as needed.</li> </ul>
	<ul style="list-style-type: none"> <li>• Determine if assistance is needed from an oil spill cooperative (if available) or Local Response Team. Activate them if needed.</li> </ul>
	<ul style="list-style-type: none"> <li>• Collect the released material into containment sites as quickly as possible.</li> </ul>
	<ul style="list-style-type: none"> <li>• Locate additional containment sites, if needed.</li> </ul>
	<ul style="list-style-type: none"> <li>• Evaluate resources to confirm sufficient personnel and equipment.</li> </ul>
	<ul style="list-style-type: none"> <li>• Clean up to minimize damage to public health and the environment.</li> </ul>
	<ul style="list-style-type: none"> <li>• Repair the damage to the system.</li> </ul>




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## B.12. Detailed Incident Response Checklist


**REGULATION:** Per 49 CFR §195.402(e)(2) - (7), the plan includes a detailed incident response checklist.

**ADVISORY:** Without exception, personnel safety is the Company's first priority. Excessive exposure to the vapor and liquid stages of the spilled product should be avoided.


Initial Response (Develop Company checklist from this sample.)	
	Take appropriate personal protective measures.
	Call for medical assistance if an injury has occurred.
	Check wind direction before investigating incidents where vapor cloud is a possibility.
	Utilize Permissible Exposure Limit (PELs) and or lower explosive limit (LEL) meter when you conduct an initial investigation to determine what has been released and the source.
	Do not investigate on your own, take a buddy.
	If you discover explosive/flammable vapors during your initial investigation or if vapors are a possibility, make sure you inform the 911 operator that police and other emergency responders should NOT use flares to control traffic.
	At the evacuation muster point, take a head count to determine if anyone is missing.
	If possible, block access to the hot zone and/or entire area (use vehicles, caution tape, traffic cones, etc.).
	Restrict access to the spill site and adjacent area as the situation demands. Take any other steps necessary to minimize any threat to health and safety.
	Verify the type of product and quantity released (Material Safety Data Sheets are retained in the Safety Department).
	Advise personnel in the area of any potential threat and/or initiate evacuation procedures.
	Use testing and sampling equipment to determine potential safety hazards, as the situation demands.
	Identify/Isolate the source and minimize the loss of product, from a safe distance.
	Take necessary fire response actions. If fire is in the incipient stage, trained personnel may utilize the facility fire extinguishers if safe to do so. Company personnel are trained only to the incipient stage.
	Eliminate possible sources of ignition in the near vicinity of the spill.
	Notify Management of the incident.
Line Break or Leak, Specific Response (including Piping Rupture/Leak, Valve Rupture/Leak, and Manifold Failure both under and not under pressure)	
	Shut down pumping equipment.
	Close upstream and downstream block valves.
	Utilize Combustible Gas Indicator, O2 meter, proper colormetric indicator, and other air sampling measurements to assure that areas are safe to enter for continued response operations.
	Mitigate spreading of the product, as the situation demands. Potential containment strategies: <ul style="list-style-type: none"> <li>• Earthen dike/berm</li> <li>• Ditching</li> </ul>

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	<ul style="list-style-type: none"> <li>• Spreading sorbent material over the spill</li> </ul>
	Prevent the spill from entering the waterways, sewer, etc. to the greatest extent possible, from a safe distance.
	If located within containment area, ensure that drainage valve(s) is "closed".
	Drain the line section, as the situation demands.
	Make all necessary repairs.
	Return the line/rack to service when repairs are complete.
	Clean up spilled product(s) to eliminate any possible environmental problems. Be alert for underground cables.
	Inform local operators such as utilities, telephone company, railway.
	Determine the direction and expected duration of spill movement.
	Request local authorities establish traffic control in the area, as the situation demands.
	Complete follow-up and written reporting, as the situation demands.
<b>Storage Tank Leak, Specific Response (including Tank Failure/Leak) Not Applicable</b>	
	Shut down all tank battery product movement operations and isolate the tank.
	Initiate Confined Space Entry procedures, as applicable.
	As applicable, ensure that the containment area drainage valve(s) is "closed".
	If near tank bottom, consider filling tank with water and maintain water bottom to suspend the discharge.
	Utilize Combustible Gas Indicator, O2 meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
	Block drainage of spilled material from traveling offsite.
	Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.
	Request local authorities to establish traffic control in the area, as necessary.
	Remove product from containment area (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck with skimmer attachments.
	Empty tank as soon as possible.
	Make all necessary repairs. Return the line/tank to service when repairs are complete and tested.
	Clean up product spill to eliminate any possible environmental problems. Be alert for underground cables.
	Inform local operators such as utilities, telephone company, railway.
	If necessary, call one (1) of the approved waste removal companies to remove the remaining sludge and residue from the containment area. Contact the Company Hazardous Waste Coordinator, if necessary, to remove waste from the Facility for disposal.
	Determine the direction and expected duration of spill movement.
	Complete follow-up and written reporting, as the situation demands.
<b>Leak or Spill to Land, Specific Response (contact Company HSE Manager)</b>	
<b>Note:</b> For more specific information regarding containment, cleanup, storage, handling and disposal, refer to the appropriate sections of this manual.	
	See Initial Response Actions heading above.
	Cease pumping and close valves to prevent any further release of CO2.

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	Determine the release source and prevent further flow from the pipeline.
	Remember that flammable vapor concentrations can exist near spilled oil. (For example, as much as 50% of the original volume of gasoline can evaporate in 10 minutes at 60°F.) Use explosive meters and safety precautions to prevent fire, explosions, and asphyxiation or health risks to the response personnel.
	Eliminate possible sources of ignition. Do not start vehicles in the vicinity of volatile materials that have been released.
	To avoid vapor ignition, divert or stop traffic if the release impacts a roadway.
	Prevent oil from entering into drainage or sewer systems, water courses, irrigation channels, or culverts. Block drains, dam ditches, and boom water courses and irrigation channels.
<b>Response Strategies</b>	
	Oil either spreads out or penetrates downward when released on land. When the oil penetration is rapid and the depth of groundwater is shallow, the preferable strategy may be to let the oil spread. If the land surface is impermeable, the desirable strategy may be to allow or cause the oil to collect in pools.
	<b>Note:</b> If oil collects in pools in a contained area, consider using water as a layer between the oil and the ground.
	Consult with a Company environmental representative for guidance on cleanup, storage, handling and disposal.
	<b>Note:</b> If possible, treat soil on site.
<b>Explosions and/or Fire, Specific Response</b>	
<b>Note:</b> In the event of a fire at or near any Company facilities, personnel must take action as appropriate to protect employees and public safety.	
	Shut down Facility operations and mitigate fuel sources, as the situation demands.
	Utilize applicable Facility firefighting capability after conducting safety assessment of the area. If a fire is in the incipient stage, trained personnel may utilize the facility fire extinguishers if safe to do so. Facility personnel are trained only to the incipient stage.
	Notify local fire department(s), as the situation demands (telephone references for Fire Departments are provided in Appendix BAppendix B).
	Consider evacuating the area, as the situation demands, if there are nearby residential or commercial dwellings.
	Assist the emergency rescue personnel with injured and/or trapped individuals.
	Determine when the fire started.
<b>Individual Discovering the Fire (All Employees)</b>	
	Notify Shift Supervisor on duty.
	Return to the scene of the fire and, if practical (not beyond incipient stage), attempt to extinguish same with the nearest fire extinguisher available.
	Prevent secondary problems due to flame impingement, or spills and runoff.
	In the event the fire is too large for an individual to fight alone, the individual sounding the alarm or making the phone call should stand by at a safe distance to direct the fire department to the scene of the fire and keep personnel and vehicles from entering the danger area.
	Alert all personnel of the exact location and extent of the fire.
	Shut off pumps.

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<b>Tank-Related Fire</b>															
	Determine the tank status (inactive, pumping in or out, gauge level, tank/roof condition).														
	Isolate the tank from connecting lines and facilities if possible.														
	Determine the tank contents (material and characteristics).														
	Determine the type of roof (cone, external floater, internal floater, seal material) on the tank. If the tank has a cone roof, determine if it is equipped with flame arresters, emergency vent shutoffs, snuffers, or other types of fire prevention equipment.														
	Review the fire wall area, drainage (dike drains), proximity of the equipment, and exposed piping.														
<b>Explosion Near or at a Pipeline Facility</b>															
	Damage Assessment/Control by On Site Personnel: Contact local firefighting authorities and police. Damage assessment/control may be initiated by on site personnel only if it is safe to engage in such activities.														
	See Initial Response Actions heading above.														
	<b>People Related</b> <ul style="list-style-type: none"> <li>• Call for fire and medical assistance if necessary.</li> <li>• Account for personnel known to be working at or near the facility.</li> </ul>														
	<b>Explosion Related</b> <ul style="list-style-type: none"> <li>• Survey the facility for damage.</li> <li>• Try to determine if there is an obvious source of the explosion. For example, ignition of vapors, rapid release of gas or liquid, outside sources (collision, bomb, etc.), electrical equipment (transformers, distribution panels, etc.).</li> <li>• Considering the source of the explosion and damage if any, isolate the facility to limit additional fuel or fire or explosions.</li> </ul>														
<b>Vapor Cloud (from a massive spill, line rupture, etc.)</b>															
<b>Note:</b> If an incident occurs when the pipeline is transporting gas or highly volatile liquids (HVLs) or refined products, there is a strong possibility of vapor cloud formation.															
<b>Material Specific Gravity</b>															
	When an incident occurs, the specific gravity of the vapor material is relevant. Vapors that are heavier than air seek low spots, such as ditches and depressions in the ground. Therefore, the higher specific gravity of a material released, the more likely its vapor cloud would hug the ground.														
	<p>The following table lists the specific gravities of possible release materials using the specific gravity for air as a base.</p> <table border="1" data-bbox="451 1474 1109 1774"> <thead> <tr> <th>Material</th><th>Specific Gravity</th></tr> </thead> <tbody> <tr> <td>Gasoline</td><td>3.00</td></tr> <tr> <td>CO<sub>2</sub></td><td>1.53</td></tr> <tr> <td>Natural Gas</td><td>0.55</td></tr> <tr> <td>Jet</td><td>0.82 to 1.08</td></tr> <tr> <td>ULS Diesel</td><td>0.62 to 0.88</td></tr> <tr> <td>Crude</td><td>0.7 to 0.8</td></tr> </tbody> </table>	Material	Specific Gravity	Gasoline	3.00	CO <sub>2</sub>	1.53	Natural Gas	0.55	Jet	0.82 to 1.08	ULS Diesel	0.62 to 0.88	Crude	0.7 to 0.8
Material	Specific Gravity														
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Jet	0.82 to 1.08														
ULS Diesel	0.62 to 0.88														
Crude	0.7 to 0.8														
<b>Weather</b>															
	Wind and general weather conditions can affect vapor clouds. Such conditions can cause the boundary area to move and enlarge. If an incident occurs, determine the most likely direction of vapor cloud movement based on the wind direction.														


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Vapor Cloud Originating from a Facility Incident	
	The person who discovers the vapor cloud will sound the alarm and notify the supervisor on duty and vacate the area.
	Remember: The only proper action in the presence of a vapor cloud is to get away from it. Do not shut off electrical equipment.
	All personnel will report to the evacuation muster point for roll call and further instructions.
	<p>After all personnel have been accounted for, the Facility Operator/Manager will initiate the following actions as deemed necessary:</p> <ol style="list-style-type: none"> <li>1. Shut down pipeline.</li> <li>2. Evacuation of adjacent property.</li> <li>3. Only the fire department will be permitted to enter the facility.</li> </ol>
	Contact the appropriate agencies and potentially affected neighbors (refer to Appendix B).
Vapor Cloud Originating from a Pipeline Incident	
	<p><b>The Initial Responder:</b></p> <ul style="list-style-type: none"> <li>• Discovers the vapor cloud.</li> <li>• Determines the material causing the vapor cloud.</li> <li>• Notifies the Controller and maintenance crew.</li> <li>• Sees Initial Response Action listed previously in this section.</li> </ul>
	<p><b>The Controller:</b></p> <ul style="list-style-type: none"> <li>• Isolates the pipeline by closing the remotely-operated valves.</li> <li>• Notifies the National Response Center.</li> </ul>
	<b>Maintenance Crew:</b> Isolates the pipeline by closing the manually operated valves.
	<p><b>The Initial Responder determines:</b></p> <ul style="list-style-type: none"> <li>• If there is a fire, then remain at a safe distance on site, until relieved.</li> <li>• If there is not a fire, then keep ignition sources away and work with fire department to disperse the vapor cloud.</li> </ul>
	<p><b>The Initial Responder actions:</b></p> <ul style="list-style-type: none"> <li>• Determines the boundary area of the vapor cloud and the vapor concentration using explosimeter or Draeger tube.</li> <li>• Barricades or identifies the boundary area.</li> <li>• Identifies the affected area that exists 1,500 feet outside of boundary area and the areas downwind of the vapor cloud.</li> <li>• Determines the people and facilities within the affected area and notifies the police to evacuate the affected area (including areas downwind of the vapor cloud, outside of the affected area).</li> </ul>
	Police evacuate the boundary area.
	Fire department disperses the vapor cloud with a sustained flow of water spray.
	<p><b>The Initial Responder stays</b> on site until one of the following occurs:</p> <ul style="list-style-type: none"> <li>• Relief arrives.</li> <li>• Vapor cloud is completely dispersed.</li> <li>• Fire is burned out and the vapor cloud no longer exists.</li> </ul>
CO2 Detected in a Building, Specific Response	
<p><b>Note:</b> In the event of gas being detected in a building on or near Company facilities, personnel should take action as appropriate to protect employees and public safety.</p>	
	<b>Gas Detection and Confirmation by On Site Personnel:</b>

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	Contact the gas utility companies and/or other gas pipeline operations in the immediate area. Begin leak detection procedures and mitigation procedures (e.g., shutting off the gas and ignition sources, etc.) only if it is safe to engage in such activities.
	See Initial Response Actions heading above.
	<b>People Related</b> <ul style="list-style-type: none"> <li>Consider evacuating the area if there are nearby residential or commercial dwellings.</li> </ul>
	<b>Release Related</b> <ul style="list-style-type: none"> <li>Determine the location and source of the gas release.</li> <li>If a vapor cloud has developed, assess the extent and coverage of the vapor cloud and determine the hazardous areas.</li> <li>Refer to guidelines under the Vapor Clouds heading above.</li> </ul>
<b>Bomb Threats, Specific Response</b>	
	<p>This section provides guidelines for actions to be taken in the event a bomb threat is received. A bomb threat to the facilities or personnel may present itself in any of several ways:</p> <ul style="list-style-type: none"> <li>Phone</li> <li>E-mail</li> <li>Fax</li> <li>Radio</li> <li>Mail</li> <li>Word-of-mouth</li> <li>Third party intelligence</li> </ul>
	<p>Other threats to facilities, vehicles, and persons are often treated in the same manner as bomb threats. These threats may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>Terrorist threats</li> <li>Workplace violence threats</li> <li>General threat to an industry</li> <li>Civil disturbances</li> </ul>
	<p>The following steps should be used as guidance when responding to the above situations. Actions during a real event will vary based on differences in circumstances, response activities, good judgment, etc.</p>
<b>Phone/Written (Fax, Letter, Telegram) Threats</b>	
	<b>Person Receiving the Call</b>
	Immediately refer to the Phone Threat Checklist (see Section B.13; this should be kept next to phones that have publicly posted phone numbers), so you can use it during the conversation with the individual making the bomb threat call. If possible, complete the form during the call.
	Remain calm when talking to the caller.
	Keep the caller on the line as long as possible in order to obtain as much information as possible. Ask him/her to repeat the message. Try to write down every word spoken by the person. If you have a small hand-held tape recorder available, try to tape the conversation.
	If the caller does not indicate the location of the bomb or the time of detonation/attack, ask for this information.
	Inform the caller that the building/facility is occupied, and that the incident could result in death or serious injury to many innocent people.
	Pay particular attention to background noises, such as motors, music, and any other noise that may give a clue as to the location of the caller.
	Listen closely to the voice (male, female), voice quality (calm, excited), accents, and speech impediments.



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#### After the Caller Hangs Up or Written Threats

	Immediately report the threat call to the Shell person designated by management to receive such information (i.e., Site Security Company, Site Manager, Site Qualified Individual, or appropriate supervisor).
	Do not use cell phones, personal digital assistants (PDAs), two-way radios, or other similar communication devices in the facility and/or the general area until the bomb squad approves their use. Turn any such devices off immediately, since an incoming call could be enough to trigger a nearby explosive device.

#### Pipelines and Capture Facilities, Additional Guidance

	If the caller does not indicate the location of the bomb/substance or the time of possible detonation/attack, ask him/her for this information. Try to determine the State, pipeline system, and specific location involved, if possible.
	For offices and control rooms, inform the caller that the building/facility is occupied, and the incident could result in death or serious injury to many innocent people.
	For pipelines and facilities, inform the caller that an incident could result in death of the innocent general public or significant environmental impact.
	Secure the facility and limit access to essential personnel only.
	If a full or partial facility evacuation is necessary, activate <i>Facility Evacuation Plan</i> immediately. When in doubt, evacuate. Encourage personnel to be vigilant for suspicious or out of place objects as they evacuate and leave their workstations.
	Work with local law enforcement and local FBI. Follow their direction.
	Initiate operations shutdown procedures, as necessary.
	If deemed necessary, set up a Command Post at a pre-determined offsite location. Ensure you have the following: <ul style="list-style-type: none"> <li>• Applicable response/security plans</li> <li>• Facility maps</li> <li>• Access keys</li> <li>• Cell phones, pagers, and radios</li> </ul>
	Members of the press or general public should not be permitted inside the Facility. Direct all members of the press to the designated spokesperson.
	Additional actions to consider for pipelines and tank farms: <ul style="list-style-type: none"> <li>• Which, if any system(s), should be shutdown</li> <li>• When, if any system(s), should be shutdown</li> </ul>


#### Facility Search Guidelines

	Employees/staff should conduct visual searches as they evacuate the area.
	Look for obvious signs of things out of place. (The bomb squad will not know what is out of place.)
	Turn off all cell phones, pages, PDAs, radios, etc. as you evacuate.
	Leave all doors, lights, gates, power, etc. as you find them.
	If a suspicious object is found, <b>DO NOT TOUCH OR MOVE IT!</b> Inform the bomb squad of the object's location.

#### Pipelines and Tank Farms, Additional Search Guidance

	Survey from a distance with the aid of binoculars: <ul style="list-style-type: none"> <li>• Base of tanks</li> <li>• Manifolds and station piping</li> </ul>
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	<ul style="list-style-type: none"> <li>• Open pump canopies and switch gear areas</li> </ul>
	Closed areas should be searched after the open areas have been eliminated unless there is a specific reason for doing otherwise.
	Due to the expanse of pipeline facilities, aircraft should be considered to aid in the surveying of tank tops and pipeline right-of-way (ROW).

#### Suspicious Mail/Delivered Packages


	<p>Frequently seen explosive devices have been incorporated, hidden, or camouflaged in letters, soft cover pocketbooks, hard cover books, manila envelopes, and cardboard boxes. While many are delivered by U.S. mail, they may arrive by private courier or express service. Be alert to recognize suspicious-looking or unexpected items especially those that have the following:</p> <ul style="list-style-type: none"> <li>• Handwritten or poorly typed address</li> <li>• Incorrect title, or title but no names</li> <li>• Misspelling of common words</li> <li>• Oily stains, discolorations, or odor</li> <li>• No return address</li> <li>• Excessive weight</li> <li>• Lopsided, uneven, or ridged envelope</li> <li>• Protruding wires or tin foil</li> <li>• Excessive securing material (tape, string, etc.)</li> <li>• Any evidence that the envelope has been opened and re-glued</li> <li>• Mail item from a new or strange source</li> </ul>
	<p>If you receive or find a suspicious-looking letter or package:</p> <ul style="list-style-type: none"> <li>• <b>DO NOT TRY TO OPEN IT.</b></li> <li>• Isolate the area around the letter or package to the degree possible, and make emergency notifications as previously outlined, and evacuate personnel to a safe distance, as directed.</li> <li>• If accidentally opened, preserve, BUT DO NOT TOUCH FURTHER all original envelopes, twine, shipping documents, or packaging materials for evidence and release to the police as requested.</li> <li>• Report the package to the person designated by management to receive such information (i.e., Facility Security Officer, Facility Manager, Facility Qualified Individual, or appropriate supervisor) or their designee.</li> <li>• Notify local law enforcement/FBI for local assistance.</li> <li>• Inform the Corporate Security Department (refer to the Notifications Section).</li> </ul>

#### Natural Disaster (Tornados, Severe Storms, and Earthquakes), Specific Response


	Although many disasters cannot be prevented or predicted, preparation can significantly reduce losses. In the event of a severe weather condition or a natural disaster, the Qualified Individual or a Terminal Operator will be the emergency coordinator.
	<p>A tornado may be monitored and detected in the following ways:</p> <ul style="list-style-type: none"> <li>• Listening to news reports – know the difference between tornado watch and tornado warning.</li> <li>• Sighting of a funnel formation on the ground or in the clouds.</li> <li>• Hearing a roar that sounds like a jet or a locomotive.</li> </ul>

#### Tornados and Severe Storms


	<p>Be Aware of Changing Weather Conditions</p> <ul style="list-style-type: none"> <li>• Tornado watch: Conditions are right for the formation of a tornado.</li> <li>• Tornado warning: A tornado has been sighted but is not in the area at this time.</li> <li>• Tornado alert: A tornado has been sighted in the immediate area. Take cover immediately.</li> </ul>
	<p>If severe weather conditions threaten, take the following actions:</p> <ol style="list-style-type: none"> <li>1. Sound fire alarm.</li> <li>2. Alert facility personnel of condition.</li> </ol>

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	<ol style="list-style-type: none"> <li>If time permits, all personnel should assemble in an inside room in the facility office for shelter.</li> <li>If time does not permit, seek shelter in low level area away from glass.</li> <li>Make certain facility personnel are aware of the condition.</li> <li>Stay in shelter until "all clear" has been issued.</li> </ol>
	<p>If a tornado is a direct threat to a pipeline facility, take the following actions:</p> <ol style="list-style-type: none"> <li>Notify appropriate Company personnel.</li> <li>Shut down the pipeline facility.</li> <li>Inform others and take appropriate shelter.</li> <li>After a tornado passes, correct any damage to the Facility and restart operations after obtaining proper approval.</li> </ol>
	<p><b>Note:</b> Circumstances may require changing the order in which these guidelines are performed.</p>
	<p>Immediately After the Storm</p> <ol style="list-style-type: none"> <li>Account for all personnel.</li> <li>Survey for damages to facility property.</li> <li>Initiate team for any repairs if needed (i.e., high tank alarms, lighting, etc.).</li> <li>Refer to this Plan for additional response guidance regarding fires, spills, etc., as needed.</li> </ol>
<b>Earthquake</b>	
<p><b>General Guidelines:</b> In the event of an earthquake, if you are located within the Tank Farm, take the following actions as precautionary measures:</p>	
	<p>Immediately press the Emergency Shutdown Button.</p>
	<p>Stop and shut down all loading operations.</p>
	<p>If you are outside, remain in an open area. Stay away from anything that could potentially fall and injure you.</p>
	<p>If you are inside, move away from all windows.</p>
	<p>If absolutely necessary, shut off the main power switch.</p>
	<p>Notify the On-Duty Supervisor as soon as possible (refer to Appendix B for phone references).</p>
	<p>When the earthquake has subsided, notify the On-Duty Supervisor with an initial report of damage, injury, etc. If more than one person is available, one person should assess damage while the other person stays by the telephone.</p>
	<p>If any leaks are noticed, isolate the leak by closing the appropriate valves. Do so only with precautions established in this Plan.</p>
<p><b>Tank Farm Operator Guidelines:</b> When the inspection of the Facility is completed, and you are satisfied that there are no leaks, proceed with the following steps:</p>	
	<p>Call the Scheduler with an updated report.</p>
	<p>Turn main power back on (if needed).</p>
	<p>Activate one product pump at a time. Inspect the product filter area for any leaks.</p>
	<p>If no leaks appear, turn the pump off and go to the next product. Use this same procedure for each product until all product lines have been tested.</p>
<p><b>Pipeline Related Guidelines and Special Considerations</b></p> <p>In the event of a significant earthquake, regional personnel in the affected area should immediately contact the Control Room and advise them on operational precautions to be taken. If the Control Room suspects that there has been an earthquake within a region, they will:</p>	
	<p>Shut down any system(s) they feel may have been affected.</p>
	<p>Notify the Region of actions taken.</p>

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	Monitor integrity of suspected systems to degree possible.
	Await directions of regional personnel before restarting suspected systems.
<b>Guidelines for Regional Operations following significant earthquakes</b>	
	Shut down and isolate pipelines in the affected area, utilizing the Control Room, if possible, until the situation is evaluated.
	Notify supervision and other internal personnel as appropriate.
	Evaluate system(s) and emergency response needs.
	Contact additional maintenance and operations personnel as needed to inspect the following in the affected area for structural, mechanical, and electrical integrity as deemed necessary: <ul style="list-style-type: none"> <li>• Pump stations</li> <li>• Tanks</li> <li>• Pipeline(s) in ROW</li> </ul>
	Perform "stand-up" pressure test(s) as necessary.
	Advise Control Room on restart of affected systems when management considers it prudent considering the following factors: <ul style="list-style-type: none"> <li>• Aftershocks</li> <li>• Power and communications reliability</li> <li>• Requirements of local authorities</li> <li>• Conditions at the origin and destination facilities</li> </ul>
<b>Special Considerations</b>	
	If system integrity or other problems are suspected, then consider pipeline surveillance using helicopters or fixed-wing aircraft supplemented with "on the ground" inspections when needed.
	If an earthquake occurs and multiple releases are possible, then consider more than the usual amount of emergency response personnel and equipment.
	If bridges or highways are destroyed or impassable, then use alternative transportation routes or modes to close block valves. Response time may be longer than normal. Consider using helicopters as an alternative to driving.
	If the earthquake causes damage to Navigator CO2 Ventures LLC employees' homes in the region and they are occupied with their own personal situations, then get assistance from Navigator CO2 Ventures LLC locations outside the affected area. Include both personnel and equipment. Use contractors and other service providers needed.
	If regular communication is not functional (down or congested), then establish emergency communication in the region.
<b>Floods, Specific Response</b>	
Take into account the following special considerations, depending on the magnitude of the flooding, amount of damage, and prevalent conditions:	
	Be alert to areas of flooding and have personnel available for emergency response actions such as shutdown, isolation, and containment.
	Consider extending regulator vents and relief stacks above the level of anticipated flooding as appropriate.
	Evaluate the accessibility of pipeline facilities, such as valve setting needed to isolate water crossings or other sections of pipeline that might be jeopardized.
	Perform frequent patrols to evaluate right-of-way conditions at water crossings during flooding and after waters subside. Determine if flooding has exposed and/or undermined pipelines as a result of forming new channels or erosion of riverbeds.

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	Coordinate with other pipeline companies in the flood area and provide personnel to emergency response centers to act as a liaison for pipeline issues. Provide maps and information on pipeline location and condition to emergency responders.
	Determine if normally aboveground facilities (valves, regulator, and relief sets, etc.) that have become submerged could be struck by craft operating in flooded areas and supply maps to emergency response centers and mark with buoys, as appropriate.
	Perform surveys to determine the depth of cover over pipelines and notify landowners of reduced cover. Agricultural agencies may be helpful in reminding farmers of the potential hazard of reduced cover over pipelines.
	Assure that line markers are still in place and remind contractors, highway departments, and others involved in excavation and clearing activities associated with flood clean-up of the presence of pipelines and the operating hazards that could occur due to reduced pipeline cover.

### Controlling Ground, Marine, and Air Traffic

The first responder or IC will evaluate the release site to determine whether or not ground and marine traffic will hamper the spill response. The FOSC may evaluate air traffic.


In the event that control is required before local state, or federal agencies arrive, the first responder or IC will follow the guidelines presented in the table below.

Traffic Control Needed	Response Requirements
Ground	<p>Call 911 and describe the location and nature of the release. Request highway patrol, sheriff, police, or fire department assistance. If manpower permits:</p> <ul style="list-style-type: none"> <li>• Cordon off the area with hazard cones and yellow hazard tape.</li> <li>• Consider temporary use of vehicles to barricade streets if vehicular traffic is in danger.</li> <li>• Keep pedestrians away from the site.</li> </ul>
Marine	<p>In the event that such a spill reaches marine waters:</p> <ul style="list-style-type: none"> <li>• Notify the Coast Guard immediately.</li> <li>• Request that the Captain of the Port provide assistance to control marine vessels.</li> <li>• To the extent possible, warn vessels and boats that traversing the release area may be dangerous and may jeopardize response operations.</li> </ul> <p>Leave patrolling and control activities to the direction of Coast Guard or the Captain of the Port.</p>
Air	<p>Contact the Federal Aviation Administration (FAA) if it appears that air traffic control will be required via the FAA Hotline (<a href="https://hotline.faa.gov/">https://hotline.faa.gov/</a>). <b>Note:</b> Upon approval, the FAA will immediately issue a Notice to Airmen (NOTAM). Be prepared to describe the geographical location, or if known, the latitude and longitude of the release.</p>

### Civil Disorder, Specific Response


#### General Guidelines

	Secure the facility.
	Contact appropriate Company personnel.
	Shut down the facility, if necessary.
	Request protection from police or other law enforcement authorities; and

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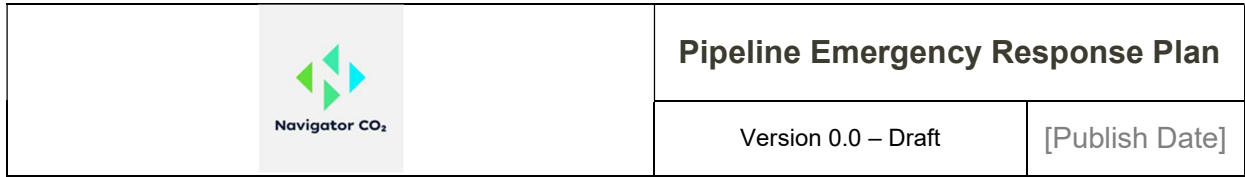
	When order is restored, correct any damage to the facility and restart operations after obtaining proper approval.
	<b>Note:</b> Circumstances may require changing the order in which these guidelines are performed.

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### B.13. Phone Threat Checklist

<b>Information about Call:</b>	
Person Receiving Call:	Phone Number Received on:
Date/Time of Call:	Type of Threat:
<b>Questions to Ask Caller:</b> (document caller's answers exactly)	
When is the bomb going to explode? (if Bomb Threat)	
When will the event take place? (if other threat)	
Where is the device located? (state, county, facility)	
What does the device look like? (color, size, shape)	
What kind of device is it?	
What will trigger the device?	
Did YOU put the device on our property? Why?	
What is your name? Who do you represent?	
Where are you? (address, phone #, etc.)	



Sex: ☐ Male ☐ Female

Length of Call:


<input type="checkbox"/> Calm	<input type="checkbox"/> Excited	<input type="checkbox"/> Nasal	<input type="checkbox"/> Angry	<input type="checkbox"/> Taped
<input type="checkbox"/> Stutter	<input type="checkbox"/> Lisp	<input type="checkbox"/> Slow	<input type="checkbox"/> Raspy	<input type="checkbox"/> Irrational
<input type="checkbox"/> Rapid	<input type="checkbox"/> Deep	<input type="checkbox"/> Soft	<input type="checkbox"/> Ragged	<input type="checkbox"/> Incoherent
<input type="checkbox"/> Loud	<input type="checkbox"/> Laughing	<input type="checkbox"/> Crackling	<input type="checkbox"/> Deep Breathing	<input type="checkbox"/> Abusive
<input type="checkbox"/> Crying	<input type="checkbox"/> Disguised	<input type="checkbox"/> Slurred	<input type="checkbox"/> Familiar	<input type="checkbox"/> Reading
<input type="checkbox"/> Distinct	<input type="checkbox"/> Slang	<input type="checkbox"/> Vulgar	<input type="checkbox"/> Well Spoken	<input type="checkbox"/> Frightened
<input type="checkbox"/> Accent	Type of Accent: _____			

Background Noises: \_\_\_\_\_

- Notes:**

[illegible]



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## Appendix C References

### c.1. Federal Regulations

29 CFR § 1910.120–Hazardous waste operations and emergency response

49 CFR Part 192–Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards

49 CFR Part 195–Transportation of Hazardous Liquids by Pipeline: Minimum Federal Regulations

- 49 CFR § 195.50 Reporting accidents
- 49 CFR § 195.52 Immediate Notice of certain accidents
- 49 CFR § 195.402 Procedural manual for operations, maintenance, and emergencies
- 49 CFR § 195.403 Emergency response training

### c.2. State Regulations for Accident Reporting

**Illinois:** The Illinois Commerce Commission has jurisdiction over intrastate gas pipelines only. 220 ILCS 75/310 states federal PHMSA jurisdiction over CO<sub>2</sub> pipelines in the State of Illinois for pipeline safety.

**Iowa:** The Iowa Utilities Board has jurisdiction over intrastate gas pipelines only.

**Minnesota:** - MINN. STAT. 299J (2022)


- The Minnesota Office of Pipeline Safety has inspection and enforcement jurisdiction over intrastate pipelines and facilities (both gas and hazardous liquids) and requires accident reporting for both. Minnesota has severe penalties for failure to report all emergency releases to the Minnesota Office of Pipeline Safety.

**Nebraska:** Nebraska State Fire Marshal, Fuels Division, Pipeline Safety Section has jurisdiction over intrastate gas pipelines only.

**South Dakota:** The South Dakota Public Utilities Commission has jurisdiction over intrastate gas pipelines only.


### c.3. Supporting and Supplemental Company Programs

- Control Room Management Plan
- Operations & Maintenance Plan (Liquids)
- Integrity Management Plan (Liquids)
- Safety Manual
- Navigator CO<sub>2</sub> Environmental Response Plan
- Public Awareness Plan

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## Appendix D County-Specific Incident Contacts

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## REVISION HISTORY

The following information documents the changes to this manual. All change descriptions indicate the section number and MOC number, which details the justification for change. Each new version of this document is documented and communicated through the Company's MOC process.

Date: 07/18/2023		MOC No. N/A	Personnel:
Section	Change Description		
All	New Plan		

Date: MM/DD/YYYY		MOC No. xxxx	Personnel:
Section	Change Description		

Date: MM/DD/YYYY		MOC No. xxxx	Personnel:
Section	Change Description		

Date: MM/DD/YYYY		MOC No. xxxx	Personnel:
Section	Change Description		

Date: MM/DD/YYYY		MOC No. xxxx	Personnel:
Section	Change Description		