AECOM

Submitted to:
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EPIC MIDSTREAM

Emergency Response Action Plan (ERAP)
Epic Macon Terminal
Epic Midstream, LLC

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1.0 Emergency Response Action Plan

The intent of an Emergency Response Action Plan (ERAP) is to provide terminal operators and response personnel with easy access to critical information in the event of an emergency or oil discharge. The ERAP is designed to contain concise information necessary to respond to a discharge of oil and is arranged so that response actions are not delayed. This ERAP contains copies or condensed versions of the information and forms included in the body of the Integrated Contingency Plan. In accordance with 29 CFR 1910.38 (f), Epic Midstream, LLC will review the ERAP with each employee covered by the plan:

1. When the plan is developed or the employee is assigned initially to a job;
2. When the employee's responsibilities under the plan change; and
3. When the plan is revised.

2.0 Facility Information

2.1 General Information

Facility Name:
Epic Midstream, LLC
Epic Macon Terminal
6225 Hawkinsville Road
Macon, Bibb County, GA 31216
(478) 788-1877

EPA FRP ID: FRP 04GA305

Dunn and Bradstreet #: 07-839-6522

NAICS: 424710

Date of Initial Storage: 1965

Owner Name:
Physical Address
Dennis Shoemaker, CEO
Epic Midstream, LLC
125 Town Park Drive, Suite 300
Kennesaw, Georgia 30144
(770) 420-8274

Qualified Individual:
Work Address
Eddie Nobles, Terminal Manager
6225 Hawkinsville Road
Macon, Bibb County, GA 31216
(b) (6) [redacted]
(478) 788-1877 (Office)
(b) (6) [redacted])
(478) 737-4921 (Mobile, 24-Hour Number)

Alternate Qualified Individual:
Work Address
Wesley Parkerson
6225 Hawkinsville Road
Macon, Bibb County, GA 31216
(b) (6) [redacted]
(478) 788-1877 (Office)
(b) (6) [redacted])
(478) 338-2313 (Mobile, 24-Hour Number)

Alternate Qualified Individual:
Work Address
Brian Ruholt, Regional Operations Manager
125 Town Park Drive, Suite 300
Kennesaw, Georgia 30144
(b) (6) [redacted]
(770) 420-8274 (Office)
(770) 324-7540* (Mobile, 24-Hour Number)

Telephone/FAX: Additional telephone references, including 24 hour numbers, for the Facility, Owner, and QI/AQI are provided in Tables 2-1 and 2-2.

2.2 Facility Location

County: Bibb

(b) (7)(F) [redacted]

Area Map: Provided in Figure 1.1 in Section 1

Facility Diagram: Provided in Figure 1.2 in Section 1

Wellhead Protection Area: None

Facility Distance to Navigable Water: Greater than 1 mile, Less than 2 mile

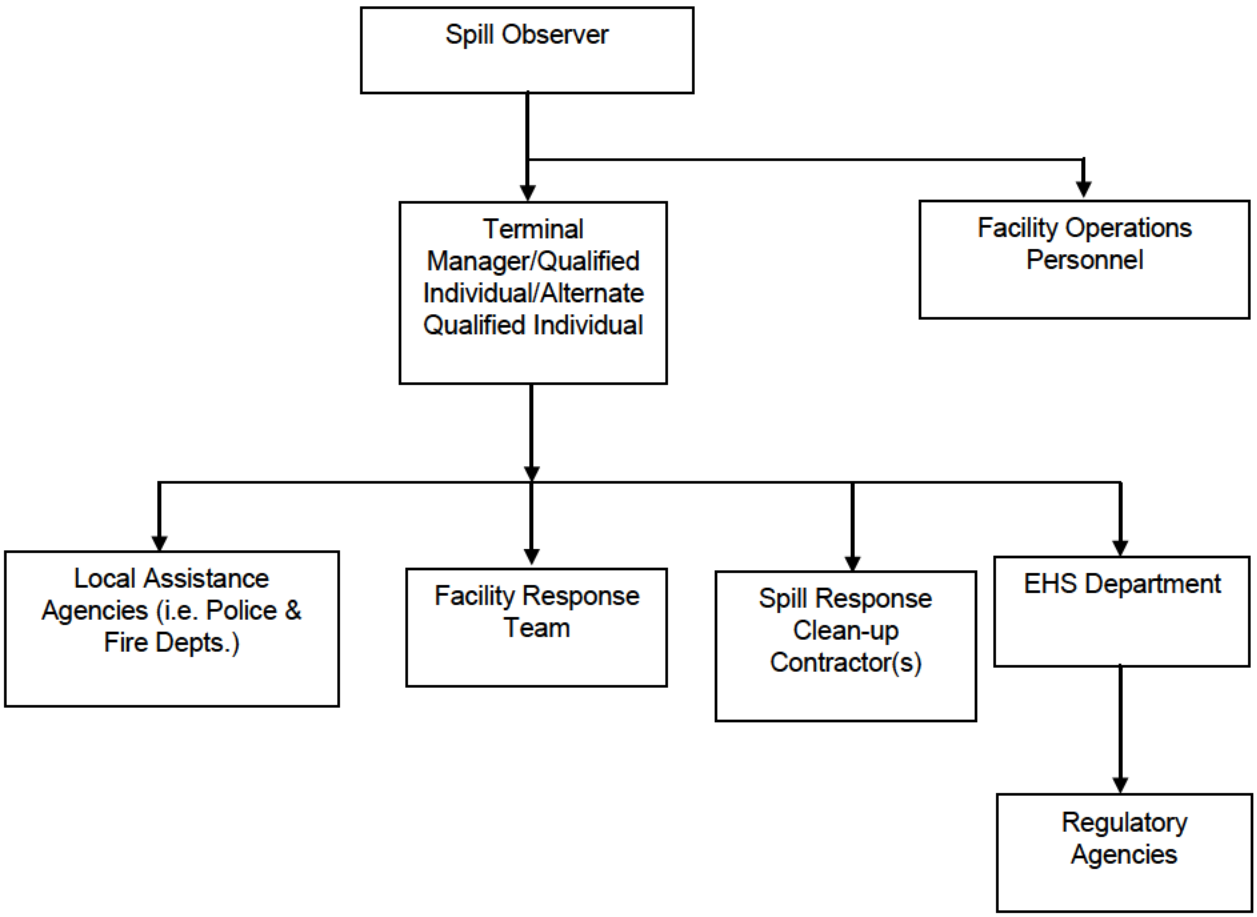
Landside Directions: From downtown Macon, Take Interstate Highway 75 South to Exit 160A onto Highway 41/247 South (Pio Nono Avenue). Stay on Highway 247 (It will change names from Pio Nono Avenue to Houston Road, to Hawkinsville Road) for approximately 3.8 miles. Turn right (west) onto Hangar Road. The terminal is at the end of Hangar Road, approximately 500 feet.

2.3 Internal Notification Sequence

(Phone references are provided in the tables in the following pages)

Note: Initial Notification MUST NOT be delayed pending collection of all information

Emergency Notification Flow Chart



2.4 Internal Notification References

Table 2-1 - Internal Notifications -General			
Facility Area	**Address**	**Office**	**Other Number**
Epic Midstream, LLC	125 Town Park Drive, Suite 300 Kennesaw, Georgia 30144	(770) 420-8274	(770) 420-8276 Fax
Terminal Office	6225 Hawkinsville Road Macon, GA 31216-5849 5849	(478) 788-1877	(478) 737-4921 (Eddie Nobles Cell)
Regional Operations Manager – Brian Ruholt	125 Town Park Drive, Suite 300 Kennesaw, Georgia 30144	(770) 420-8274	(770) 324-7540* (Mobile, 24-Hour Number)
EHS Specialist – Jeff Morrison	1452 Corporate Pointe Warner Robins, Georgia 31088	(478) 329-8870	(404) 483-5333* (Mobile, 24-Hour Number) (478) 284-1062 FAX

Table 2-2 - Internal Notifications – Facility Response Team and Regional Resources					
Position/Title	**Name**	**Response Time**	**Office**	(b) (6)	**Cell**
Facility Response Team					
Qualified Individual - Director of Emergency Response	Eddie Nobles	30 minutes	(478) 788-1877		478) 737-4921
Alternate Qualified Individual	Wesley Parkerson	30 minutes	(478) 788-1877		478) 338-2313
Operator	Dale Burnette	5 minutes	(478) 788-1877		478) 718-2862
Regional Resources					
Alternate Qualified Individual – Regional Operations Manager	Brian Ruholt	120 minutes	(770) 420-8274		770) 324-7540
Corporate Communications	Donna Dedula	120 minutes	(770) 420-8274		404) 578-1656
Finance	David Fowler	120 minutes	(770) 420-8274		404) 788-3435
Engineering	Todd Eldridge	120 minutes	(404) 748-4866		404) 429-7823
EHS Specialist – Safety Officer	Jeff Morrison	30 minutes	(478) 329-8870		404) 483-5333
Liability Insurance & Risk Control	J.W. Terrill Cottrell "Cot" Fox	N/A	(314) 594-2700		

Note: Personnel responding to a spill at the Facility will receive regular training in HAZWOPER, SPCC Plan, and NIMS. Details of the Epic's training program are provided in Appendix D of the ICP.

A description of response personnel and their roles and responsibilities is provided in Section 4 of the ICP.

2.5 Spill Response Notification Form

Spill Response Notification Form					
Reporter's Information:					
Last Name:					
First:					
M.I.:					
Position:					
Phone Numbers:					
Day:					
Evening:					
Company:					
Organization Type:					
Address:					
City:					
State:					
Zip:					
Were Materials Discharged?	Y / N	**Confidential?**	Y / N		
Meeting Federal Obligations to Report?		Y / N			
Date NRC Called:		**Incident # Assigned:**			
Meeting GDNR Obligations to Report?		Y / N	Time Called:		
Meeting LEPC Obligations to Report?		Y / N	Time Called:		
Calling for Responsible Party?		Y / N	Time Called:		
Incident Description					
Source and/or Cause of Incident:					
Date of Incident:		**Time of Incident:**	AM / PM		
Incident Address/Location:					
Nearest City:					
State:					
County:					
Zip:					
Distance from City:		Units of Measure:			
Direction from City:		Section:			
Township:		Range:			
Container Type:					
Tank Oil Storage Capacity:		Units of Measure:			
Facility Oil Storage Capacity:		Units of Measure:			
Facility Latitude:					

Spill Response Notification Form					
Degrees:		Min:	Seconds:		
Facility Longitude:					
Degrees:		Min:	Seconds:		
Material					
CHRIS Code	**Discharged Quantity**	**Unit of Measure**	**Material Discharged in Water**	**Quantity**	**Unit of Measure**
Response Action					
Actions Taken to Correct, Control or Mitigate Incident:					
Impact					
Number of Injuries:			Number of Deaths:		
Were there Evacuations?	Y/N		Number Evacuated:		
Was there any Damage?	Y/N		Damage in Dollars (Approx.):		
Medium Affected:					
Description:					
More Information about Medium:					
Additional Information					
Any information about the incident not recorded elsewhere in the report:					

Reporting Requirements

Note: Initial Notification MUST NOT be delayed pending collection of all information.

Type: Immediately for spills that impact or threaten navigable water or adjoining shoreline.

Verbal: Notification to the EPA is typically accomplished by the call to the NRC.

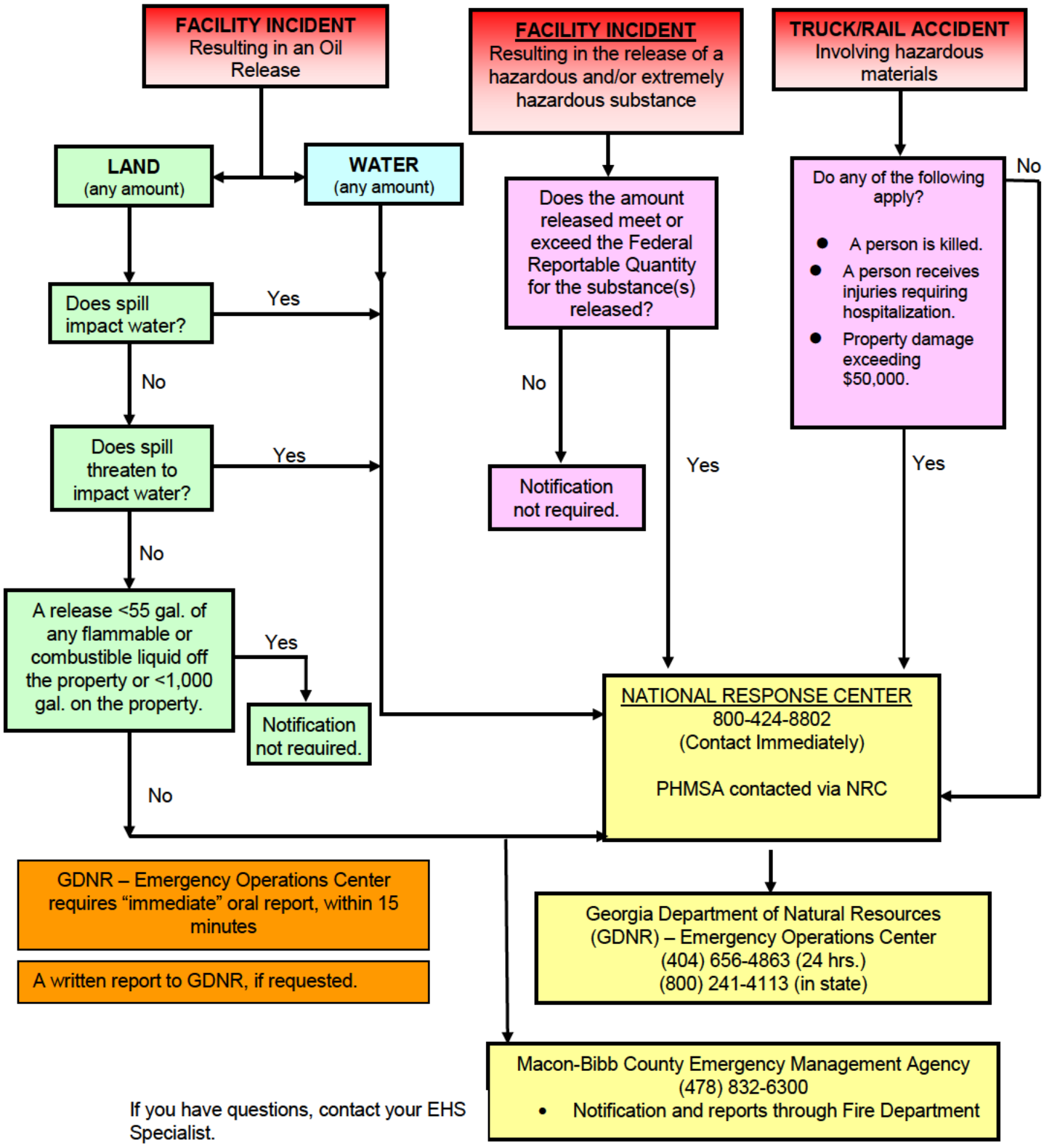
Written: Per SPCC requirements, a written report must be submitted within 60 days for a spill in excess of 1,000 gallons (approximately 24 barrels) in a single event or two spill events within a twelve month period into or upon navigable waters of the United States or adjoining shorelines. The written 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:

1. Name, address, and telephone number of the owner or operator;
2. Name, address, and telephone number of the Facility;
3. Date, time, and type of incident (e.g., fire, explosion);
4. Name and quantity of material(s) involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

Estimated quantity and disposition of recovered material that resulted from the incident.

2.6 External Notification Flowchart



2.7 External Notification References

Note: Initial Notification MUST NOT be delayed pending collection of all information

Table 2-3 - Required Notifications	
National Response Center	
c/o United States Coast Guard (CG-5335) – Stop 7581 2100 2nd Street Southwest Washington, D.C. 20593-0001	(800) 424-8802 (24 Hrs.) (202) 267-2180 (24 Hrs.) (202) 267-1322 (Fax)
Reporting Requirements **Type:** Any oil discharge that has impacted or threatens to impact navigable waters or release of a hazardous substance in an amount equal to or greater than the reportable quantity (see Section 2.4 in the ICP). **Verbal:** Immediately **Written:** Report online at http://nrc.uscg.mil	
Georgia Department of Natural Resources (GDNR) – Emergency Operations Center	
7 Martin Luther King Jr. Drive Room 643 Atlanta, GA 30334	(404) 656-4863 (24 hrs.) (800) 241-4113 (in state)
Region Five – Coastal Georgia Office	(912) 427-1954 (912) 288-4403 (POC Cell Number)
Reporting Requirements (Oil only) **Type:** (per OCGA §12-14-1 – Oil or Hazardous Material Spill or Release Act) - A release of an unknown amount of oil, or amount of oil that creates a significant sheen on top of state waters, or creates an emulsion or sludge under state waters. (per 391-3-6-.05(3) – Water Quality Control Emergency Actions) - Any toxic or taste and color producing substance, or any other substance which would endanger downstream users of the waters of the State or would damage property, is discharged into such waters, or is so placed that it might flow, be washed, or fall into them. **Oral:** Immediately on having knowledge of release, within 15 minutes. **Written:** As requested by Agency.	
Macon – Bibb County Emergency Management	
700 Poplar Street Macon, Georgia 31201	(478) 832-6300
Reporting Requirements **Type:** Will be contacted by the Macon Fire Department, for all 911 calls. **Oral:** Communication via Fire Department. **Written:** Report via Fire Department.	

2.8 Other Potential Required Notifications

Table 2-4 - Other Potential Required Notifications	
Occupational Safety and Health Administration (OSHA)	
200 Constitution Avenue Washington, D.C. 20210	800-321-6742
Reporting Requirements **Type:** Fatality from a work related incident or the inpatient hospitalization of three (3) or more employees as a result of a work related incident **Verbal:** Immediately **Written:** As requested by the Agency	
U.S. Environmental Protection Agency Region IV	
61 Forsyth Street. SW Atlanta, GA 30303-3104	(404) 562-8700
Reporting Requirements **Note: Initial Notification MUST NOT be delayed pending collection of all information.** **Type:** Immediately for all spills that impact or threaten navigable water or adjoining shoreline. **Verbal:** Notification to the EPA is typically accomplished by the call to the NRC. **Written:** Per SPCC requirements, a written report must be submitted within 60 days for a spill in excess of 1,000 gallons (approximately 24 Bbls) in a single event or two spill events within a twelve 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.	
U.S. Fish & Wildlife Service	
Athens Field Office 105 Westpark Drive, Suite D Athens, Georgia 30606-3175	(706) 613-9493 (706) 613-6059 FAX
Reporting Requirements **Type:** Wildlife Protection / Rehabilitation. **Verbal:** Immediately **Written:** As the agency may request depending on circumstances	

Table 2-4 - Other Potential Required Notifications	
Pipeline and Hazardous Materials Administration (PHMSA)	
U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration East Building, 2nd Floor Mail Stop: E24-455 1200 New Jersey Ave., SE Washington, DC 20590	Communicated via the NRC 800-424-8802 (24 Hrs.) 202-267-2180 (24 Hrs.) (202) 366-4433 PHMSA main number
Reporting Requirements Type: Accident report required for each failure in a pipeline system subject to 49 CFR Part 195 in which there is a release of the hazardous liquid transported resulting in: an explosion or fire not intentionally set by the operator: a release of 5 gallons or more of hazardous liquid, with the exception of certain releases that occur during pipeline maintenance activities (see Part 195.50); death of any person; personal injury requiring hospitalization; or 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. Verbal: At the earliest practicable moment following discovery of a release, via the NRC Written: An Accident report must be filed as soon as practicable, but not later than 30 days after discovery of the accident, on DOT Form 7000–1.	
Robins Air Force Base	
Robins Air Force Base Fire Department	Routed via 911 if occurs on Base (478) 222-2900
Robins Air Force Base Security Police	(478) 926-2187
Additional Impact-specific Contacts	
Refer to ICP Figure 6.5 for Geographic Response Plan Maps associated facility data sheets which contain response plan data and contact information for sensitive sites.	

Table 2-5 - Local Emergency Services	
DIAL 911 for All Police, Fire, and Ambulance Emergencies	
Service	**Telephone**
Bibb County Sheriff Department	(478) 746-9441
Macon Police Department	(478) 751-7500
Bibb County Radio Dispatch	(478) 751-7300
Houston County Emergency Management Agency	(478) 542-2026
Houston County Sheriff Department	(478) 542-2125

Georgia Notifications	GA EMA	(800) 241-4113 Statewide
	Georgia State Police	(478) 993-3002
	State Fire Marshall	(404) 656-2064
Hospitals		**Telephone**
Coliseum Medical Center		(478) 765-7000
Medical Center of Central Georgia		(478) 633-1000
Ambulances		**Telephone**
Ambulance Service Medical Center		(478) 633-1111

Table 2-6 - Oil Spill Removal Organizations (OSRO)

Company	Response Time	Location	Telephone
First Environmental	30 minutes (*maximum*)	Macon, GA	(478) 477-2323

Local Spill Response Support

Company	Location	Telephone
Prim Industrial Contractors, Inc.	Macon, GA	(478) 742-0420

3.0 Initial Response Actions

Remember, Without Exception, Personnel Safety Is First Priority.
Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided

3.1 First Company Person Notified/On Scene

_____ Follow the appropriate **"Specific Incident Response Checklist"** in Section 3.4 and **"Product Specific Response Considerations"** in Section 4.

_____ Notify **Terminal Manager/QI** of the incident.

_____ Contact emergency services as necessary (security, fire, medical).

3.2 Terminal Manager/QI

_____ **Evaluate the Severity,** Potential Impact, Safety Concerns, and Response Requirements based on the initial data provided by the first person on scene.

_____ **Confirm safety** aspects at site, including need for personal protective equipment, sources of ignition, and potential need for evacuation.

_____ Activate the **Facility 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 the tables in Section 2).

_____ Perform notifications as per Section 1.

_____ Ensures EHS Specialist coordinate/perform **regulatory agency notification**, as the situation demands (notification procedures and telephone references are provided in Section 2).
Note: Initial Notification MUST NOT be delayed pending collection of all information.

_____ Proceed to spill site 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 4.

3.3 Facility Response Team

_____ Assigned personnel will immediately respond to a discharge from the Facility, as the situation demands.

_____ Perform response/clean-up operations as directed or coordinated by the Incident Commander.

_____ Assist as directed at the spill site.

3.4 Specific Incident Response Checklists

3.4.1 Initial Response

_____ Take appropriate personal protective measures.

_____ Call for medical assistance if an injury has occurred.

_____ Restrict access to the spill site and adjacent area as the situation demands. Take additional steps necessary to minimize any threat to health and safety.

_____ Verify the type of product and quantity released.

_____ 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.

_____ Take necessary fire response actions.

_____ Eliminate possible sources of ignition in the near vicinity of the spill.

All personnel are reminded that outsiders other than emergency services will not be allowed in the Facility during the time of an emergency, and that no statements will be issued to the media or other interested parties except by designated Facility Management. Be courteous with media representatives and direct them to the designated spokesman.

3.4.2 Line Break or Leak

_____ Notify Terminal Manager/QI with the following

- Location, volume, source and material released
- Note time found
- Pull MSDS for product and have it available
- Initiate internal and external notifications (EHS will handle agency notifications)
- Use alternate telephone # for call-backs and out-going calls
- Begin an incident log with timeline

_____ Begin initial response

- Evacuate and secure immediate area
- Account for contractors and Company personnel
- Approach from upwind direction
- Eliminate any potential ignition sources
- Initiate air monitoring (i.e., O2, LEL, chemical, heat stress, etc.) and establish hot warm and cold zones
- Foam release (if significant volume of flammable) within 15 minutes
- First responder to stop source and contain (if possible) in a safe manner

_____ Facility Response Team assemble at Emergency Operations Center (EOC) for briefing

- Fill positions in IMS (if required based on size and type of incident)

- Determine PPE requirements indicated on MSDS or PPE matrix
- Approach from upwind direction
- Dispatch equipment needed to contain and start clean-up (use of portable or fixed monitors, vacuum trucks, fire truck, boat, absorbents, non-sparking shovels, etc.)

NOTE: DO NOT USE SPILL BOAT OR BOOM ON FLAMMABLE SPILLS INTO THE WATER

_____ Continue initial response/ assess situation

- Ensure that pumps/ electrical equipment have been shut down
- Include vessel, ships and docks if spill is at dock or on waterfront
- Control and direct traffic flow (establish and staff staging area if required)
- Notify any affected neighboring facilities
- Consider fence line air monitoring if release will affect property off-site

_____ Establish objectives and priorities based on this assessment

- Contain to keep from impacting additional areas (closing dike drains, outfalls, etc.)
- Maintaining foam blanket will be necessary to suppress vapors if material is flammable and posing a threat of a fire or high LEL levels
- Vacuum up or absorb free product (all equipment used must be grounded)
- Stop source safely if first responder could not (due to vapor exposures or risk of fire)

3.4.3 Explosions and/or Fire

3.4.3.1 Individual Discovering the Fire - (All Employees)

In the event that a fire response is required by the Facility Response Team, the following actions should be taken in order:

NOTE: If the situation warrants, and your personal safety is ensured, initial efforts to extinguish small incipient stage fires may prove to be the best action. In these situations, if you believe that your personal safety is not at risk, and you can take interim measures to mitigate a situation while the Facility Response Team is deploying-do so.

_____ Notify the Terminal Manager/QI

- Acknowledge information and switch all emergency communications to an alternate channel
- Have the Facility Response Team members secure all operations on which they are working before responding
- Note time of call
- Sound the emergency siren, contact the local fire department
- Have staff member check weather for any changes in wind direction

_____ Account for personnel and contractors. Facility Response Team on scene

- Check wind direction-**approach from upwind**
- Confirm and conduct a preliminary assessment of the situation upon arrival at the scene
- Evaluate scene for potential hazards (i.e., overhead power lines, obstacles wind direction)
- Determine what product is involved and have MSDS pulled and reviewed for PPE and firefighting instructions
- Have fire pumps started and on standby (if applicable) Monitor Fire Water pressure

- Initiate internal and external notifications in accordance with the fire and other emergency response plans

_____ Eliminate any sources of ignition in the immediate area

- Shut down product fuel pumps and any movement into/out of area
- Shut down contractor activity
- Stop traffic flow into and out of area
- Adjacent tank pumps and motors
- Be aware of static electricity
- Trained personnel, initiate fire extinguishing measures (Note: No water on a fuel fire)
- Be aware of overhead power lines, DO NOT flow water near them

3.4.4 Vapor Cloud (from a massive spill, line rupture, etc.)

_____ The person who discovers the vapor cloud will sound the alarm and notify the Terminal Manager or 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 assembly / muster point for head count and further instructions.

_____ After all personnel have been accounted for, the Terminal Manager/QI, will initiate the following actions as deemed necessary:

1. Shut down transfer operations.
2. Evacuation of adjacent property.
3. Only the Fire Department will be permitted to enter the Area.

_____ Contact the appropriate agencies and potentially affected neighbors (refer to Section 1.9)

(b) (7)(F)

(b) (7)(F)

(b) (7)(F)

[redacted]

3.4.6 Natural Disaster (Tornado and Severe Storms)

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 Terminal Manager/QI will coordinate incident response.

_____ Be Aware of Changing Weather Conditions

1. Tornado watch - conditions are right for the formation of a tornado.
2. Tornado warning - a tornado has been sighted, but is not in the area at this time.
3. Tornado alert - a tornado has been sighted in the immediate area - take cover immediately.

_____ If Severe Weather Conditions Threaten

1. Alert Facility personnel of condition.
2. If time permits, all personnel should assemble at an inside room in the Facility for shelter.
3. If time does not permit, seek shelter in low level area away from glass.
4. Make certain that Facility personnel are aware of the condition.
5. Stay in shelter until "all clear" has been issued.

_____ Immediately After the Storm

1. Account for all personnel.
2. Survey for damages to the Facility.
3. Initiate team for any repairs if needed (i.e. lighting, etc.).

3.4.7 Medical Emergency

_____ Apply appropriate first aid for both injury and shock, exercising care not to cause further injury.

_____ If victim is unconscious and not breathing, immediately apply artificial respiration (if trained in CPR) and continue without interruption until natural breathing is restored or relieved by another trained CPR personnel or other qualified medical personnel.

_____ Call 9-1-1 for ambulance or other medical evacuation resources, if appropriate.

_____ Notify hospital of patient arrival and extent of injury.

_____ Notify victim’s immediate family.

_____ Complete follow-up and written reporting, as the situation demands.

4.0 Product Specific Response Considerations for Crude/Distillate

Remember, Without Exception, Personnel Safety Is First Priority.
Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided

Suggested physical response actions for these products are detailed below. It is important to note however, that each situation is unique and must be individually responded to. ***The following are intended for guideline purposes only.***

_____Eliminate the source of the spill to the greatest extent possible.

_____If the incident occurs from an **equipment failure,** take all possible actions to isolate the source close tank/vessel manifold and discharge valves.

_____Eliminate sources of vapor cloud ignition. Shut down all engines and motors in the vicinity of any potential vapor cloud. If vapor cloud exists in the area of an electrical panel, **do not** open breaker switches to "off" positions.

_____Identify the type(s) and quantity (as available) of the spilled product.

_____Ensure that all transfer operations are immediately stopped and that the source of the spill has been eliminated.

_____Evacuate all non-essential personnel and restrict access to the Facility and the area surrounding the spill as the situation demands.

_____Advise neighboring industrial facilities of any threat to their property or personnel and request USCG to establish a vessel control traffic area, if necessary.

_____Use combustible / toxic gas meter and other air sampling equipment to determine when areas are safe to enter for commencement/continuance of response operations.

_____Flammable conditions may exist.

_____Containment and recovery is the preferred method of response. Diversionary/containment booming and skimming techniques should be implemented.

_____Section 6 of the ICP should be consulted for staging/access areas and environmentally sensitive areas to protect.

NOTE: Material Safety Data Sheets are retained separately at the Facility.

5.0 Product Specific Response Considerations for Gasoline/Light Hydrocarbon

**Remember, Without Exception, Personnel Safety Is First Priority.
Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided**

Suggested physical response actions for these products are detailed below. It is important to note however, that each situation is unique and must be individually responded to. ***The following are intended for guideline purposes only.***

This material floats on water and is extremely flammable. Containment of this material may allow explosive concentrations to accumulate. **DO NOT BOOM.** The preferred response is to knock down the vapors, disperse the product, and allow evaporation to occur; protect shorelines.

_____Eliminate the source of the spill to the greatest extent possible.

_____If the incident occurs from an equipment failure, take all possible actions to isolate the source (close tank/vessel manifold and discharge valves).

_____Eliminate sources of vapor cloud ignition. Shut down all engines and motors in the vicinity of any potential vapor cloud. If vapor cloud exists in the area of an electrical panel, do not open breaker switches to “off” positions. Use water fog from dock/area fire monitors and response equipment to knock down vapors and disperse material.

_____Identify the type(s) and quantity (as available) of the spilled product.

_____Ensure that all transfer operations are immediately stopped, and stay upwind.

_____Evacuate all non-essential personnel and restrict access to the Facility and the area surrounding the spill as the situation demands.

_____Advise neighboring industrial facilities of any threat to their property or personnel and request USCG to establish a vessel control traffic area as necessary.

_____Use combustible / toxic gas meter and other air sampling equipment to determine when areas are safe to enter for commencement/continuance of response operations.

_____Flammable conditions may exist.

_____Knock down vapors and disperse the product.

_____Allow evaporation to occur.

_____Deploy diversionary and protective strategies.

_____Consult Section 6 of the ICP for staging/access areas and environmentally sensitive areas to protect.

NOTE: Material Safety Data Sheets are retained separately at the Facility.

6.0 Evacuation Plan

Epic has prepared an evacuation map for the Macon Terminal (Figure 6.1). This map illustrates the evacuation routes, as well as evacuation regrouping area (muster point) locations within the Terminal.

The Terminal Manager/QI, or designee, shall initiate facility-wide or location-specific emergency evacuation. The First Responder shall initiate evacuation for isolated emergencies when an immediate reason for evacuation exists (e.g., life-threatening condition). The Fire Department will coordinate community evacuation activities if necessary and determine area of impact (normally ½ mile radius of site). **Special Note - If the Fire Department orders an evacuation, an evacuation must be initiated.**

6.1 Evacuation Tasks

All Epic employees have two-way radios. When an emergency condition is discovered, an "on-call" situation is initiated for all employees on the radio. The Terminal Manager/QI is notified. For contractors, the contractor lead is given an Epic two-way radio, the Terminal Manager/QI cell number, and the office number.

The following tasks will be conducted when performing an evacuation:

- Request assistance from off-site response organizations; convey EOC location.
- Notify appropriate agencies (if appropriate).
- Assemble personnel at predetermined safe location: upwind/up-gradient of release (assembly area).
- Account for Company and contractor personnel.
- Assess casualties (number/type/location).
- Determine probable location of missing personnel.
- Secure site, establish re-entry point and check-in/check-out procedures.
- Develop list of known hazards (confined spaces, electrical hazards, physical hazards, vapors, oxygen deficiency, fire/explosion, etc.)
- Monitor situation (weather, vapors, product migration) for significant changes.
- Assist in developing a rescue plan, if necessary.

The following evacuation factors will be taken into consideration when executing an evacuation plan.

Table 6-1 - Evacuation Factors

FACTOR	DESCRIPTION
Stored material location	• Located in oil storage area • Identified in facility Piping and Tank Content Maps (Figure 8-4)
Spilled material hazards	• Hazard is fire/explosion
Water currents, tides, or wave conditions	• Water currents are not applicable because the Facility is inland and the evacuation routes do not cross water
Evacuation routes	• Routes are summarized on Evacuation Map (Figure 6-1) • Criteria for determining safest evacuation routes from facility may include: wind direction, potential exposure to toxins and carcinogens, intense heat, potential for explosion/fire, and blockage of planned route by fire, debris, or released liquid
Alternate evacuation routes	• Alternative routes may exist; refer to Evacuation Map (Figure 6-1)
Injured personnel transportation	• Emergency vehicles can be mobilized to the facility

Table 6-1 - Evacuation Factors	
Alarm/Notification system location	• The facility does not have an evacuation alarm system. All employees will be notified of required evacuations and preferred routes via voice communications
Community evacuation plans	• Company may request local police, county sheriff, and/or state police assistance. Community evacuations are the responsibility of these agencies
Spill flow direction	• The predicted overall direction of a spill from the Facility is to the north, as indicated on the Terminal Drainage Map (Figure 8-3). During an incident the person directing the evacuation will determine the actual direction of the spill and direct the use of alternate evacuation route if necessary.
Prevailing wind direction and speed	• The prevailing winds at the Facility are normally from the northwest. However, changes in weather condition require that the person directing any evacuation be cognizant of the wind direction and speed. A shift in the wind direction may expose personnel to smoke or fumes. An increase in wind speed may accelerate and spread a fire. • Because wind direction varies with weather conditions, consideration for evacuation routing will depend in part on wind direction
Emergency personnel/response equipment arrival route	• Response equipment will arrive via Hawkinsville Road. Response contractors are instructed to report to the qualified individual or designated field operation personnel from instruction on deployment. • Directions to nearest medical facility are provided below
Centralized check-in area	• Front entrance at the head count area. • Supervisor or designee is responsible for head count
Mitigation Command Center Location	• The initial mitigation control center will be established at the Terminal Office. • Mobile Command Posts may be established as necessary
Facility Shelter Location	• If the preferred evacuation procedure is to shelter in place all personnel will be directed to report to the Terminal Office. Once all personnel are accounted for the office windows and doors will be sealed and any outside air source eliminated (i.e. HVAC makeup air). • Not a safe harbor from fires, explosions, vapor clouds, or other significant emergencies; however, may be used for temporary shelter from inclement weather
Directions to nearest medical facility	Directions to the nearest hospital is the Medical Center of Central Georgia, approximately 7.3 miles away: • Go North on Hawkinsville Road / US-129 / Broadway. West on Hemlock Street to the Medical Center. 777 Hemlock Street Macon, GA 31201

6.2 Alarm Activation

Notification of an emergency evacuation will be carried out by the QI. Terminal staff and on site contractors will be notified via two-way radio.

6.3 Emergency Transportation

Emergency vehicles will arrive in the following manner:

From I-75 North
Exit 149 onto Highway 49 North (Industrial Highway)
Stay on Highway 49 for approximately 7.7 miles
Follow the overpass and turn north onto Hawkinsville Road (Highway 247N)
Travel north on Hawkinsville Road for approximately ½ mile
Turn left (west) onto Hangar Road
The terminal is at the end of Hangar Road, approximately 500 feet.

From I-75 South
Exit 160A onto Highway 41/247 South (Pio Nono Avenue)
Stay on Highway 247 (It will change names from Pio Nono Avenue to Houston Road, to Hawkinsville Road) for approximately 3.8 miles
Turn right (west) onto Hangar Road
The terminal is at the end of Hangar Road, approximately 500 feet.

Figure 6-1 - Macon Terminal Evacuation Diagram

(b) (7)(F)

7.0 Emergency Response Equipment

7.1 Facility Response Equipment

The facility holds only incidental response equipment, which does not require extensive testing or deployment. Company response equipment is tested and inspected as noted in Appendix A of the ICP. In addition to the response equipment available on-site, the Terminal has a contract with First Environmental Nationwide, Inc. to provide emergency response services. Contact information for First Environmental Nationwide, Inc. is provided above in Table 2.6.

Table 7-1 - Facility Owned Spill Response Equipment

TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS
SORBENTS			
Absorbent Boom	50 feet	Warehouse	Operational
Absorbent Pads	4 bundles	Warehouse	Operational
HAND TOOLS			
Rakes and Shovels	2 each	Warehouse	Operational
FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT			
Dry chemical fire extinguisher	4	Loading Rack	Operational
Dry chemical fire extinguisher	4	Impoundment 5 Area	Operational
Dry chemical fire extinguisher	1	Company Truck	Operational
Dry chemical fire extinguisher	2	Main Office	Operational

7.2 Equipment Limitations

Winds, currents and wave action seriously reduce the ability of booms to contain and of skimmers to recover oil. When containment and recovery is attempted it is important to select equipment that is suitable for the type of oil and the prevailing weather and surface water conditions. Efforts should target the heaviest oil concentrations and areas where collection will reduce the likelihood of oil reaching sensitive resources and shorelines. Booms should not be towed at speeds greater than 0.5 knots, and wave height should be considered when determining booming strategies.

Because skimmers float on the water surface, they experience many of the operational difficulties which apply to booms, particularly those posed by wind, waves and currents. Even moderate wave motion greatly reduces the effectiveness of most skimmer designs. In calm waters more satisfactory performance can be achieved provided the skimmer is suited to the viscosity of the oil in question.

8.0 Contracted Response Resources

Table 8-1 - Oil Spill Removal Organization

COMPANY NAME	RESPONSE TIME
First Environmental Nationwide, Inc. 1266 Sixth Street Macon, Georgia 31206 (478) 477-2323 www.firstenvironmental.com	0.5 hours

8.1 Response Equipment Testing and Deployment

This facility conducts equipment deployment exercises consistent with the National Preparedness for Response Exercise Program (PREP) Guidelines. These exercises are excerpted from the PREP Guidelines Sections 2 and 4, for EPA-Regulated Onshore and Certain Offshore Non Transportation-Related facilities dated, August 2002.

Semi-annual deployment drills will be conducted and documented on a Spill/Exercise Documentation Form, (see Section D.8 of the ICP) to ensure facility personnel and equipment are capable of responding to a small (2,100 gallon) spill. This exercise will include an inspection of all equipment to ensure it is in working order. Responses to actual spills may be documented as a substitute to the deployment drills.

Annual deployment drills will be conducted and documented to ensure OSRO personnel and equipment are capable of responding to a spill in the appropriate environment. Facility personnel will ensure OSRO personnel receive training and OSRO equipment receives proper inspections by requesting such documentation from the OSRO and logging such documentation on an equipment deployment log sheet (See Section A.15 of the ICP).

A more complete discussion on Facility Drills and Training is included in Appendix D.

Table 8-2 - Epic Macon Terminal Tank Table

Table 8-2 - Macon Terminal Tank Inventory

Tank No.	Failure/Cause	Max Capacity (gal)	Secondary Containment Volume (gal) / Type	Tank Type	Direction of Flow/Rate (see Plot Plan)	Impoundment	Outfall	Product Stored
1	Overfill / Rupture / Leakage	(b) (7)(F)		Horizontal	North / Instantaneous	3	1	Petroleum Contact Water
2	Overfill / Rupture / Leakage			Horizontal	North / Instantaneous	3	1	Petroleum Contact Water
3	Overfill / Rupture / Leakage			Cone	North / Instantaneous	5	1	Additive
4	Overfill / Rupture / Leakage			Cone	North / Instantaneous	4	1	Additive
5	Overfill / Rupture / Leakage			Horizontal	North / Instantaneous	3	1	Empty
7	Overfill / Rupture / Leakage			Cone	North / Instantaneous	4	1	Transmix
8	Overfill / Rupture / Leakage			IFR	North / Instantaneous	3	1	Transmix
2001	Overfill / Rupture / Leakage			IFR	North / Instantaneous	1	1	Empty
2201	Overfill / Rupture / Leakage			Cone	North / Instantaneous	4	1	Empty
3001	Overfill / Rupture / Leakage			Cone	North / Instantaneous	4	1	ULSD
3002	Overfill / Rupture / Leakage			Cone	North / Instantaneous	4	1	JP-8
3003	Overfill / Rupture / Leakage			Cone	North / Instantaneous	4	1	JP-8
3004	Overfill / Rupture / Leakage			IFR	North / Instantaneous	3	1	Empty
3005	Overfill / Rupture / Leakage			IFR	North / Instantaneous	3	1	Empty
3006	Overfill / Rupture / Leakage			IFR	North / Instantaneous	4	1	Empty

Table 8-2 - Macon Terminal Tank Inventory

Tank No.	Failure/Cause	Max Capacity (gal)	Secondary Containment Volume (gal) / Type	Tank Type	Direction of Flow/Rate (see Plot Plan)	Impoundment	Outfall	Product Stored
3007	Overfill / Rupture / Leakage	(b) (7)(F)		Cone	North / Instantaneous	4	1	Empty
5501	Overfill / Rupture / Leakage			IFR	North / Instantaneous	2	1	JP-8
Drums	Overfill / Rupture / Leakage			Drum	North / Instantaneous	2, 4, 5	1	Waste
Load Rack Retains	Overfill / Rupture / Leakage			Horizontal	North / Instantaneous	N/A	OWS	Petroleum Mixture
OWS	Overfill / Rupture / Leakage			UST	North / Instantaneous	N/A	N/A	Petroleum Mixture

Containment Type : 1=Earthen Berm and Floor, 2=Concrete Berm and Floor, 3=Earthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Double Walled, 7=Coated Asphalt Materials, 8=Concrete Berm and Earthen, 9=Asphalt, Soil, and walls and Earthen Floor * Not in Containment Area, ** Curbing and containment system

Figure 8-1 - Facility Area Map

(b) (7)(F)

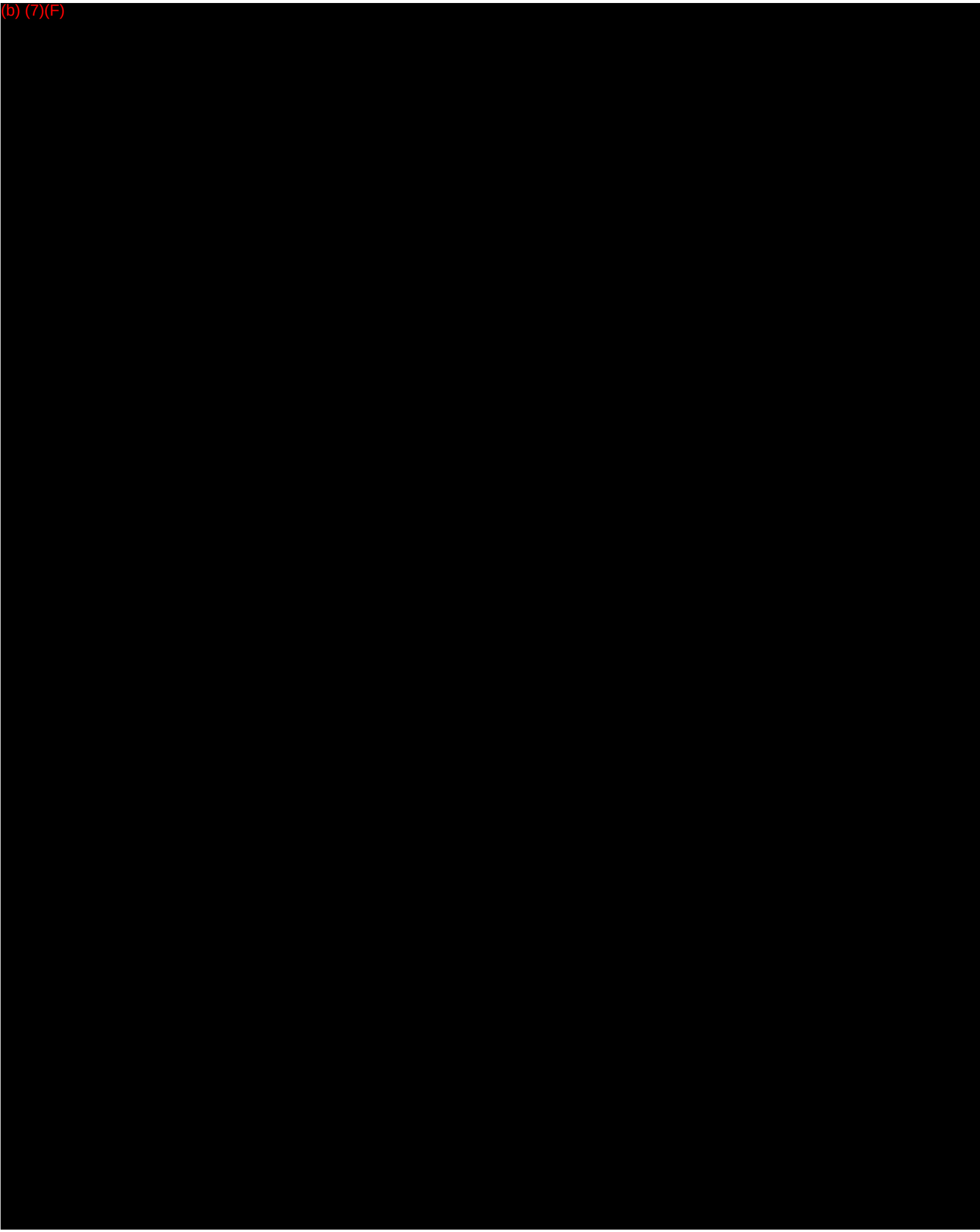


Figure 8-2 - Macon Facility Diagram

(b) (7)(F)

Figure 8-3 - Macon Terminal Drainage Diagram

(b) (7)(F)

Figure 8-4 - Macon Terminal Tank and Piping Locations, Capacities and Contents

(b) (7)(F)

Integrated Contingency Plan

Epic Macon Terminal

Prepared for:

Epic Midstream, LLC
125 Town Park Drive, Suite 300
Kennesaw, Georgia 30144

Prepared by:

AECOM Technical Services, Inc.
1452 Corporate Pointe
Warner Robins, Georgia 31088
Phone: 478-329-8870 Fax 478-284-1062

October 2012

MANAGEMENT APPROVAL

The Integrated Contingency Plan (ICP) is a carefully conceived plan, prepared in accordance with good engineering practices, and has the full approval of Epic Midstream, LLC (Epic) at a level with the authority to commit the necessary resources. The ICP is intended to be implemented to the fullest extent feasible, as described herein, and will be reviewed and evaluated by Epic personnel at least once every five years and whenever oil storage and transfer facilities or operations are significantly altered. This plan supersedes earlier plans as of the date shown below on this approval sheet.

Authorized Representative: _____

Name and Title: D. Dennis Shoemaker, CEO

Date: 10/24/2012

PROFESSIONAL ENGINEER CERTIFICATION

The undersigned Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the Code of Federal Regulations (40 CFR 112) and has visited and examined the facility, or has supervised the review and inspection of the facility by appropriately qualified personnel ("Agent of the Professional Engineer"). The undersigned Professional Engineer attests that this ICP has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR 112; that procedures for required inspections and testing have been established; and that this plan is adequate for the facility (40 CRF 112.3(d)). This certification relies on the secondary containment calculations performed and certified by Arseal Technologies, LLC.

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this ICP in accordance with the requirements of 40 CFR 112. This plan is valid only to the extent that the facility owner or operator maintains tests and inspects equipment, containment and other devices as prescribed in this plan.

Thomas A. Rolka, Jr., P.E.
Name of Registered Professional Engineer

_____
Signature of Registered Professional Engineer

GEORGIA REGISTERED No. PE022162 ENGINEER THOMAS A. ROLKA

Date: 24 Oct 2012 Registration Number: PE022162 State: Georgia

ICP PLAN REVIEW

The facility must complete a review and evaluation of the ICP at least once every five years. The results of the review will indicate if the ICP must be amended. Administrative changes are not technical amendments; however, a change in the facility design, construction, operation, or maintenance that materially affects potential for a discharge would require a technical amendment. Examples of changes that may require an amendment include, but are not limited to:

- commissioning or decommissioning containers;
- replacement, reconstruction, or movement of containers;
- reconstruction, replacement, or installation of piping;
- construction or demolition that might alter secondary containment;
- changes of product or service; or
- revision of a standard operating procedure.

Epic personnel will document reviews in the table below. If a technical amendment is required, it will be noted in the table and a registered Professional Engineer (PE) will approve the amendment. The PE's approval will be maintained in this Plan following this review page.

Name	Review Date	Will or Will Not Amend the Plan?

TECHNICAL AMENDMENT ENGINEER CERTIFICATION

I, _____, a Registered Professional Engineer in the State of_____ _____, certify that I, or a designated agent, have examined the facility described in this ICP, and being familiar with the provisions of 40 CFR Part 112, attest that this ICP has been prepared in accordance with good engineering practices, including consideration of applicable industry standards.

I attest that this amendment has been prepared in accordance with good engineering practices, including consideration of applicable industry standards. I further attest that procedures for required inspections and testing have been established, and that this Plan is adequate for the facility.

Registered Professional Engineer: _____

Name and Registration Number: _____

Date: _____

Board of Registration Seal:

Foreword

Certification of The Applicability of The Substantial Harm Criteria

Facility Name: Epic Macon Terminal
Facility Address: 6225 Hawkinsville Road
Macon, Georgia 31216

(Detailed Facility information, including data required for the Response Plan Cover Sheet, is provided in Figure 1.3)

1. Does the facility transfer oil over water to or from vessels ***and*** does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?	Yes		No	✓
2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons ***and*** does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?	Yes		No	✓
3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons ***and*** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.	Yes	✓	No	
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons ***and*** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula[1]) such that a discharge from the facility would shut down a public drinking water intake[2]?	Yes		No	✓
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons ***and*** has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?	Yes		No	✓

[1] If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

[2] For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

CERTIFICATION

I hereby certify the following:

- Under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.
- The information and procedures contained herein are considered to be accurate as of this date and are consistent with the National Contingency Plan (NCP) and applicable Area Contingency Plans (ACP) as detailed in Section 1.5.

Signature

CEO
Title

D. Dennis Shoemaker
Name (please type or print)

10/24/2012
Date

Certification of Qualified Individual and Alternate Qualified Individual

Epic Midstream, LLC hereby certifies to the United States Environmental Protection Agency (USEPA), and the United States Department of Transportation (USDOT) that the individuals identified as Qualified Individual and Alternate Qualified Individual in this plan have the full authority in accordance with the applicable federal regulations and this plan to:

1. Activate and engage in contacting with oil spill removal organizations;
2. Act as a liaison with the pre-designated Federal On-Scene Coordinator (OSC); and,
3. Obligate funds required to carry out response activities.

Epic Midstream, LLC

Signature

10/24/2012
Date

D. Dennis Shoemaker
Name

CEO
Title

Foreword

NOTE: It is the responsibility of the holder of this Plan to insure that all changes and updates are made. The Plan Holder must:

- Remove and discard obsolete pages.
- Replace obsolete pages with the updated pages.

Revision Record

Change Date	Remove	Insert	Description of Change(s)
	Page Number(s)		
October 2012			Reformatted entire document and updated plan for new facility owner

Distribution List

Copy Number	Plan Holder (Hard Copies)
1	Brian Ruholt Emergency Response Coordinator Epic Midstream, LLC 125 Town Park Drive, Suite 300 Kennesaw, Georgia 30144
2	Eddie Nobles Epic Macon Terminal Manager Epic Midstream, LLC 6225 Hawkinsville Road Macon, GA 31216
3	Ted Walden SPCC/FRP Coordinator U. S. EPA Region 4 61 Forsyth Street. SW Atlanta, GA 30303-8960
4 Per § 194.119, (2) electronic copies were submitted	Office of Pipeline Safety Pipeline and Hazardous Materials Safety Administration Department of Transportation PHP 80 1200 New Jersey Ave., SE Washington, DC 20590-0001
5	Jeff Morrison – EHS Specialist AECOM 1452 Corporate Pointe Warner Robins, Georgia 31088

NOTE: The Distribution of this Plan is controlled by the Copy Number located on the front cover. The Plan Distribution Procedures provided in Section 1.3 and the Plan Review and Update Procedures provided in Section 1.4 should be followed when making any and all changes.

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40 CFR 112 Requirement	**Section #**
112.7 General Requirements	
112.7(a)(1) Facility Conformance	§1, Part 1.5
112.7(a)(2) Deviation Discussion	§1, Part 1.5
112.7(a)(3) Physical Layout/Diagram	Appendix C, Figures C.1 and C.2
112.7(a)(3)(i) Substance & Capacity	Appendix C, Part C.5 and Figures C.1 and C.2
112.7(a)(3)(ii) Discharge Prevention (including loading, unloading and facility transfers)	Appendix C
112.7(a)(3)(iii) Drainage Controls	Appendix C
112.7(a)(3)(iv) Countermeasures	§3, Part 3.1, 3.2 and 3.3, Appendix A and Appendix C
112.7(a)(3)(v) Disposal of Recovered Material	Appendix G
112.7(a)(3)(vi) Contact List	§2, Tables 2.1, 2.2, and 2.4 through 2.8
112.7(a)(4) Reporting Procedures (unless subject to 112.20)	§2, and Table 2.3
112.7(a)(5) Appropriate Document Organization (unless subject to 112.20)	§1
112.7(b) Equipment Failure Prediction	Appendix C, Part C.5
112.7(c) Containment and/or Diversionary Structures	Appendix C, Part C.5, and Appendix H, Part H.20
112.7(d) Explanation of 112.7(c) not practicable	N/A
112.7(e) Inspections, Tests and Records	Appendix H
112.7(f) Training & Discharge Prevention Procedures	Appendix D, Part D.1, Appendix H
112.7(g) Security	Appendix H, Part H.2
112.7(h) Loading/Unloading	Appendix C, Part C.1
112.7(i) Brittle Fracture Evaluation	Appendix H, Part H.3.2
112.7(j) More Stringent State Requirements	§2, Part 2.1
112.7(k) Qualified Oil Operational Equipment	N/A
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112.8(c)(5) Partially Buried Metal Tanks Corrosion Protection	N/A
112.8(c)(6) AST Testing	Appendix H, Part H.3.2
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	C.1.3.7, and Appendix H, Part H.12
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N/A - Not Applicable

U.S. EPA – OPA 90 40 CFR Part 112.20 (h) and Appendix F			
40 CFR § 112.20 (h)	**40 CFR § 112 Appendix F**	**Brief Description**	**Location In Plan**
-----	1.0	***Model Facility-Specific Response Plan***	-----
(1)	1.1	***Emergency Response Action Plan***	-----
(1)(i)		1. Qualified Individual Information	ERAP, Part 2.0
(1)(ii)		2. Emergency Notification Phone List	ERAP, Table 2-1 through 2-7
(1)(iii)		3. Spill Response Notification Form	ERAP, Part 2.5
(1)(iv)		4. Response Equipment List and Location	ERAP, Table 7-1
-----		5. Response Equipment Testing and Deployment	ERAP, Part 8.1
(1)(v)		6. Facility Response Team	ERAP, Table2-2
(1)(vi)		7. Evacuation Plan	ERAP, Part 6.0
(1)(vii)		8. Immediate Actions	ERAP, Part 3.0
(1)(viii)		9. Facility Diagram	ERAP, Figures 8-1 through 8-3
(2)	1.2	***Facility Information***	-----
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	1.2.2	Latitude and Longitude	§1, Part 1.6
	1.2.3	Wellhead Protection Areas	§1, Part 1.6
	1.2.4	Owner/Operator	§1, Part 1.6
	1.2.5	Qualified Individual	§1, Part 1.6
	1.2.6	Date of Oil Storage Start-up	§1, Part 1.6
	1.2.7	Current Operation	§1, Part 1.7
	1.2.8	Dates and Types of Substantial Expansion	§1, Part 1.8
(3)	1.3	***Emergency Response Information***	-----
(3)(iii)	1.3.1	Notifications	§ 2 (all)
(3)(i)	1.3.2	Response Equipment List / Location	Appendix A, Part A.6
(3)(ii)	1.3.3	Response Equipment Testing / Deployment	Appendix A, Part A.10 and A.11
(3)(vi)	1.3.3	Response Equipment Testing / Deployment	Appendix A, Part A.13, A-14 and A-15
(3)(i)	1.3.4	Personnel	§2, Tables 2.1, 2.2, and 2.4 through 2.8, and §4.3
(3)(iv)	-----	A description of information to pass to response personnel	§2, Table 2.3
(3)(v)	-----	A description of response personnel capabilities, including:	-----
	-----	• Duties of persons at the Facility during a response action	§3, and §4, Parts 4.2, 4.3 and 4.8

U.S. EPA – OPA 90 40 CFR Part 112.20 (h) and Appendix F			
40 CFR § 112.20 (h)	**40 CFR § 112 Appendix F**	**Brief Description**	**Location In Plan**
	-----	• Response time and qualifications	§2, Table 2.2
(3)(ii)	-----	• Evidence of Contractual Arrangements	Appendix A, Part A.10 and A.11
(3)(vii)	1.3.5	Evacuation Plans / Diagrams	Appendix E
(3)(viii)	1.3.5	Evacuation Plans / Diagrams	Appendix E
-----	1.3.6	Qualified Individual's Duties	§4, Part 4.2
(3)(ix)	-----	A description of the duties of the qualified individual that includes:	-----
(3)(ix)(A)	-----	• Activate internal alarms and hazard communications systems	§4, Part 4.2
(3)(ix)(B)	-----	• Notify all response personnel, as needed	§4, Part 4.2
(3)(ix)(C)	-----	• Identify the character, exact source, amount, and extent of release	§4, Part 4.2
(3)(ix)(D)	-----	• Notify and provide necessary information to the appropriate Federal, State, and local authorities	§4, Part 4.2
(3)(ix)(E)	-----	• Assess the interaction of the spilled substance with water and/or other substances stored at the Facility	§4, Part 4.2
(3)(ix)(F)	-----	• Assess the possible hazards to human health and environment	§4, Part 4.2
(3)(ix)(G)	-----	• Assess and implement prompt removal actions	§4, Part 4.2
(3)(ix)(H)	-----	• Coordinate rescue and response actions	§4, Part 4.2
(3)(ix)(I)	-----	• Use authority to immediately access company funding	§4, Part 4.2
(3)(ix)(J)	-----	• Direct cleanup activities until properly relieved	§4, Part 4.2
(4)	1.4	***Hazard Evaluation***	-----
	1.4.1	Hazard Identification	Appendix C, Part C.1
	1.4.2	Vulnerability Analysis	§6, Part 6.5
	1.4.3	Analysis of the Potential for an Oil Spill	Appendix C, Part C.2
	1.4.4	Facility Reportable Oil Spill History	Appendix C, Part C.3
(5)	1.5	***Discharge Scenarios***	-----
(5)(ii)	1.5.1	Small and Medium Discharges	Appendix B: Group I Oils, Part B.1 Group II, III, and IV Oils, Part B.2
(5)(iii)	1.5.2	Small and Medium Discharges	
(5)(i)	1.5.3	Worst Case Discharge	
(6)	1.6	***Discharge Detection Systems***	-----
	1.6.1	Discharge Detection by Personnel	Appendix H, Part H.1.1
(3)(ix)(A)	1.6.2	Automated Discharge Detection	Appendix H, Part H.1.2
(7)	1.7	***Plan Implementation***	-----
(7)(i)	1.7.1	Response actions to be carried out by facility personnel or contracted personnel; Response resources for small, medium, and worst case spills	§3.1 and 3.2, Figures 3.1, 3.2., and 3.3; Appendix A; and Appendix B
(7)(iii)	1.7.2	Disposal Plans	Appendix G
(7)(iv)	1.7.3	Containment and Drainage Planning	Appendix H, Part H.20

U.S. EPA – OPA 90 40 CFR Part 112.20 (h) and Appendix F			
40 CFR § 112.20 (h)	**40 CFR § 112 Appendix F**	**Brief Description**	**Location In Plan**
(8)	1.8	***Self-Inspection, Drills / Exercises, and Response Training***	-----
(8)(i)	1.8.1	Facility Self-Inspection	Appendix H, Parts H.3 through H.19
(8)(i)	1.8.1.1	Tank Inspection / Secondary Containment	Appendix H, Parts H.5 through H.9, and H16 through H.18
(8)(i)	1.8.1.2	Response Equipment Inspection	Appendix A, Part A.13, A-14 and A-15
(8)(ii)	1.8.2	Facility Drills / Exercises	Appendix D
(8)(iv)	1.8.2.1	Qualified Individual Notification Drill Log	Appendix D, Part D.6
(8)(iv)	1.8.2.2	Crisis Management Team Tabletop Exercise Log	Appendix D, Part D.5
(8)(iii)	1.8.3	Response Training	Appendix D, Part D.1
(8)(iv)	1.8.3.1	Personnel Response Training Log	Appendix D, Part D.4
(8)(iv)	1.8.3.2	Discharge Prevention Meeting Log	Appendix H, Part H.10
(9)	1.9	***Diagrams***	-----
		(1) Site Plan Diagram	§1, Figures 1.2 and 1.3
		(1) Site Drainage Plan Diagram	ERAP Figures 7.3 and 7.4, and Appendix H, Figures H.1 and H.2
		(1) Site Evacuation Plan Diagram	Appendix E, Figures E.1 and E.2
(10)	1.10	***Security***	Appendix H, Part H.2
(11)	2.0	***Response Plan Cover Sheet***	Outside cover of Plan
-----	3.0	***Acronyms***	Glossary and Acronym Tab
40 CFR § 112.21	**40 CFR § 112 Appendix F**	**Brief Description**	**Location in Plan**
(a)	1.8.2	Develop a training and drill program that satisfies the requirements of this section	Appendix D
(b)	1.8.3	Develop a facility response training program to train personnel involved in response activities	Appendix D, Part D.1
(b)(1)	1.8.3	Proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations	Appendix D, Part D.1
(b)(2)	1.8.3	Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel	Appendix D, Part D.1
(b)(3)	1.8.2	Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup	Appendix D, Part D.1
(c)	1.8.2	Develop a program of facility response drills/exercises, including evaluation procedures. Can follow PREP.	Appendix D, Part D.3

40 CFR 265, Subpart D – Contingency Plan and Emergency Procedures	Section #
265.51 Purpose and Implementation	-----
265.51 (a) Plan Design	§1, Part 1.1
265.51 (b) Execution	§2, Part 2.1
265.52 Contingency Plan Content	-----
265.52 (a) Actions	§3
265.52 (b) SPCC Plan	§1, Part 1.5
265.52 (c) Emergency Response Coordination	§2, Part 2.1
265.52 (d) Emergency Coordinator Contacts	§1, Part 1.1; and §2, Table 2.2
265.52 (e) Emergency Equipment Inventory	Appendix A, Part A.6
265.52 (f) Evacuation Plan	Appendix E
265.53 Copies of Contingency Plan	-----
265.53 (a) Local Copies of Contingency Plan	Foreword
265.53 (b) Copies of Contingency Plan to Local Emergency Response Agencies	Foreword
265.54 Amendment of Contingency Plan	§1
265.55 Emergency Coordinator	§1, Part 1.1, and §2, Table 2.2
265.56 Emergency Procedures	1.1.4, 1.1.5 & 1.3.1
265.56 (a) (1) Activate Alarms	§4, Part 4.2
265.56 (1) (2) Notify Appropriate Agencies	§3, Part 3.1; and §4, Part 4.2
265.56 (b) Identify Released Materials	§4, Part 4.2
265.56 (c) Assess Hazards	§4, Part 4.2
265.56 (d) Report Human Health Hazards	§2, Part 2.3; and §4, Part 4.2
265.56 (e) Isolate Release	§4, Part 4.2
265.56 (f) Monitor Other Equipment and Processes	§4, Part 4.2
265.56 (g) Waste Management	Appendix G
265.56 (h) (1) Manage Incompatible Waste	Appendix G, Part G.3
265.56 (h) (2) Cleaned and Fit Emergency Equipment	Appendix A, Part A.11
265.56 (i) Document Incident and Notify Regional Administrator	§2, Table 2.3 and Table 2.5

49 CFR Part 194, PHMSA Response Plans for Onshore Oil Pipelines	Section #
Subpart B – Response Plans	
101 Operators required to submit plans	Entire Plan
103 Significant and substantial harm; operator's statement	§1, Part 1.7
105 (a) WCD calculations for each response zone	Appendix B, Part B.1
105 (b) WCD calculations	Appendix B, Part B.1
107 (a) Procedures and resources for responding to WCD	§2, §6, Part 6.6 and Appendix A
107 (b) Reviewed NCP and ACP	§1, Part 1.5
107 (b) (1) Consistent with NCP	§1, Part 1.5
107 (b) (1) (i) Operator understands the function of the Federal response structure	§5
107 (b) (1) (ii) Provisions to ensure protection of safety at the response site	§5, Part 5.2
107 (b) (1) (iii) Identify procedures to obtain Federal and State permissions for using alternative response strategies	Appendix G, Part G.7

49 CFR Part 194, PHMSA Response Plans for Onshore Oil Pipelines	Section #
107 (b) (2) Consistent with ACP	§1, Part 1.5
107 (b) (2) (i) Address removal of a WCD and the mitigation or prevention of a substantial threat of a WCD	§6, Part 6.6 and Appendix B
107 (b) (2) (ii) Identify environmentally and economically sensitive areas	§6, Part 6.5
107 (b) (2) (iii) Describe the responsibilities of the operator and of Federal, State and local agencies in removing a discharge and in mitigating or preventing a substantial threat of a discharge	§4, Part 4.8
107 (b) (2) (iv) Establish the procedures for obtaining an expedited decision on use of dispersants or other chemicals	Appendix D, Table D-2
107 (c) (1) Each response plan must consist of a core plan consisting of:	
107 (c) (1) (i) An information summary as required in §194.113	ERAP
107 (c) (1) (ii) Immediate notification procedures	ERAP, Parts 2.3 and 2.4
107 (c) (1) (iii) Spill detection and mitigation procedures	§6, Part 6.6 and Appendix H, Part H.1
107 (c) (1) (iv) name, address, and telephone number of the oil spill response organization, if appropriate	ERAP, Part 8
107 (c) (1) (v) Response activities and response resources	ERAP, Parts 2.5, 3 and 7
107 (c) (1) (vi) Names and telephone numbers of Federal, State and local agencies which the operator expects to have pollution control responsibilities or support	ERAP, Tables 2.3 and 2.4
107 (c) (1) (vii) Training procedures	Appendix D
107 (c) (1) (viii) Equipment testing	Appendix A
107 (c) (1) (ix) Drill program, either by following national PREP guidelines or a drill program that is equivalent to PREP	Appendix D
107 (c) (1) (x) Plan review and update procedures	§1, Part 1.4
107 (c) (2) Appendix for each response zone	N/A, Information for both response zones is the same
107 (c) (3) A description of the operator's response management system	§4
109 Submission of State Response Plans	
109 (a) In lieu of submitting a response plan required by §194.103, an operator may submit a response plan that complies with a state law or regulation, if the state law or regulation requires a plan that provides equivalent or greater spill protection than a plan required under this part	N/A, plan submitted conforms to §194.103
109 (b) (1) The submitted plan must have an information summary required by §194.113	N/A, plan submitted conforms to §194.103
109 (b) (2) The submitted plan must List the names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s)	N/A, plan submitted conforms to §194.103

49 CFR Part 194, PHMSA Response Plans for Onshore Oil Pipelines	Section #
109 (b) (2) The submitted plan must ensure through contract or other approved means the necessary private personnel and equipment to respond to a WCD or a substantial threat of such a discharge.	N/A, plan submitted conforms to §194.103
111 Response plan retention	
111 (a) Each operator shall maintain relevant portions of its response plan at the operator's headquarters and at other locations from which response activities may be conducted, for example, in field offices, supervisors' vehicles, or spill response trailers.	§1, Part 1.3
111 (b) Each operator shall provide a copy of its response plan to each qualified individual.	§1, Part 1.3
113 Information summary	
113 (a) (1) For the core plan the information summary must include the name and address of the operator	ERAP
113 (a) (2) For the core plan the information summary must include the names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s)	ERAP
113 (b) (3) For the response zone appendix the information summary must include the description of the response zone, including county(s) and state(s), for those zone in which a WCD could cause substantial harm to the environment	Appendix B
113 (b) (4) For the response zone appendix the information summary must include a list of line sections for each pipeline contained in the response zone, identified by milepost or survey station number, or other operator designation	Appendix B
113 (b) (5) For the response zone appendix the information summary must include the basis for the operator's determination of significant and substantial harm	§1, Part 1.7
113 (b) (6) For the response zone appendix the information summary must include the type of oil and volume of the WCD	Appendix B
115 Response resources	
115 (a) Each operator shall identify and ensure, by contract or other approved means, the resources necessary to remove, to the maximum extent practicable, a worst case discharge and to mitigate or prevent a substantial threat of a worst case discharge	Appendix A
115 (b) An operator shall identify in the response plan the response resources which are available to respond within the time specified, after discovery of a worst case discharge, or to mitigate the substantial threat of such a discharge	Appendix A, Appendix B
117 Training	

49 CFR Part 194, PHMSA Response Plans for Onshore Oil Pipelines	Section #
117 (a) (1) (i) Each operator shall conduct training to ensure that all personnel know their responsibilities under the response plan	Appendix D
117 (a) (1) (ii) Each operator shall conduct training to ensure that all personnel know the name and address of, and the procedure for contacting, the operator on a 24-hour basis	Appendix D
117 (a) (1) (iii) Each operator shall conduct training to ensure that all personnel know the name of, and procedures for contacting, the qualified individual on a 24- hour basis	Appendix D
117 (a) (2) (i) Each operator shall conduct training to ensure that all reporting personnel know the content of the information summary of the response plan	Appendix D
117 (a) (2) (ii) Each operator shall conduct training to ensure that all reporting personnel know the toll free telephone number of the National Response Center	Appendix D
117 (a) (2) (iii) Each operator shall conduct training to ensure that all reporting personnel know the notification process	Appendix D
117 (a) (3) (i) Each operator shall conduct training to ensure that personnel engaged in response activities know the characteristics and hazards of the oil discharged	Appendix D
117 (a) (3) (ii) Each operator shall conduct training to ensure that personnel engaged in response activities know the conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions	Appendix D
117 (a) (3) (iii) Each operator shall conduct training to ensure that personnel engaged in response activities know the steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage	Appendix D
117 (a) (3) (iv) Each operator shall conduct training to ensure that personnel engaged in response activities know the proper firefighting procedures and use of equipment, fire suits, and breathing apparatus	Appendix D
117 (b) Each operator shall maintain a training record for each individual that has been trained as required by this section. These records must be maintained in the following manner as long as the individual is assigned duties under the response plan:	Appendix D
117 (b) (1) Records for operator personnel must be maintained at the operator's headquarters	Appendix D

49 CFR Part 194, PHMSA Response Plans for Onshore Oil Pipelines	Section #
117 (b) (2) Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator	Noted
117 (b) (3) Nothing in this section relieves an operator from the responsibility to ensure that all response personnel are trained to meet the Occupational Safety and Health Administration (OSHA) standards for emergency response operations in 29 CFR 1910.120, including volunteers or casual laborers employed during a response who are subject to those standards pursuant to 40 CFR part 311	Noted
119 Submission and approval procedures	
119 (a) Each operator shall submit two copies of the response plan required by this part. Copies of the response plan shall be submitted to: Pipeline Response Plans Officer, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, 400 Seventh Street, SW Washington, DC 20590-0001	Noted
121 Response plan review and update procedures	
121 (a) Each operator shall update its response plan to address new or different operating conditions or information. In addition, each operator shall review its response plan in full at least every 5 years from the date of the last submission or the last approval as follows:	§1, Part 1.4.2
121 (a) (1) For substantial harm plans, an operator shall resubmit its response plan to OPS every 5 years from the last submission date	§1, Part 1.4.2
121 (a) (2) For significant and substantial harm plans, an operator shall resubmit every 5 years from the last approval date	N/A
121 (b) If a new or different operating condition or information would substantially affect the implementation of a response plan, the operator must immediately modify its response plan to address such a change and, within 30 days of making such a change, submit the change to PHMSA	§1, Part 1.4.2

29 CFR Part 1910.38, Subpart E – Exit Routes and Emergency Planning	Section #
(a) Available Emergency Action Plan	ERAP
(b) Written Emergency Action Plan	ERAP
(c) Contents of Emergency Action Plan	N/A
(1) Emergency Reporting Procedures	ERAP, §2
(2) Emergency Evacuation Procedures	ERAP, §6 and Figures 6.1 and 6.2

29 CFR Part 1910.38, Subpart E – Exit Routes and Emergency Planning	Section #
(3) Emergency Shutdown Procedures	ERAP, §4, Figure 4.1
(4) Employee Roster and Roll-Call	ERAP, §6, Part 6.1
(5) Rescue Procedures	ERAP, §6, Part 6.1
(6) Emergency Contacts	ERAP, §2, Tables 2-1, 2-2, and 2-4 through 2-7
(d) Employee Alarm System	ERAP, §6, Table 6.1
(e) Employee Training	ERAP, §8, Part 8.1
(f) Emergency Action Plan Review	ERAP, §1

29 CFR Part 1910.120, Subpart H – Hazardous Materials	Section #
(l) (1) (i) Available Written Emergency Response Plan	ERAP
(l) (2) Elements of Emergency Response Plan	------
(l) (2) (i) Pre-Emergency Planning	§2
(l) (2) (ii) Personnel Roles and Lines of Authority	§4
(l) (2) (iii) Emergency Recognition and Prevention	Appendix D
(l) (2) (iv) Safe Distances and Places of Refuge	Appendix E
(l) (2) (v) Site Security and Control	Appendix H, Part H.2
(l) (2) (vi) Evacuation Routes and Procedures	Appendix E, Figures E.1 and E.2
(l) (2) (vii) Decontamination Procedures	§3, Part 3.8
(l) (2) (viii) Emergency Medical Treatment	§3, Figure 3.1 and Part 3.10
(l) (2) (ix) Emergency Alerts and Response Procedures	§2; and §3
(l) (2) (x) Critique of Response and Follow-up	Appendix F
(l) (2) (xi) PPE and Emergency Equipment	§3, Part 3.9
(l) (3) (i) (A) Site topography, layout, and prevailing weather conditions	§1, Figures 1.1 through 1.3; and Appendix E, Table E.1
(l) (3) (i) (B) Local Agency Reporting	§2, Table 2.6
(l) (3) (i) (B) (iv) Regularly Rehearsed	Appendix D
(l) (3) (i) (B) (v) Periodically Reviewed	§1, Part 1.4
(l) (3) (i) (B) (vi) Employee Alarm System	Appendix E, Part E.1
(l) (3) (i) (B) (vii) Incident Evaluation and Implementation of the Emergency Response Plan	Appendix F

GLOSSARY OF TERMS/ACRONYMS

Page

Glossary of Terms Glossary/Acronyms-1

Acronyms Glossary/Acronyms-13

This glossary contains definitions of terms that will be used frequently during the course of response operations.

Activate: The process of mobilizing personnel and/or equipment within the response organization to engage in response operations.

Activator: An individual in the response organization whose responsibilities include notifying other individuals or groups within the organization to mobilize personnel and/or equipment.

Adverse Weather: The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height, ice, temperature, weather - related visibility, and currents within the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.

Agency Representative: Individual assigned to an incident from an agency that has been delegated full authority to make decisions on all matters affecting that agency's participation in response operations.

Area Committee: As defined by Sections 311(a)(18) and (j)(4) of CWA, as amended by OPA, means the entity appointed by the President consisting of members from Federal, State, and local agencies with responsibilities that include preparing an Area Contingency Plan for the area designated by the President. The Area Committee may include ex-officio (i.e., non-voting) members (e.g., industry and local interest groups).

Area Contingency Plan: As defined by Sections 311(a)(19) and (j)(4) of CWA, as amended by OPA, means the plan prepared by an Area Committee, that in conjunction with the NCP, shall address the removal of a discharge including a worst-case discharge and the mitigation or prevention of a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

Average Most Probable Discharge: A discharge of the lesser of 50 barrels or 1% of the volume of the worst case discharge.

Barrel (bbl): Measure of space occupied by 42 U.S. gallons at 60 degrees Fahrenheit.

Bioremediation Agents: Means microbiological cultures, enzyme additives, or nutrient additives that are deliberately introduced into an oil discharge and that will significantly increase the rate of biodegradation to mitigate the effects of the discharge.

Boom: A piece of equipment or a strategy used to either contain free floating oil to a confined area or protect an uncontaminated area from intrusion by oil.

Booming Strategies: Strategic techniques which identify the location and quantity of boom required to protect certain areas. These techniques are generated by identifying a potential spill source and assuming certain conditions which would affect spill movement on water.

Bulk: Material that is stored or transported in a loose, unpackaged liquid, powder, or granular form capable of being conveyed by a pipe, bucket, chute, or belt system.

Chemical Agents: Means those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects or the removal of the oil pollutant from the water. Chemical agents include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents, but do not include solvents.

Clean-up Contractor: Persons contracted to undertake a response action to clean up a spill.

Cleanup: For the purposes of this document, cleanup refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Cleanup includes restoration of the site and its natural resources.

Coastal Waters: For the purpose of classifying the size of discharges, means the waters of the coastal zone except for the Great Lakes and specified ports and harbors on inland rivers.

Coastal Zone: As defined for the purpose of the NCP, means all United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP, and the land surface or land substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

Coast Guard District Response Ground (DRG): As provided for by CWA sections 311(a)(20) and (j)(3), means the entity established by the Secretary of the department in which the USCG is operating within each USCG district and shall consist of: the combined USCG personnel and equipment, including firefighting equipment, of each port within the district; additional prepositioned response equipment; and a district response advisory team.

Command: The act of controlling manpower and equipment resources by virtue of explicit or delegated authority.

Command Post: A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

Communications Equipment: Equipment that will be utilized during response operations to maintain communication between the Company employees, contractors, Federal/State/Local agencies. (Radio/ telephone equipment and links)

Containment Boom: A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.

Contingency Plan: A document used by (1) federal, state, and local agencies to guide their planning and response procedures regarding spills of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or at their facilities.

Contract or Other Approved Means: For OPA 90, a written contract with a response contractor; certification by the facility owner or operator that personnel and equipment are owned, operated, or under the direct control of the facility, and available within the stipulated times; active membership in a local or regional oil spill removal organization; and/or the facility's own equipment.

Critical Areas to Monitor: Areas which if impacted by spilled oil may result in threats to public safety or health.

Cultural Resources: Current, historic, prehistoric and archaeological resources which include deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.

Damage Assessment: The process of determining and measuring damages and injury to the human environment and natural resources, including cultural resources. Damages include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensued following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.

Decontamination: The removal of hazardous substances from personnel and their equipment necessary to prevent adverse health effects.

Discharge: Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Dispersants: Means those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Diversion Boom: A floatation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.

Drinking Water Supply: As defined by Section 101(7) of CERCLA, means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act) or as drinking water by one or more individuals.

Economically Sensitive Areas: Those areas of explicit economic importance to the public that due to their proximity to potential spill sources may require special protection and include, but are not limited to: potable and industrial water intakes; locks and dams; and public and private marinas.

Emergency Service: Those activities provided by state and local government to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency.

Environmentally Sensitive Areas: Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.

Facility: Either an onshore facility or an offshore facility and includes, but is not limited to structures, equipment, and appurtenances thereto, used or capable of being used to transfer oil to or from a vessel or a public vessel. A facility includes federal, state, municipal, and private facilities.

Facility Operator: The person who owns, operates, or is responsible for the operation of the facility.

Federal Fund: The spill liability trust fund established under OPA.

Federal Regional Response Team: The federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

Federal Response Plan (FRP): Means the agreement signed by 25 federal departments and agencies in April 1987 and developed under the authorities of the Earthquake Hazards Reduction Act of 1977 and the Disaster Relief Act of 1974, as amended by the Stafford Disaster Relief Act of 1988.

First Responders, First Response Agency: A public health or safety agency (e.g., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

Handle: To transfer, transport, pump, treat, process, store, dispose of, drill for, or produce.

Harmful Quantity Of Oil: The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen upon or discoloration of the surface of the water or a shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion to be deposited beneath the surface of the water or on a shoreline, tidal flat, beach, or marsh.

Hazardous Material: Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

Hazardous Substance: Any substance designed as such by the Administrator of the EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act, or discharged by the SERC.

Hazardous Waste: Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively.

HAZMAT: Hazardous materials or hazardous substances, exposure to which may result in adverse effects on health or safety of employees.

HAZWOPER: Hazardous Waste Operations and Emergency Response Regulations published by OSHA to cover worker safety and health aspects of

Heat Stress: Dangerous physical condition caused by over exposure to extremely high temperatures.

Hypothermia: Dangerous physical condition caused by over exposure to freezing temperatures.

Incident: Any event that results in a spill or release of oil or hazardous materials. Action by emergency service personnel may be required to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Briefing Meeting: Held to develop a comprehensive, accurate, and up-to-date understanding of the incident, nature of status of control operations, and nature and status of response operations; ensure the adequacy of control and response operations; begin to organize control and response operations; and prepare for interactions with outside world.

Incident Command Post (ICP): That location at which all primary command functions are executed.

Incident Command System (ICS): The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of assigned resources at an incident.

Incident Commander (IC): The one individual in charge at any given time of an incident. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.

Indian Tribe: As defined in OPA section 1001, means any Indian tribe, band, nation, or other organized group or community, but not including any Alaska Native regional or village corporation, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians and has governmental authority over lands belonging to or controlled by the Tribe.

Initial Cleanup: Remedial action at a site to eliminate acute hazards associated with a spill. An initial clean-up action is implemented at a site when a spill of material is an actual or potentially imminent threat to public health or the environment, or difficulty of cleanup increases significantly without timely remedial action. All sites must be evaluated to determine whether initial cleanup is total clean-up, however, this will not be possible in all cases due to site conditions (i.e., a site where overland transport or flooding may occur).

Initial Notification: The process of notifying necessary the Company personnel and Federal/ State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

Initial Response Actions: The immediate actions that are to be taken by the spill observer after detection of a spill.

Inland Area means the area shoreward of the boundary lines defined in 46 CFR part 7, except that in the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines) as defined in §80.740 through 80.850 of this chapter. The inland area does not include the Great Lakes.

Inland Waters: State waters not considered coastal waters; lakes, rivers, ponds, streams, underground water, et. al.

Inland Zone: Means the environment inland of the coastal zone excluding the Great Lakes, and specified ports and harbors on inland rivers. The term inland zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

Interim Storage Site: A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.

Lead Agency: The government agency that assumes the lead for directing response activities.

Lead Federal Agency: The agency which coordinates the federal response to incident on navigable waters. The lead federal agencies are:

- **U.S. Coast Guard:** Oil and chemically hazardous materials incidents on navigable waters.
- **Environmental Protection Agency:** Oil and chemically hazardous materials incidents on inland waters.

Lead State Agency: The agency which coordinates state support to federal and/or local governments or assumes the lead in the absence of federal response.

Loading: Transfer from Facility to vehicle.

Local Emergency Planning Committee (LEPC): A group of local representatives appointed by the State Emergency Response Commission (SERC) to prepare a comprehensive emergency plan for the local emergency planning district, as required by the Emergency Planning and Community Right-to-know Act (EPCRA).

Local Response Team: Designated Facility individuals who will fulfill the roles determined in the oil spill response plan in the event of an oil or hazardous substance spill. They will supervise and control all response and clean-up operations.

Lower Explosive Limit: Air measurement utilized to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

Marinas: Small harbors with docks, services, etc. for pleasure craft.

Medium Discharge: Means a discharge greater than 2,100 gallons (50 Bbls) and less than or equal to 36,000 gallons (85+ Bbls) or 10% of the capacity of the largest tank, whichever is less and not to exceed the WCD.

National Contingency Plan: The plan prepared under the Federal Water Pollution Control Act (33 United State Code §1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code § 9601 et seq), as revised from time to time.

National Pollution Funds Center (NPFC): Means the entity established by the Secretary of Transportation whose function is the administration of the Oil Spill Liability Trust Fund (OSLTF). Among the NPFC's duties are: providing appropriate access to the OSLTF for federal agencies and states for removal actions and for federal trustees to initiate the assessment of natural resource damages; providing appropriate access to the OSLTF for claims; and coordinating cost recovery efforts.

National Response System (NRS): Is the mechanism for coordinating response actions by all levels of government in support of the OSC. The NRS is composed of the NRT, RRTs, OSC, Area Committees, and Special Teams and related support entities.

National Strike Force (NSF): Is a special team established by the USCG, including the three USCG Strike Teams, the Public Information Assist Team (PIAT), and the National Strike Force Coordination Center. The NSF is available to assist OSCs in their preparedness and response duties.

National Strike Force Coordination Center (NSFCC): Authorized as the National Response Unit by CWA section 311(a)(23) and (j)(2), means the entity established by the Secretary of the department in which the USCG is operating at Elizabeth City, North Carolina, with responsibilities that include administration of the USCG Strike Teams, maintenance of response equipment inventories and logistic networks, and conducting a national exercise program.

Natural Resource: Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the state, federal government, private parties, or a municipality.

Navigable Waters: As defined by 40 CFR 110.1 means the waters of the United States, including the territorial seas. The term includes:

All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

Interstate waters, including interstate wetlands;

All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters;

That are or could be used by interstate or foreign travelers for recreational or other purposes;

From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; and

That are used or could be used for industrial purposes by industries in interstate commerce.

All impoundments of waters otherwise defined as navigable waters under this section;

Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and

Wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition: Provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act jurisdiction remains with EPA.

Nearshore Area: For OPA 90, the area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation defined in §80.740 - 80.850 of title 33 of the CFR.

Non-persistent or Group I Oil: A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

1. At least 50% of which by volume, distill at a temperature of 340 degrees C (645 degrees F);
2. At least 95% of which volume, distill at a temperature of 370 degrees C (700 degrees F).

Ocean: The open ocean, offshore area, and near-shore area as defined in this subpart.

Offshore area: The area up to 38 nautical miles seaward of the outer boundary of the near-shore area.

Oil or Oils: Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under Section 101(14) of the federal comprehensive environmental response, compensation, and liability act of 1980, as amended by P. L. 99-499.

Oil Spill Liability Trust Fund: Means the fund established under section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509).

Oily Waste: Product contaminated waste resulting from a spill or spill response operations.

On-Scene Coordinator (OSC): Means the federal official predesignated by the EPA or the USCG to coordinate and direct response under subpart D.

On-site: Means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of a response action.

Open Ocean: means the area from 38 nautical miles seaward of the outer boundary of the nearshore area, to the seaward boundary of the exclusive economic zone.

Owner or Operator: Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

Persistent Oil: A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

1. Group II specific gravity less than .85
2. Group III specific gravity between .85 and less than .95
3. Group IV specific gravity .95 and including 1.0
4. Group V specific gravity greater than 1.0

Plan Holder: The plan holder is the industry transportation related facility for which a response plan is required by federal regulation to be submitted by a vessel or facility's owner or operator.

Post Emergency Response: The portion of a response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the sites has begun.

Post Emergency: The phase of response operations conducted after the immediate threat of the release has been stabilized, and cleanup operations have begun.

Primary Response Contractors or Contractors: An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.

Qualified Individual (QI): That person or entity who has authority to activate a spill cleanup contractors, act as liaison with the "On-Scene Coordinator" and obligate funds required to effectuate response activities.

Recreation Areas: Publicly accessible locations where social/sporting events take place.

Regional Response Team (RRT): The Federal response organization (consisting of representatives from selected Federal and State agencies) which acts as a regional body responsible for overall planning and preparedness for oil and hazardous materials releases and for providing advice to the OSC in the event of a major or substantial spill.

Remove or Removal: As defined by section 311(a)(8) of the CWA, refers to containment and removal of oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare (including, but not limited to, fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment. For the purpose of the NCP, the term also includes monitoring of action to remove discharge.

Response Activities: The containment and removal of oil from the water and shorelines, the temporary storage and disposal of recovered oil, or the taking of other actions as necessary to minimize or mitigate damage to public health or welfare, or the environment.

Response Contractors: Persons/companies contracted to undertake a response action to contain and/or clean up a spill.

Response Guidelines: Guidelines for initial response that are based on the type of product involved in the spill, these guidelines are utilized to determine clean-up methods and equipment.

Response Plan: A practical manual used by industry for responding to a spill. Its features include: (1) identifying the notifications sequence, responsibilities, response techniques, etc. in a easy to use format; (2) using decision trees, flowcharts, and checklists to ensure the proper response for spills with varying characteristics; and (3) segregating information needed during the response from data required by regulatory agencies to prevent confusion during a spill incident.

Response Resources: All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.

Responsible Party: Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.

Response Priorities: Mechanism used to maximize the effective use of manpower and equipment resources based upon their availability during an operational period.

Response Resources: All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.

Restoration: The actions involved in returning a site to its former condition.

Rivers and Canals: A body of water confined within the inland area that has a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

Securing the Source: Steps that must be taken to stop discharge of oil at the source of the spill.

Sinking Agents: Means those additives applied to oil discharges to sink floating pollutants below the water surface.

Site Characterization: An evaluation of a cleanup site to determine the appropriate safety and health procedures needed to protect employees from identified hazards.

Site Conditions: Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic breakdowns, etc.

Site Safety and Health Plan: A site specific plan developed at the time of an incident that addresses:

- Safety and health hazard analysis for each operation.
- Personal protective equipment to be used.
- Training requirements for site workers.
- Medical surveillance requirements.
- Air monitoring requirements.
- Site control measures.
- Decontamination procedures.
- Emergency response procedures.
- Confined space entry procedures.

Site Security and Control: Steps that must be taken to provide safeguards needed to protect personnel and property, as well as the general public, to ensure an efficient clean-up operation.

Skimmers: Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.

Snare Boom: Oil will adhere to the material of which this boom is made of and thus collect it.

Sorbents: Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.

Spill: An unauthorized discharge of oil or hazardous substance into the waters of the state.

Spill Observer: The first Facility individual who discovers a spill. This individual must function as the first responder and person-in-charge until relieved by an authorized supervisor.

Spill of National Significance (SONS): Means a spill which due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and cleanup the discharge.

Spill Management Team: The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Spill Response: All actions taken in responding to spills of oil and hazardous materials, e.g.: receiving and making notifications; information gathering and technical advisory phone calls; preparation for and travel to and from spill sites; direction of clean-up activities; damage assessments; report writing, enforcement investigations and actions; cost recovery; and program development.

Spill Response Personnel: Federal, state, local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be pre-approved on a list maintained in each region.

Staging Areas: Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

State Emergency Response Commission (SERC): A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Re-authorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

Surface Collecting Agents: Means those chemical agents that form a surface film to control the layer thickness of oil.

Surface Washing Agent: Is any product that removes oil from solid surfaces, such as beaches and rocks, through a detergency mechanism and does not involve dispersing or solubilizing the oil into the water column.

Tanker: A self-propelled tank vessel constructed or adapted primarily to carry or hazardous material in bulk in the cargo spaces.

Tidal Current Tables: Tables which contain the predicted times and heights of the high and low waters for each day of the year for designated areas.

Trajectory Analysis: Estimates made concerning spill size, location, and movement through aerial surveillance or computer models.

Transfer: Any movement of oil to, from, or within a vessel by means of pumping, gravitation, or displacement.

Trustee: Means an official of a federal natural resources management agency designated in subpart G of the NCP or a designated state official or Indian tribe or, in the case of discharges covered by the OPA, a foreign government official, who may pursue claims for damages under section 1006 of the OPA.

Underwriter: An insurer, a surety company, a guarantor, or any other person, other than an owner or operator of a vessel or facility, that undertakes to pay all or part of the liability of an owner or operator.

Unified Command: The method by which local, state, and federal agencies and the responsible party will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident.
- Determine their overall objectives for management of an incident.
- Select a strategy to achieve agreed-upon objectives.
- Deploy resources to achieve agreed-upon objectives.

Unified or Coordinated Command Meeting: Held to obtain agreement on strategic objectives and response priorities; review tactical strategies; engage in joint planning, integrate response operations; maximize use of resources; and minimize resolve conflicts.

Volunteers: An individual who donates their services or time without receiving monetary compensation.

Waste: Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

Waters of the U.S. - See Navigable Waters, page G-7.

Wetlands: Those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds (40 CFR 112.2(y)).

Wildlife Rescue: Efforts made in conjunction with Federal and State agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

Worst Case Discharge: The largest foreseeable discharge under adverse weather conditions. For facilities located above the high water line of coastal waters, a worst case discharge includes those weather conditions most likely to cause oil discharged from the facility to enter coastal waters.

Acronyms

AC .....Area Committee

AOR .....Area of Review

AQI.....Alternate Qualified Individual

BIA .....Bureau of Indian Affairs

BLM.....Bureau of Land Management

BPD.....Barrels Per Day

BOD .....Biological Oxygen Demand

BOM.....Bureau of Mines

CAER .....Community Awareness and Emergency Response

CERCLA .....Comprehensive Environmental Response, Compensation and Liability Act

CFR.....Code of Federal Regulations

CHEMTREC.....Chemical Transportation Emergency Center

COE.....U. S. Army Corps of Engineers

COTP .....Captain of the Port Zone

CPI .....Corrugated Plate Interceptor

CRZ.....Contamination Reduction Zone

CWA.....Clean Water Act (Federal - Public Law 100-4)

CWS.....Community Water System

CZM.....Coastal Zone Management

DECON .....Decontamination

DOC .....Department of Commerce

DOD .....Department of Defense

DOE.....Department of Energy

DOI.....Department of Interior

DOJ.....Department of Justice

DOL.....Department of Labor

DOS.....Department of State

DOT.....Department of Transportation

DRAT .....District Response Advisory Team

DRG .....District Response Group

EBS.....Emergency Broadcast System

EHS.....Extremely Hazardous Substance

EMA .....Emergency Management Agency

EMS.....Emergency Medical Service

EOC.....Emergency Operations Center

EPA.....U. S. Environmental Protection Agency

EPCRA.....The Emergency Planning and Right-to-Know Act of 1986 (Title III of SARA)

EQ.....Environmental Quality

ERT.....Environmental Response Team

ESA.....Endangered Species Act

ETA.....Estimated Time of Arrival

FAA.....Federal Aviation Administration

FACT.....First Assessment Crisis Team

FAX.....Facsimile Machine

FCC.....Federal Communications Commission

FEMA.....Federal Emergency Management Agency

FOSC.....Federal On-Scene Coordinator

FR.....Federal Register

FRDA.....Freshwater Resource Damage Assessment

FRF.....Federal Revolving Fund

GIS.....Geographic Information System

GSA.....General Services Administration

HAZWOPER....Hazardous Waste Operations and Emergency Response

HHS.....Department of Health and Human Services

HOPD.....Head Office Products Distribution

IBRRC.....International Bird Rescue Research Center

IOCC.....Interstate Oil Compact Commission

LEPC.....Local Emergency Planning Committee

LFL.....Lower Flammable Limit

LOSC.....Local On-Scene Coordinator

LRT.....Local Response Team

MBL.....Mobile

MER.....Marine Emergency Response

MMS.....Minerals Management Service

MMT.....Marine Management Team

MOU.....Memorandum of Understanding

MSDS.....Material Safety Data Sheet

MSO.....Marine Safety Office

MSRC.....Marine Spill Response Corporation

MSU .....Marine Safety Unit

NCP.....National Contingency Plan

NCWS .....Non-Community Water System

NEPA .....National Environmental Policy

NIOSH.....National Institute for Occupational Safety and Health

NMFS .....National Marine Fisheries Service

NOAA.....National Oceanic and Atmospheric Administration (Department of Commerce)

NPDES.....National Pollution Discharge Elimination System

NPFC.....National Pollution Funds Center

NPS.....National Park Service

NRC.....National Response Center

NRDA.....Natural Resource Damage Assessment

NRS.....National Response System

NRT.....National Response Team

NSF .....National Strike Force

NSFCC.....National Strike Force Coordination Center

NTNCWS.....Non -Transient Non-Community Water System

OPA.....Oil Pollution Act

OPS.....Office of Pipeline Safety (DOT)

OSC.....On-Scene Coordinator

OSHA.....Occupational Safety and Health Administration (USDL)

OSLTF.....Oil Spill Liability Trust Fund

OSPRA.....Oil Spill Prevention and Response Act

OSRO.....Oil Spill Response Organization

PCB.....Polychlorinated Biphenyls

PFD .....Personal Flotation Device

PGR.....Pager

PHMSA .....Pipeline and Hazardous Materials Safety Administration

PIAT .....Public Information Assist Team

POLREP.....Pollution Report

PPE .....Personal Protective Equipment

PPM.....Parts Per Million

PSD .....Prevention of Significant Deterioration

QI.....Qualified Individual

RACT .....Reasonably Achievable Control Technology

RCP.....Regional Contingency Plan

RCRA.....Resource Conservation and Recovery Act

RECON .....Reconnaissance

REP.....Radiological Emergency Preparedness

RERT.....Radiological Emergency Response Team

RQ.....Reportable Quantity

RRT.....Regional Response Team

RSPA .....Research and Special Programs Administration (DOT - OPS)

SARA .....Superfund Amendments and Reauthorization Act

SCBA .....Self Contained Breathing Apparatus

SDWA .....Safe Drinking Water Act

SERC .....State Emergency Response Commission

SIC .....State Implementation Plan

SMT.....Spill Management Team

SONS .....Spill of National Significance

SOP.....Standard Operating Procedure

SPCC .....Spill Prevention Control and Countermeasures

SSC.....Scientific Support Coordinator (NOAA)

STEL .....Short Term Exposure Limits

SWD.....Salt Water Disposal

TSCA.....Toxic Substances Control Act

TSDF.....Treatment, Storage or Disposal Facility

UCS.....Unified Command System

USACOE.....U.S. Army Corps of Engineers

USCG.....U.S. Coast Guard

USDA.....U.S. Department of Agriculture

USDL.....U.S. Department of Labor

USDOD .....U.S. Department of Defense

USDOE.....U.S. Department of Energy

USDW .....Underground Source of Drinking Water

USFWS .....U. S. Fish and Wildlife Services

USGS .....U. S. Geological Survey

WCD.....Worst Case Discharge

Section 1
Plan

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1.1 Plan Purpose/Objectives

The purpose of this Integrated Contingency Plan (hereinafter referred to as "Plan") is to assist the Epic Midstream, LLC Macon Terminal (hereinafter referred to as “Epic Macon Terminal” or "Facility") personnel prepare for and respond quickly and safely to a discharge originating from the Facility. The Plan provides techniques and guidelines for achieving an efficient, coordinated and effective response to a discharge incident that may occur at the Facility.

The specific objectives of the Plan are to:

- Establish a Facility Response Team, assign individuals to fill the positions on the team and define the roles and responsibilities of team members.
- Define notification, activation, and mobilization procedures to be followed when a discharge occurs.
- Define organizational lines of responsibility to be adhered to during a response operation.
- Ensure compliance with certain federal, state, and local regulatory requirements. A summary of the applicable regulations addressed by this Plan is provided in Section 1.5.
- Ensure consistency with the National Contingency Plan and Area Contingency Plan(s) for the area of operation.

1.2 Format and Scope of Plan

This Plan has been developed under the general guidance published in the Federal Register by the EPA entitled “The National Response Team’s Integrated Contingency Plan” (61 FR 28642). The NRT guidance was developed in conjunction with the Environmental Protection Agency, Department of Transportation (U.S. Coast Guard, Research and Special Programs Administration), Department of the Interior (Minerals Management Service), and the Department of Labor (Occupational Safety and Health Administration). This guidance also provides for state and local contingency planning requirements to be incorporated into the Plan.

This Plan contains prioritized procedures for Facility personnel to mitigate or prevent any discharge resulting from the operations of the Facility. A graphical depiction of the operations conducted at the Facility is provided as Figure B.1 in Appendix B with additional information provided in the "Hazard Evaluation" located in Appendix C. Facility spill mitigation procedures and response guidelines are provided in Section 3.0 for discharges that could result from a variety of sources including, but not limited to:

- Tank overfill/failure
- Piping rupture/leak
- Explosion and/or fire
- Equipment failure (e.g. system failure etc.)

1.3 Plan Distribution Procedures

Epic Midstream, LLC’s Environment, Health and Safety (EHS) group shall have the responsibility for distribution of the Plan. Distribution will be handled in the following manner:

- Distribution of the Plan is controlled by the number on the binder cover. A Distribution List is provided in the Foreword to facilitate control.
- Epic personnel who may be called upon to provide assistance during discharge response activities will have access to a copy of the plan for their use and training.
- It is the responsibility of any person holding a copy of the Plan to ensure that the copy is transferred to their replacement in the event of reassignment or change in responsibility.

- Various regulatory agencies will also be distributed a copy of the Plan. The list of agencies is provided in the Distribution List.

1.4 Plan Review and Update Procedures

1.4.1 Annual Review/Update

Epic Midstream, LLC's EHS Group will coordinate the following plan review and update procedures with Facility Management.

- At least once each year review and make appropriate revisions as required by operational or organizational changes.
- At least once each year review and make appropriate revisions as required by changes in the names and telephone numbers detailed in Section 2.0.
- Epic Midstream, LLC's EHS Group will coordinate the word processing, publication, and distribution efforts of completing the revisions and maintaining the Plan.
- Plan review opportunities may occur during response team tabletop exercises or actual emergency responses.

1.4.2 Agency Review/Revision Requirements

Agency Timing Requirements	EPA	PHMSA
Timing for Plan reviews.	Periodically but not to exceed five (5) years.	At least every 5 years from the date of the last submission or the last approval
Timing for submission of significant Plan revisions as detailed in the following table.	60 days	30 days
When submitting revisions to the applicable agencies always include the Facility identification number (see Figure 1.3) with the revisions.		

The Facility shall revise and resubmit revised portions of the Plan for each change that may materially affect the response to a Worst-case Discharge, including:

Conditions Requiring Changes	EPA	PHMSA	RCRA
Relocation or replacement of portions of the Facility (including any pipelines) which in any way substantially affect the information included in this Plan, such as a change to the Worst-case Discharge volume.	✓	✓	
Material change in the Facility's spill prevention and response equipment or emergency response procedures.	✓	✓	✓
Change in the Facility's configuration that materially alters the information included in the Plan.	✓		
Change in the type of oil handled, stored, or transferred that materially alters the required response resources.	✓	✓	
A change in the name of the Oil Spill Removal Organization (OSRO).		✓	
Material change in capabilities of the OSROs that provide equipment and personnel.	✓	✓	✓
An extension of the existing pipeline or construction of a new pipeline in a response zone not covered by the previously approved plan		✓	
A change in key personnel (Qualified Individuals)	✓	✓	✓
A change in the NCP or ACP that has significant impact on the equipment appropriate for response activities.		✓	
Any other changes that materially affect the implementation of the Plan.	✓	✓	✓
The Plan fails in an emergency.			✓

Revised portions of the Plan will also be resubmitted if any of the following occur:

- A change in the description of discharge practices;
- A change in the description of stored materials;
- A change in the procedures for immediately notifying the POTW of slug discharges;
- A change in procedures to prevent adverse impact from accidental spill.

NOTE: Any agency may require revisions to this Plan at any time if deficiencies are found under their applicable regulations or during an actual response.

1.4.3 Incorporation of Plan Revisions

The **Plan Holder**, immediately upon receipt of any revisions, shall:

- Review and insert the revised pages into the Plan.
- Discard the obsolete pages.

A copy of an Emergency Plan Review Form, which will be used to document required reviews of this (and other) documents, is provided in Section 1.9.

1.5 Regulatory Compliance

The development, maintenance, and utilization of this Plan implements company policy and addresses the following regulatory requirements and guidelines:

- Federal Oil Pollution Act of 1990 (OPA): U.S. EPA Final Rule for Non-Transportation Related On-shore Facilities as published in 40 CFR Part 112.20.
- Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation requirements for an OPA 90 Plan as published in 49 CFR 194;
- U.S. EPA Spill Prevention, Control, and Countermeasure (SPCC) regulations as published in 40 CFR Part 112.1 - 112.7.

This ICP was developed following the requirements of Part 112.7 - General Requirements for Spill Prevention, Control, and Countermeasure Plans. Any deviations from specific regulatory requirements are addressed in the following table:

Requirement	Current Condition	Course of Action/Date
40 CFR 112.8(c)(8), Overfill protection devices for oil storage containers	Tanks are not equipped with high level alarms. The facility currently uses scheduled tank gauging and planned verbal communication with offsite suppliers to determine the liquid level in the tank during filling. For tanks containing greater than 1,000,000 gallons of petroleum products, this engineering practice is not preferred discharge prevention strategy.	Epic intends to install high level alarms on tanks greater than 1,000,000 gallons when tank upgrades are scheduled.

With the preparation and full implementation of this ICP, Epic will be in compliance with the requirements of 40 CFR 112. The Georgia Environmental Protection Division (GA EPD) does not require any additional prevention and containment procedures to 40 CFR 112.

- U.S. EPA Resource Conservation and Recovery Act (RCRA) regulations as published in 40 CFR Part 265.50 - 265.56.
- OSHA's Emergency Action Plan Regulation as published in 29 CFR 1910.38(a).
- OSHA's HAZWOPER Regulation as published in 29 CFR 1910.120.

This Plan is consistent with the most recent version of the applicable Regional Contingency Plan (ACP). The applicable ACP for the Facility is:

- U.S. Environmental Protection Agency - Region IV, Region 4 Oil and Hazardous Substances Pollution Contingency Plan

This Plan is consistent with the most recent version of the National Contingency Plan (NCP). The NCP for the Facility is:

- U.S. Environmental Protection Agency; National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule.

A regulatory cross reference is located after the main Table of Contents

Figure 1.1 - Area Map

(b) (7)(F)

Figure 1.2 – Macon Terminal Diagram

(b) (7)(F)

1.6 Facility Information

Facility Name:
Epic Midstream, LLC
Epic Macon Terminal
6225 Hawkinsville Road
Macon, Bibb County, GA 31216
(478) 788-1877

EPA FRP ID: FRP 04GA305

Dunn and Bradstreet #: 07-839-6522

NAICS: 424710

Date of Initial Storage: 1965

Owner Name:
Physical Address
Dennis Shoemaker, CEO
Epic Midstream, LLC
125 Town Park Drive, Suite 300
Kennesaw, Georgia 30144
(770) 420-8274

Qualified Individual:
Work Address
Eddie Nobles, Terminal Manager
6225 Hawkinsville Road
Macon, Bibb County, GA 31216
(b) (6)
(478) 788-1877 (Office)
(b) (6)
(478) 737-4921 (Mobile, 24-Hour Number)

Alternate Qualified Individual:
Work Address
Wesley Parkerson
6225 Hawkinsville Road
Macon, Bibb County, GA 31216
(b) (6)
(478) 788-1877 (Office)
(b) (6)
(478) 338-2313 (Mobile, 24-Hour Number)

Alternate Qualified Individual:
Work Address
Brian Ruholt, Regional Operations Manager
125 Town Park Drive, Suite 300
Kennesaw, Georgia 30144
(b) (6)
(770) 420-8274 (Office)
(770) 324-7540* (Mobile, 24-Hour Number)

Telephone/FAX: Additional telephone references, including 24 hour numbers, for the Facility, Owner, and QI/AQI are provided in Tables 1-3 and 1-4 of the Emergency Response Action Plan.

Facility Location

County: Bibb

(b) (7)(F) [redacted]

Area Map: Provided in Figure 1.1 in Section 1

Facility Diagram: Provided in Figure 1.2 in Section 1

Wellhead Protection Area: None

Facility Distance to Navigable Water: Greater than ½ mile, Less than 1 mile

Landside Directions: From downtown Macon, Take Interstate Highway 75 South to Exit 160A onto Highway 41/247 South (Pio Nono Avenue). Stay on Highway 247 (It will change names from Pio Nono Avenue to Houston Road, to Hawkinsville Road) for approximately 3.8 miles. Turn right (west) onto Hangar Road. The terminal is at the end of Hangar Road, approximately 500 feet.

1.7 Physical Descriptions

Physical Description - General

Date of Oil Storage Start-up: 1965

Description of Operation:

- The terminal handles a range of liquid commodities including Ultra Low Sulfur Diesel (ULSD), JP-8, various additives, transmix, and petroleum contact water (PCW).
- The terminal has a total storage capacity of approximately (b) (7)(F) [redacted] with an average storage volume of (b) (7)(F) [redacted] Most of the facility's capacity is provided by ten large (>30,000-barrel capacity) aboveground storage tanks. Eight additional aboveground storage tanks, with capacities ranging in size from seven to about 700 barrels are also present at the terminal, as are two underground collection tanks associated with the oil-water separator and spill containment system.
- Approximately 12 miles of pipeline are owned by the terminal, including a 12-mile pipeline that serves Robins Air Force Base (AFB), an approximate 1,500-foot-long pipeline that serves Norfolk Southern railroad to the west of the terminal, and approximately 2,900 feet of the Plantation pipeline that supplies the terminal.
- Product is received and shipped out via pipeline and truck. Additives are received by truck.
- The Facility is manned Monday-Friday from 8AM to 4PM. Terminal personnel are on-call and available 24 hours a day, 7 days a week.
- (b) (7)(F) [redacted]

Dunn & Bradstreet Number: 07-839-6522

Products Handled:

- JP-8
- Ultra Low Sulfur Diesel
- Additives
- Transmix/Petroleum Contact Water

Note: Product Specific Response Consideration sheets are provided at the end of Section 3.0. The Facility also maintains a stand-alone reference binder that contains all of the relevant MSDSs.

Physical Description - Truck Rack

Description of Operation:

- The Terminal has a four-bay tank truck rack. One bay has three nozzles, one bay has two nozzles and two of the bays have only one nozzle each.
- The loading/unloading operations at the Terminal are conducted on an 8-hour (6AM to 2PM), 5-day basis and on weekends on a per-need basis. Two (2) trucks can load at one time.

Loading Rate: 857 bbl/hr/nozzle

Truck Capacity: 9,000 gallons (*maximum*)

Discharge Prevention:

- The Truck Loading Rack is located on a concrete floor and curbed area that is covered to deflect rainfall. This curbed area drains to a sand trap, and then to the oil/water separator. The oil/water separator has a capacity of 9,000 gallons. Approximately 75% of this volume can be relied upon to handle a product surge. This volume is 6,750 gallons.
- The dispensing of petroleum products at the Facility are controlled by Epic personnel.

(b) (7)(F) [redacted]

- Piping and valves associated with storage tanks are configured such that product may only be discharged through the DOT pipeline system or truck loading rack.
- Only Epic employees or authorized persons operate starter controls for loading or unloading of petroleum products. Terminal starter pumps normally are in an operating or standby status and therefore are not typically locked. In the event that starter pumps are taken off operating or standby status, they are locked.
- When Facility piping, including loading/unloading connections, is not in service, all openings and connections are securely capped and/or blank flanged to prevent accidental discharge of petroleum products.
- Terminal personnel inspect and assist in all loading of product at the facility.

(b) (7)(F) [redacted]

- Warning signs are visible at the loading rack to remind drivers to unhook the hose prior to departure. Drivers do not receive permission to load until the overfill protection (Scully) system is connected to the truck and operating properly.
- Terminal personnel perform all loading of product at the Facility. Only Epic employees or authorized persons operate starter controls for loading or unloading of petroleum products.
- The lowermost drain and all outlets are inspected for discharges prior to filling and departure of all trucks and, if necessary, they are tightened, adjusted or replaced to prevent liquid

(b) (7)(F) [redacted]

- All drivers are instructed to observe caution where overhead piping may interfere with the movement of tank trucks. Epic has developed procedures for training new truck drivers on the use of the loading rack and associated equipment.
- Signs have been posted at Facilities, warning drivers of the presence of aboveground piping. Loading racks and the driveways that lead to and from the loading racks have been designed

Physical Description - Truck Rack

to allow the unobstructed movement of tank trucks through the Facility.

- Safe operating procedures are posted.

Physical Description - Pipeline

Description of Operation:

- Approximately 12 miles of pipeline are owned by the terminal, including a 12-mile pipeline that serves Robins Air Force Base (AFB), an approximate 1,500-foot-long pipeline that serves Norfolk Southern railroad to the west of the terminal, and approximately 2,900 feet of the Plantation pipeline that supplies the terminal.
- Pipelines within the Terminal are both above- and belowground.

Discharge Prevention:

- Operation of the main supply pipeline is controlled by Plantation.
- All aboveground pipelines and valves are inspected regularly.
- Pipelines are regularly pressure-tested.
- Any piping considered to be out of service is disconnected from product transfer equipment and identified as such by the installation of caps and/or blind flanges.

Statement of Significant and Substantial Harm (PHMSA):

The Plantation Pipeline is greater than 6-5/8 inches in diameter; however, it is less than 10 miles in length. The Norfolk Southern RR Pipeline is less than or equal to 6- 5/8 inches and is less than 10 miles in length. The Robins AFB Pipeline is greater than 10 miles in length, however, is less than 6-5/8 inches in diameter. Therefore, none of the pipeline segments associated with this facility are expected to cause Significant and Substantial Harm as determined by the criteria in 49 CFR 194.103(c).

1.8 Dates and Types of Substantial Expansion

Date	Type
▪ 1965	Initial development of Terminal
▪ 1968	Construction of Tanks 3001 and 3002
▪ 1972	Construction of Tank 5501
▪ 1974	Construction of Tank 3003
▪ 1975	Construction of Tanks 3004 and 3005
▪ 1977	Construction of Tank 7
▪ 1978	Construction of Tank 2001
▪ 1979	Construction of Tanks 4, 2201 and 3007
▪ 1981	Construction of Tank 3006
▪ 1986	Installation of OWS
▪ 1990	Construction of Tank 8

Other Facility Data

- Additional facility data (including storage information) and discharge detection and inspection information are provided in Appendix C and Appendix H.

1.9 ICP Review Form

Terminal : Epic Macon Terminal
Date: _____
Reviewed by: _____

If any pages need to be revised, please send marked up copies to your regional HSE Director and or staff via email or fax.

Directions:
Please answer each question in Section I. If your answer to any question is "Yes", then fill in the required Comments/Description in the line following the question. After completing this form, save it to your hard drive, then attach it to an e-mail addressed to the Regional HSE Manager.

Question No.	Question	Answer
1	Have there been any physical changes that increase the flow rates that product is received into your tankage?	
If yes, type comments here		
2	Have there been any physical changes that increase the maximum flow rates that product is delivered to a truck?	
If yes, type comments here		
3	Have there been any additive tanks, sump tanks, or other vessels added or removed at this facility?	
If yes, type comments here		
4	Have there been any changes/additions/deletions/damage, or wear and tear to the air emissions controls (tank seals, gaskets, wipers, etc.) on the fuel storage tanks?	
If yes, type comments here		
5	Have there been any substantial piping changes that would increase the fugitive emissions (i.e. changes to the number of valves, flanges, fittings, or pumps)?	
If yes, type comments here		
6	Have there been any changes/additions/deletions to the number or location of your storm water or wastewater outfalls?	
If yes, type comments here		
7	Has there been any change in operations that would impact the quality of water going to an outfall?	
If yes, type comments here		
8	Have you changed the location of where you store your accumulated Hazardous Waste?	
If yes, type comments here		

9	Has the QI, alternate QI, PIC contact information changed or are there personnel changes for your Incident Command System?	
If yes, type comments here		
10	Have there been any changes to the phone numbers at your facility or to the phone numbers for those people who work at this facility that are listed in your emergency response plans? (Home, office, cell, pager, etc.)	
If yes, type comments here		
11	Have there been any changes/additions/deletions to the spill response resources (contractors or equipment) for your facility?	
If yes, type comments here		
12	Have there been any changes in the types of products received into your tanks?	
If yes, type comments here		
13	Have there been any other significant changes to the operations of your facility including changes in secondary containment?	
If yes, type comments here		
14	Do you or any of your employees have any suggestions regarding training on Environmental Issues?	
If yes, type comments here		
15	Have there been any changes to your evacuation plans or plot plans for your facility?	
If yes, type comments here		

Section 2
Notification Procedures

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This section is a guide for notification procedures that should be implemented immediately after discovering a discharge incident and if possible, securing the source. Internal and external notifications are described separately for clarification purposes only. All notifications are of extreme importance and must be completed in a timely manner.

2.1 Emergency Information and Notification Procedures

The notification sequence for a spill is as follows:

- Facility Manager will identify and control the source of a spill, if safe to do so, then will notify the Qualified Individual
- The Qualified Individual will conduct notifications as illustrated in the following Notification Flow Chart
- All contact information is listed in Table 2.1, 2.2 and 2.4 through 2.8.

The priority of actions and response procedures will depend upon actual circumstances and will be determined by the Incident Commander. A Spill Response Notification Form (Table 2.3), utilized for notification summary and documentation is also included in the ERAP.

The Company has attempted to make the following arrangements, as appropriate for the type of hazardous waste handled at the terminal and the potential need for the services of these organizations:

- Familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes
- Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority
- Agreements with State emergency response teams, emergency response contractors, and equipment suppliers

Arrangements to familiarize local hospitals with the properties of hazardous waste handles at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

Any spill of a “harmful quantity” of oil must be reported to the United States National Response Center (NRC) and the Georgia Environmental Protection Division (EPD) if it reaches the “Waters of the United States”. The term oil includes lubricating oil, synthetic oil, hydraulic oil, diesel fuel or jet fuel. Harmful quantities are those that result in violation of applicable water quality standards or that cause a *film, sheen*, or *discoloration* on the surface of the water or adjoining shorelines. Any release of oil at the bulk terminal greater than 5 gallons or any amount that threatens to enter a sewer or waterway shall be reported immediately to Epic Midstream, LLC’s designated QI.

2.2 Internal Notification

Note: Initial Notification MUST NOT be delayed pending collection of all information

The following internal notifications should be made for each emergency incident to the extent that the incident demands (telephone reference is provided in Section 2.2). In no event shall notification be delayed because the immediate supervisor is inaccessible. Authorization is given to bypass management levels if necessary to provide timely notification to appropriate management. The typical internal notification responsibilities for each person potentially involved in the initial response are as follows:

2.1.1 Person Discovering the Discharge

- ☐ Immediately notify Terminal Manager/QI.

2.1.2 Terminal Manager/QI

- ☐ Activate the **Facility Response Team**, as the situation demands.
- ☐ **Activate local emergency response resources** (Oil Spill Removal Organizations (OSRO), fire, police, medical, etc.) as the situation warrants.
- ☐ *Estimate volume spilled. If spill is a chemical, calculate the RQ as provided in Section 2.4.*
- ☐ Notify **EHS Specialist**. If a spill/ release/ vapor discharge incident occurs under any one of the following four (4) categories, regardless of fault.

  1. All agency reportable spills / releases / vapor discharges on or around Company property (including adjoining shorelines and dock areas);
  2. All spills / releases / vapor discharges which have crossed Company property lines in either direction (i.e. from Facility to third party property or from third party property to Facility), have occurred off-property, have resulted in neighbor complaints or alleged third party damage and / or injuries, or have caused a disruption in service to an easement or right of way.
  3. All spills / releases / vapor discharges which have resulted in media attention or shall likely result in media attention
  4. All spills / releases of any product of 500 gallons or greater regardless of location in the Facility.

2.1.3 EHS Specialist

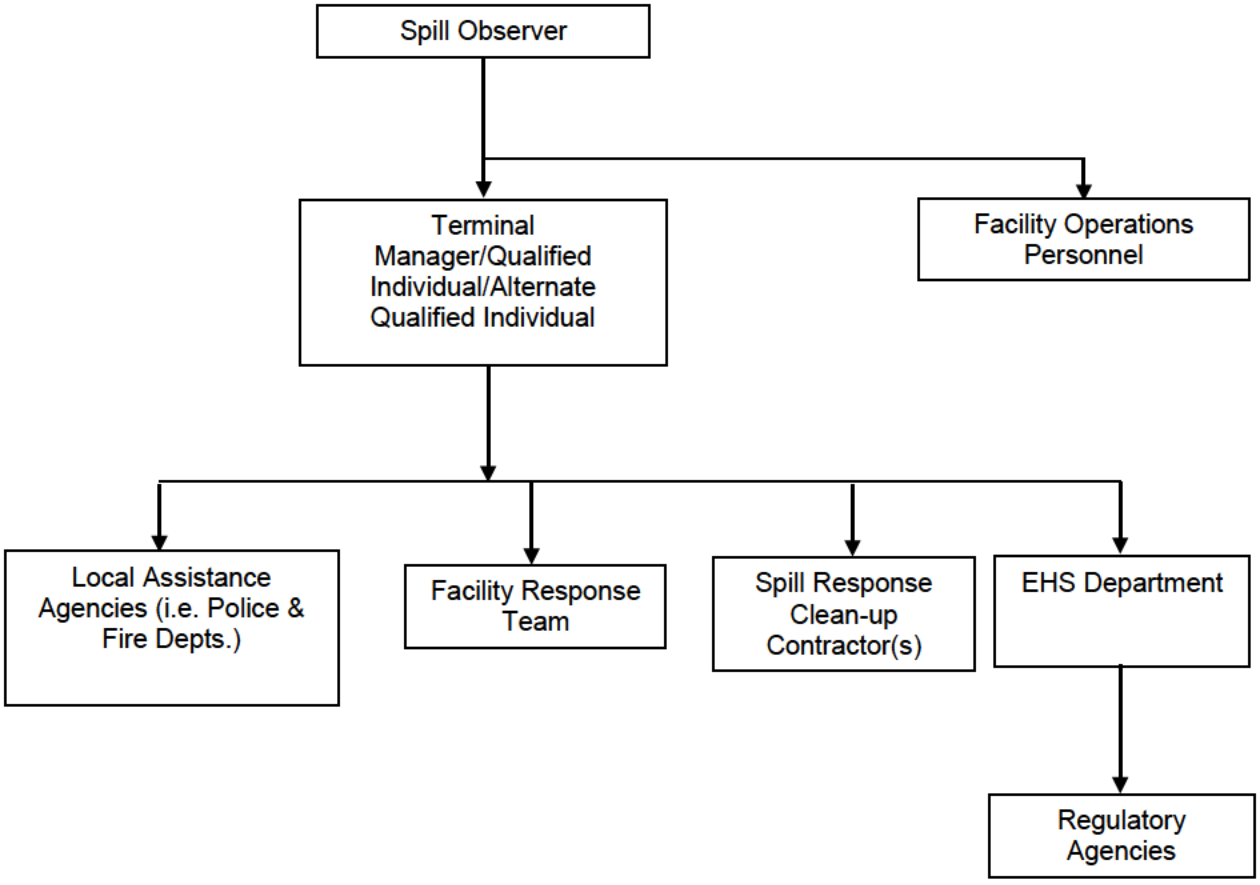
- ☐ Notify the **Facility Response Team** as conditions require.
- ☐ Notify appropriate regulatory authorities as provided in Table 2.4.

Figure 2.1 - Internal Notification Sequence

(Phone references are provided in the tables in the following pages)

Note: Initial Notification MUST NOT be delayed pending collection of all information

Emergency Notification Flow Chart



2.3 Internal Notification References

Table 2.1 - Internal Notification References - General			
Facility Area	**Address**	**Office**	**Other Number**
Epic Midstream, LLC	125 Town Park Drive, Suite 300 Kennesaw, Georgia 30144	(770) 420-8274	(770) 420-8276 Fax
Terminal Office	6225 Hawkinsville Road Macon, GA 31216-5849	(478) 788-1877	(478) 737-4921 (Eddie Nobles Cell)
Regional Operations Manager – Brian Ruholt	125 Town Park Drive, Suite 300 Kennesaw, Georgia 30144	(770) 420-8274	(770) 324-7540* (Mobile, 24-Hour Number)
EHS Specialist – Jeff Morrison	1452 Corporate Pointe Warner Robins, Georgia 31088	(478) 329-8870	(404) 483-5333* (Mobile, 24-Hour Number) (478) 284-1062 FAX

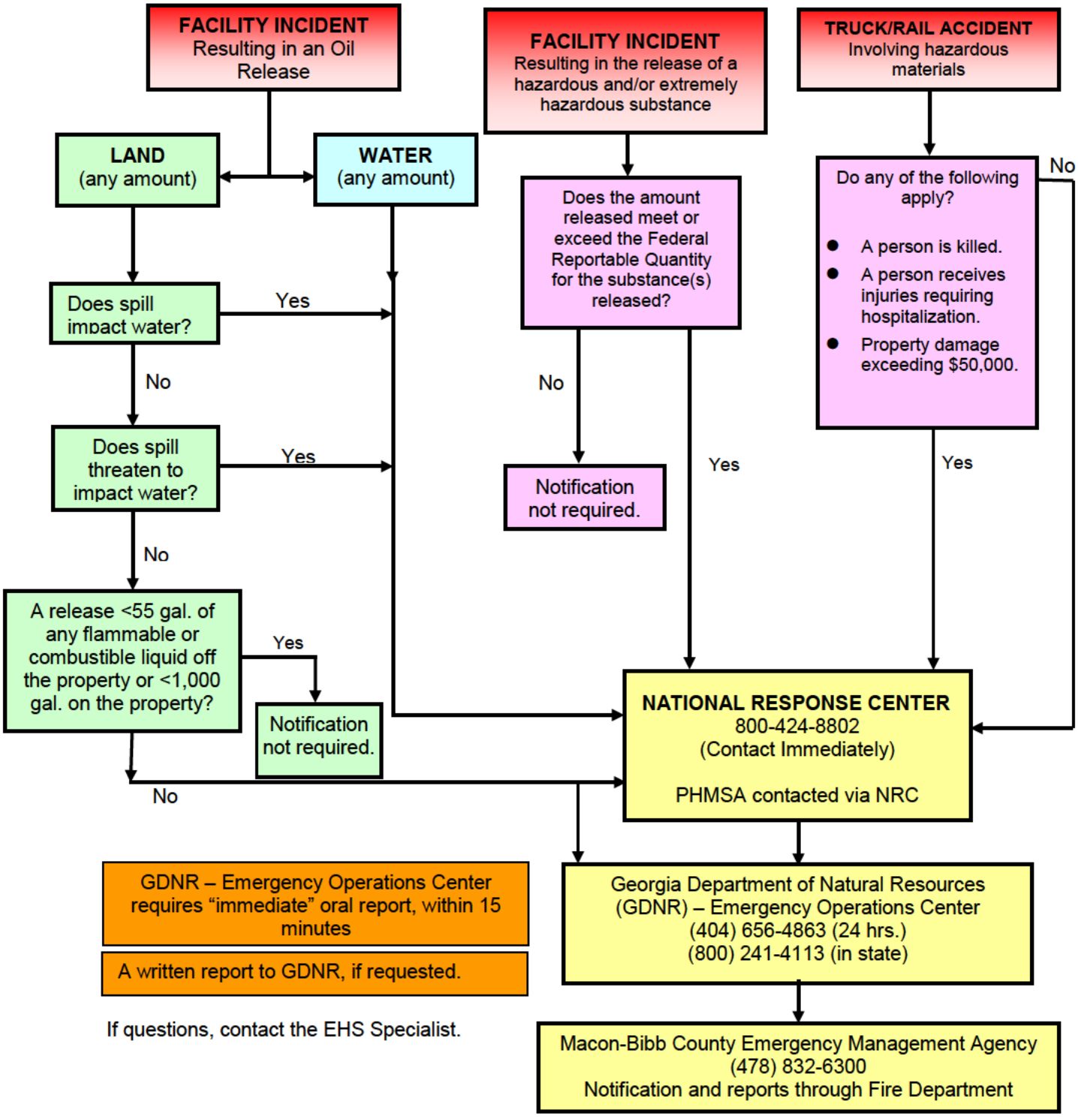
Table 2.2 - Internal Notification References - Facility Response Team and Regional Resources					
Position/Title	**Name**	**Response Time**	**Office**	**Home**	**Cell**
Facility Response Team					
Qualified Individual - Director of Emergency Response	Eddie Nobles	30 minute	(478) 788-1877	(b) (6)	(478) 737-4921
Alternate Qualified Individual	Wesley Parkerson	30 minutes	(478) 788-1877		(478) 338-2313
Operator	Dale Burnette	5 minutes	(478) 788-1877		(478) 718-2862
Regional Resources					
Alternate Qualified Individual – Regional Operations Manager	Brian Ruholt	240 minutes	(770) 420-8274		(770) 324-7540
Corporate Communications	Donna Dedula	240 minutes	(770) 420-8274		(404) 578-1656
Finance	David Fowler	240 minutes	(770) 420-8274		(404) 788-3435
Engineering	Todd Eldridge	240 minutes	(404) 748-4866		(404) 429-7823
EHS Specialist – Safety Officer	Jeff Morrison	240 minutes	(478) 329-8870		(404) 483-5333
Liability Insurance & Risk Control	J.W. Terrill Cottrell "Cot" Fox	N/A	(314) 594-2603		(314) 594-2403

Table 2.3 - Spill Response Notification Form					
Reporter's Information:					
Last Name:					
First:					
M.I.:					
Position:					
Phone Numbers:					
Day:					
Evening:					
Company:					
Organization Type:					
Address:					
City:					
State:					
Zip:					
Were Materials Discharged?	Y / N	**Confidential?**	Y / N		
Meeting Federal Obligations to Report?		Y / N			
Date NRCS Called:		**Incident # Assigned:**			
Meeting GDNR Obligations to Report?		Y / N	Time Called:		
Meeting LEPC Obligations to Report?		Y / N	Time Called:		
Calling for Responsible Party?		Y / N	Time Called:		
Incident Description					
Source and/or Cause of Incident:					
Date of Incident:		**Time of Incident:**	AM / PM		
Incident Address/Location:					
Nearest City:					
State:					
County:					
Zip:					
Distance from City:		Units of Measure:			
Direction from City:		Section:			
Township:		Range:			
Container Type:					
Tank Oil Storage Capacity:		Units of Measure:			
Facility Oil Storage Capacity:		Units of Measure:			
Facility Latitude:					
Degrees:		Min:	Seconds:		

Table 2.3 - Spill Response Notification Form					
Facility Longitude:					
Degrees:		Min:		Seconds:	
Material					
CHRIS Code	**Discharged Quantity**	**Unit of Measure**	**Material Discharged in Water**	**Quantity**	**Unit of Measure**
Response Action					
Actions Taken to Correct, Control or Mitigate Incident:					
Impact					
Number of Injuries:			Number of Deaths:		
Were there Evacuations?	Y/N		Number Evacuated:		
Was there any Damage?	Y/N		Damage in Dollars (Approx.):		
Medium Affected:					
Description:					
More Information about Medium:					
Additional Information					
Any information about the incident not recorded elsewhere in the report:					

Figure 2.2 - External Notification Flow Chart

Note: Initial Notification MUST NOT be delayed pending collection of all information



2.4 External Notification References

Note: Initial Notification MUST NOT be delayed pending collection of all information.

Table 2-4 - Required Notifications	
National Response Center	
c/o United States Coast Guard (CG-5335) – Stop 7581 2100 2nd Street Southwest Washington, D.C. 20593-0001	(800) 424-8802 (24 Hrs.) (202) 267-2675 (24 Hrs.) (202) 267-1322 (Fax)
Reporting Requirements **Type:** Any oil discharge that has impacted or threatens to impact navigable waters or release of a hazardous substance in an amount equal to or greater than the reportable quantity (see Section 2.4). **Verbal** Immediately **Written:** Not Required	
Georgia Department of Natural Resources (GDNR) – Emergency Operations Center	
7 Martin Luther King Jr. Drive Room 643 Atlanta, GA 30334	(404) 656-4863 (24 hrs.) (800) 241-4113 (in state)
Region Five – Coastal Georgia Office	(912) 427-1954 (912) 288-4403 (24 Hrs.)
Reporting Requirements (Oil only) **Type:** (per OCGA §12-14-1 – Oil or Hazardous Material Spill or Release Act) - A release of an unknown amount of oil, or amount of oil that creates a significant sheen on top of state waters, or creates an emulsion or sludge under state waters. (per 391-3-6-.05(3) – Water Quality Control Emergency Actions) - Any toxic or taste and color producing substance, or any other substance which would endanger downstream users of the waters of the State or would damage property, is discharged into such waters, or is so placed that it might flow, be washed, or fall into them. **Oral:** Immediately on having knowledge of release, within 15 minutes. **Written:** As requested by Agency.	
Macon – Bibb County Emergency Management (LEPC)	
700 Poplar Street Macon, Georgia 31201	(478) 832-6300
Reporting Requirements **Type:** Will be contacted by the Macon Fire Department, for all 911 calls. **Oral:** Communication via Fire Department. **Written:** Report via Fire Department.	

Table 2-5 - Other Potential Required Notifications	
Occupational Safety and Health Administration (OSHA)	
200 Constitution Avenue Washington, D.C. 20210	(800) 321-6742
Reporting Requirements **Type:** Fatality from a work related incident or the inpatient hospitalization of three (3) or more employees as a result of a work related incident **Verbal** Immediately **Written:** As requested by the Agency	
U.S. Environmental Protection Agency Region IV	
61 Forsyth Street. SW Atlanta, GA 30303-3104	(404) 562-8700
Reporting Requirements **Note: Initial Notification MUST NOT be delayed pending collection of all information.** **Type:** Immediately for all spills that impact or threaten navigable water or adjoining shoreline. **Verbal** Notification to the EPA is typically accomplished by the call to the NRC. **Written:** Per SPCC requirements, a written report must be submitted within 60 days for a spill in excess of 1,000 gallons (approximately 24 Bbls) in a single event or two spill events within a twelve 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..	
U.S. Fish & Wildlife Service	
Athens Field Office 105 Westpark Drive, Suite D Athens, Georgia 30606-3175	(706) 613-9493 (706) 613-6059 FAX
Reporting Requirements **Type:** Wildlife Protection / Rehabilitation. **Verbal:** Immediately **Written:** As the agency may request depending on circumstances	

Pipeline and Hazardous Materials Administration (PHMSA)	
U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration East Building, 2nd Floor Mail Stop: E24-455 1200 New Jersey Ave., SE Washington, DC 20590	Communicated via the NRC (800) 424-8802 (24-Hrs) (202) 267-2180 (24-Hrs) (202) 366-4433 PHMSA Main Number
Reporting Requirements Type: Accident report required for each failure in a pipeline system subject to 49 CFR Part 195 in which there is a release of the hazardous liquid transported resulting in: an explosion or fire not intentionally set by the operator: a release of 5 gallons or more of hazardous liquid, with the exception of certain releases that occur during pipeline maintenance activities (see Part 195.50); death of any person; personal injury requiring hospitalization; or 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. Verbal: At the earliest practicable moment following discovery of a release, via the NRC Written: An Accident report must be filed as soon as practicable, but not later than 30 days after discovery of the accident, on DOT Form 7000–1.	
Robins Air Force Base	
Robins Air Force Base Fire Department	Routed via 911 if occurs on Base (478) 222-2900
Robins Air Force Base Security Police	(478) 926-2187

The written report to EPA must include:

1. Name, address, and telephone number of the owner or operator;
2. Name, address, and telephone number of the Facility;
3. Date, time, and type of incident (e.g., fire, explosion);
4. Name and quantity of material(s) involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
7. Estimated quantity and disposition of recovered material that resulted from the incident.

Table 2-6 - Local Emergency Services

DIAL 911 for All Police, Fire, and Ambulance Emergencies	
Service	**Telephone**
Bibb County Sheriff Department	(478) 746-9441
Macon Police Department	(478) 751-7500
Bibb County Radio Dispatch	(478) 751-7300
Houston County Emergency Management Agency	(478) 542-2026
Houston County Sheriff Department	(478) 542-2125

Table 2-6 - Local Emergency Services	
DIAL 911 for All Police, Fire, and Ambulance Emergencies	
Service	**Telephone**
Georgia Notifications GA EMA	(800 241-4113 Statewide
Georgia State Police	(478) 993-3002
State Fire Marshall	(404) 656-2064
Hospitals	**Telephone**
Coliseum Medical Center	(478) 765-7000
Medical Center of Central Georgia	(478) 633-1000
Ambulances	**Telephone**
Ambulance Service Medical Center	(478) 633-1111

Table 2-7 - USCG Non-Classified Oil Spill Removal Organizations (OSRO)			
Company	**Response Time**	**Location**	**Telephone**
First Environmental	30 minutes (*maximum*)	Macon, GA	(478) 477-2323
Local Spill Response Support			
Company	**Location**	**Telephone**	
Prim Industrial Contractors, Inc.	Macon, GA	(478) 742-0420	

Table 2-8 - Additional Response Notifications	
Company	**Telephone**
Neighboring Facilities	
Norfolk Southern Railroad	(800) 453-2530
Company	**Telephone**
Utilities	
Macon Water Authority	(478) 464-5620

2.5 Determining The Reportable Quantity (RQ)

Reportable Quantities

Note: Initial Notification MUST NOT be delayed pending collection of all information

1) RQs for pure chemicals

- Cross reference the chemical name and CAS # in Table 302.4 in 40 CFR 302.4.

2) RQs for mixtures of pure chemicals

- Determine the components of the mixture and the weight percent of each.
- Determine the total amount of the mixture spilled in pounds by multiplying the estimated volume (gals) by the density (lb/gal).
- Multiply the total amount in pounds by the weight percent of each component to determine the weight of each component in the mixture.
- Cross reference the chemical name and CAS # of each of the components to Table 302.4 in 40 CFR 302.4.
- If any one of the components meets its RQ then the spill must be reported.
  - Use the MSDS to determine the mixtures properties.
  - See the example below.

RQs for oil

Discharged oil that violates state water quality standards, causes a film or sheen on the water's surface, or leaves sludge or emulsion beneath the surface.

Example for Mixture

An estimated 10 gallons of a mixture containing, by weight, 50% toluene, 30% benzene, and 20% xylene is spilled into the tank dike area. The density of the mixture is 6.9 lbs/gal.

1. Determine the weight of the entire mixture	
10 gal (6.9 lbs/gal) =	69 lbs
2. Determine the weight of each component	
Toluene: 0.5 (69 lbs) =	34.5 lbs
Benzene: 0.3 (69 lbs) =	20.7 lbs
Xylene: 0.2 (69 lbs) =	13.8 lbs
Total =	**69 lbs**
3. Determine the RQ of each component	
From Table 302.4:	
Toluene -	1000 lbs
Benzene -	10 lbs
Xylene -	1000 lbs

The spill did not exceed the RQ for either toluene or xylene, but it did exceed the RQ for benzene. Therefore, the spill is a reportable quantity because of the amount of benzene.

2.6 First Report of Incident Form

I. Location: _____ Time: _____ Date: _____

II. INCIDENT TYPE:

A. Safety

Non-injury	Property/Equipment Damage		Spill
Fire	Other ____		Air Upset
Injury	First Aid	Off-site Treatment	Discharge Event
Near Miss	Employee	Contractor	Other

B. Environmental

For Safety and Environmental Departments Use Only

Recordable Injury Chemical Exposure Recordable Illness Reportable to Agency
PSM/RMP Other

Signature _____ **Date** _____

III. INJURED EMPLOYEE / CONTRACTOR

Name: _____ Social Security: _____
Occupation: _____ Department / Company: _____
Nature of work related injury: _____
_____
Supervisor's Name: _____

IV. DESCRIPTION OF INCIDENT: (Use additional sheet(s) if necessary)

Date: _____ Time: _____ Location: _____
Tank Capacity: _____
_____
_____
_____

V. IMMEDIATE ACTION(s) TAKEN : (Use additional sheet(s) if necessary)

_____
_____

VI. Incident Investigation Required Yes No

VII. Name of person preparing this report: _____
(Please print)

Signature: _____ Date: _____ Time: _____

Supervisor: _____ Date: _____

Section 3
Response Actions

Contents

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3.1 Initial Response Actions

Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident, before the Facility Response Team (described in Section 4.0) is formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

The pages that follow discuss initial response actions for a variety of emergencies that have the possibility of occurring. These emergencies are discussed in the order listed below:

- Leaks/Spills
- Fire/Explosions
- Vapor Cloud
- Bomb Threat
- Natural Disasters (including non-emergencies and near misses)
- Medical Emergencies.

It is important to note that **these actions are intended only as guidelines**. The appropriate response to a particular incident may vary depending on the nature and severity of the incident and on other factors that are not readily addressed. Note that, **without exception, personnel and public safety is first priority**.

The first Facility person on scene will function as the person-in-charge until relieved by Qualified Individual (QI). Transfer of command will take place as more senior management respond to the incident. For response operations within the control of the Facility Response Team, the role of IC will typically be assumed and retained by the QI.

The person functioning as **QI** during the initial response period **has the authority to take the steps necessary to control the situation and must not be constrained by these general guidelines**.

Initial Response Actions - Summary
➢ Personnel and Public Safety is first priority
➢ Eliminate sources of ignition
➢ Isolate the source of the discharge, minimize further flow
➢ Activate the Facility Response Team as necessary
➢ Make internal notifications
➢ Make external notifications
➢ Activate response contractors and other external resources as necessary
➢ Monitor and control the containment and clean-up effort

First Facility Person Notified/On Scene

_____Follow the appropriate ***"Specific Incident Response Checklist"*** and ***"Product Specific Response Considerations"***.

_____Notify the Terminal Manager/QI of the incident.

_____Contact emergency services as necessary (security, fire, medical).

Terminal Manager/QI

_____**Evaluate the Severity**, Potential Impact, Safety Concerns, and Response Requirements based on the initial data provided by the first person on scene.

_____**Confirm safety** aspects at site, including need for personal protective equipment, sources of ignition, and potential need for evacuation.

_____Activate the **Facility 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 Tables 2.4 and 2.5).

_____Perform notifications as per Figure 2.1, as necessary.

_____Coordinate/perform **regulatory agency notification,** as the situation demands (notification procedures and telephone references are provided in Tables 2.4 and 2.5 respectively). Note: Initial Notification MUST NOT be delayed pending collection of all information.

_____Proceed to spill site and **coordinate response and clean-up operations.**

_____Direct containment, dispersion, and/or clean-up operations in accordance with the **"Product Specific Response Considerations"**.

Facility Response Team

_____Assigned personnel will immediately respond to a discharge from the Facility, as the situation demands.

_____Perform response/clean-up operations as directed or coordinated by the QI.

_____Assist as directed at the spill site.

Specific Incident Response Checklists

Remember, Without Exception, Personnel Safety Is First Priority. Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided

Initial Response

_____Take appropriate personal protective measures.

_____Call for medical assistance if an injury has occurred.

_____Restrict access to the spill site and adjacent area as the situation demands. Take additional steps necessary to minimize any threat to health and safety.

_____Verify the type of product and quantity released.

_____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.

_____Take necessary fire response actions.

_____Eliminate possible sources of ignition in the near vicinity of the spill.

_____Notify QI of the incident.

All personnel are reminded that:

- **Outsiders other than emergency services will not be allowed in the Facility during the time of an emergency.**
- **No statements will be issued to the media or other interested parties except by designated QI.**
- **Be courteous with media representatives and direct them to the designated spokesman.**

Line Break or Leak

_____Notify the Terminal Manager/QI with the following

- Location, volume, source and material released
- Note time found
- QI will notify the EHS Department personnel and Fire Dept.
- Pull MSDS for product and have it available
- Initiate internal and external notifications (EHS will handle agency notifications)
- Use alternate telephone # for call-backs and out-going calls
- Begin an incident log with timeline

_____Begin initial response

- Evacuate and secure immediate area
- Account for contractors and facility personnel
- Approach from upwind direction
- Eliminate any potential ignition sources
- Initiate air monitoring (i.e., O2, LEL, chemical, heat stress, etc.) and establish hot warm and cold zones
- Foam release (if significant volume of flammable) within 15 minutes
- First responder to stop source and contain (if possible) in a safe manner

_____ Facility Response Team assemble at Emergency Operations Center for briefing

- Fill positions in IMS (if required based on size and type of incident)
- Determine PPE requirements indicated on MSDS or PPE matrix
- Approach from upwind direction
- Dispatch equipment needed to contain and start clean-up (use of portable or fixed monitors, vacuum trucks, fire truck, boat, absorbents, non-sparking shovels, etc.)

NOTE: Do Not Use Spill Boat or Boom On Spills of Flammable Materials that enter the Water

_____Continue initial response/ assess situation

- Ensure that pumps/ electrical equipment have been shut down
- Include vessel, ships and docks if spill is at dock or on waterfront
- Control and direct traffic flow (establish and staff staging area if required)
- Notify any affected neighboring facilities
- Consider fence line air monitoring if release will affect property off-site

_____Establish objectives and priorities based on this assessment

- Contain to keep from impacting additional areas (closing dike drains, outfalls, etc.)
- Maintaining foam blanket will be necessary to suppress vapors if material is flammable and posing a threat of a fire or high LEL levels
- Vacuum up or absorb free product (all equipment used must be grounded)
- Stop source safely if first responder could not (due to vapor exposures or risk of fire)

Explosions and/or Fire

Individual Discovering the Fire - (All Employees)

In the event that a fire response is required by the Facility Response Team, the following actions should be taken in order:

NOTE: If the situation warrants, and your personal safety is ensured, initial efforts to extinguish small incipient stage fires may prove to the best action. In these situations, if you believe that your personal safety is not at risk, and you can take interim measures to mitigate a situation while the Facility Response Team is deploying- do so.

_____Notify the Terminal Manager/QI

- Acknowledge information and switch all emergency communications to an alternate channel
- Have the Facility Response Team members secure all operations on which they are working before responding
- Note time of call
- Sound the emergency siren, contact the local fire department
- Have staff member check weather for any changes in wind direction

_____Account for contractors and facility personnel.

_____QI mobilize to scene

- Check wind direction- **approach from upwind**
- Confirm and conduct a preliminary assessment of the situation upon arrival at the scene
- Evaluate scene for potential hazards (i.e., overhead power lines, obstacles wind direction)
- Determine what product is involved and have MSDS pulled and reviewed for PPE and firefighting instructions

_____Eliminate any sources of ignition in the immediate area

- Shut down pumps and any movement into/ out of area
- Shut down contractor activity
- Stop traffic flow into and out of area
- Adjacent tank pumps and motors
- Be aware of static electricity

_____Establish objectives and priorities based on this assessment

- Get water on the fire
- Be aware of overhead power lines, DO NOT flow water near them
- Find a way to get water to the fire quickly and safely (i.e., monitors, hydrants, truck)
- Water will quickly fill the dike area
- Evaluate the water usage and determine whether or not to open/ close the internal and external dike drains

Vapor Cloud (from a massive spill, line rupture, etc.)

_____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.

_____After all personnel have been accounted for, the Facility Management, the Facility Supervisor or a Facility Operator will initiate the following actions as deemed necessary:

1. Shut down transfer operations.
2. Evacuation of adjacent property.
3. Only the Fire Department will be permitted to enter the Area.

_____Contact the appropriate agencies and potentially affected neighbors (refer to Figure 2.5).

_____Once the vapor cloud has been cleared, respond to the cause of the incident as outlined in the other specific response guides.

(b) (7)(F)

(b) (7)(F)

[redacted]

Natural Disaster (Tornado and Severe Storms)

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 Facility Manager or a Facility Supervisor will be the Emergency Coordinator.

_____**Be Aware of Changing Weather Conditions**

1. Tornado watch - conditions are right for the formation of a tornado.
2. Tornado warning - a tornado has been sighted but is not in the area at this time.
3. Tornado alert - a tornado has been sighted in the immediate area - take cover immediately.

_____**If Severe Weather Conditions Threaten**

1. Alert Facility personnel of condition.
2. If time permits, all personnel should assemble at an inside room in the Facility for shelter.
3. If time does not permit, seek shelter in low level area away from glass.
4. Make certain that Facility personnel are aware of the condition.
5. Stay in shelter until "all clear" has been issued.

_____**Immediately After the Storm**

1. Account for all personnel.
2. Survey for damages to the Facility.
3. Initiate team for any repairs if needed (i.e. high tank alarms, lighting, etc.).

4. Refer to this Plan for additional response guidance regarding fires, spills, etc., as needed.

Medical Emergency

_____Apply appropriate first aid for both injury and shock, exercising care not to cause further injury.

_____If victim is unconscious and not breathing, immediately apply artificial respiration (if trained in CPR) and continue without interruption until natural breathing is restored or relieved by another trained CPR personnel or other qualified medical personnel.

_____Call for ambulance or other medical evacuation resources, if appropriate.

_____Notify hospital of patient arrival and extent of injury.

_____Notify victim's immediate family.

_____Complete follow-up and written reporting, as the situation demands. Refer to the facility's injury procedures that are detailed on the following pages

Product Specific Response Considerations for Crude/Distillate

Remember, Without Exception, Personnel Safety Is First Priority.
Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided.

Suggested physical response actions for these products are detailed below. It is important to note however, that each situation is unique and the response must be individually tailored to the situation. ***The following are intended for guideline purposes only.***

___ Eliminate the source of the spill to the greatest extent possible.

___ If the incident occurs from an **equipment failure**, take all possible actions to isolate the source (close tank/vessel manifold and discharge valves).

___ Eliminate sources of vapor cloud ignition. Shut down all engines and motors in the vicinity of any potential vapor cloud. If vapor cloud exists in the area of an electrical panel, **do not** open breaker switches to "off" positions.

___ Identify the type(s) and quantity (as available) of the spilled product.

___ Insure that all transfer operations are immediately stopped and that the source of the spill has been eliminated.

___ Evacuate all non-essential personnel and restrict access to the Facility and the area surrounding the spill as the situation demands.

___ Advise neighboring industrial facilities of any threat to their property or personnel and request USCG to establish a vessel control traffic area, if necessary.

___ Use explosimeter and other air sampling equipment to determine when areas are safe to enter for commencement/continuance of response operations.

___ Flammable conditions may exist.

___ Containment and recovery is the preferred method of response. Diversionary/containment booming and skimming techniques should be implemented.

___ Section 6 should be consulted for staging/access areas and environmentally sensitive areas to protect.

NOTE: Material Safety Data Sheets are retained separately at the Facility.

Product Specific Response Considerations for Gasoline/Light Hydrocarbon

Remember, Without Exception, Personnel Safety Is First Priority.
Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided.

Suggested physical response actions for these products are detailed below. It is important to note however, that each situation is unique and the response must be individually tailored to the situation. ***The following are intended for guideline purposes only.***

This material floats on water and is extremely flammable. Containment of this material may allow explosive concentrations to accumulate. **DO NOT BOOM.** The preferred response is to knock down the vapors, disperse the product, and allow evaporation to occur; protect shorelines.

___ Eliminate the source of the spill to the greatest extent possible.

___ If the incident occurs from an **equipment failure**, take all possible actions to isolate the source (close tank/vessel manifold and discharge valves).

___ Eliminate sources of vapor cloud ignition. Shut down all engines and motors in the vicinity of any potential vapor cloud. If vapor cloud exists in the area of an electrical panel, **do not** open breaker switches to "off" positions. Use waterfog from dock/area fire monitors and response equipment to knock down vapors and disperse material.

___ Identify the type(s) and quantity (as available) of the spilled product.

___ Insure that all transfer operations are immediately stopped, and stay upwind.

___ Evacuate all non-essential personnel and restrict access to the Facility and the area surrounding the spill as the situation demands.

___ Advise neighboring industrial facilities of any threat to their property or personnel and request USCG to establish a vessel control traffic area as necessary.

___ Use explosimeter and other air sampling equipment to determine when areas are safe to enter for commencement/continuance of response operations.

___ Flammable conditions may exist.

___ Knock down vapors and disperse the product.

___ Allow evaporation to occur.

___ Deploy diversionary strategies.

___ Consult Section 6 for staging/access areas and environmentally sensitive areas to protect.

NOTE: Material Safety Data Sheets are retained separately at the Facility.

3.2 Documentation of Initial Response Actions

It is difficult, particularly during the first few minutes of an initial response operation to think about the importance of documentation. A log should be maintained which documents the history of the events and communications that occur during the response. 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 facility personnel do not agree with the suggestions, instructions, or actions).

3.3 Oil Containment, Recovery, and Disposal

After initial response has been taken to stop further spillage and notifications made to the required agencies, the facility will begin spill containment, recovery, and disposal operations.

The Terminal Manager/QI will assess the size and hazards of the spill. The type of product, the location of the spill, and the predicted movement of the spill will be considered.

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed to control and contain the spill. Booms may be deployed in waterways to contain the spill and to protect socio-economic and environmentally sensitive areas. Booms may also be used in waterways to deflect or guide the spill to locations where it can more effectively be cleaned up using skimmers, vacuum trucks, or sorbent material. Clean-up equipment and material will be used in the manner most effective for rapid and complete clean-up of all spilled product.

Response and cleanup will continue until all recoverable product is removed, the environment is returned to its pre-spill state, and the unified command of Epic QI and the Federal and/or State On-Scene Coordinators determine that further response and cleanup is no longer necessary.

3.4 Storage/Disposal

Strict rules designed to ensure safe and secure handling of waste materials govern Epic waste disposal activities. To ensure proper disposal of recovered oil and associated debris, the following guidelines should be considered:

- In the event of a product spill, the Facility has limited capacity to store recovered product and water. Separated product is pumped to trucks to be carried to a facility for processing.
- Oily debris will be segregated on site and containerized for temporary storage prior to disposal in accordance with RCRA/CERCLA regulations.
- Transportation of waste material will be performed in accordance with all applicable federal and state guidelines.
- Waste associated with the spill will be disposed of at facility pre-approved sites which have the necessary permits to accept the type of waste to be discharged.

Epic's designated EHS Specialist will coordinate activities and secure the necessary permits to ensure proper disposal or recycling of recovered product and debris.

3.5 Sampling and Waste Analysis Procedures

The facility's sampling and waste analysis practices are governed by the regulations for the applicable state and the USEPA. These regulations outline methods and procedures for determining the chemical and physical characteristics of wastes generated by the Facility, including waste associated with spills, so that they may be properly stored, treated, or disposed.

3.6 Safety Awareness

It is the corporate policy of Epic to provide a safe workplace for all workers. All employees and contractors are responsible for maintaining the safety and health of all workers at the Facility and the response operations.

Prior to engaging in **any** spill response activity:

- All employees/contractors must have received orientation from the Epic Safety Plan.
- All contractor response personnel must be in compliance with OSHA training requirements.
- All other personnel will have completed appropriate training for their position as outlined in Section 4.0.
- No employee/contractor shall engage in activities which place them at risk without the appropriate protective equipment and training.

3.6.1 General Response Safety

All Epic and contractor personnel are expected to comply with the Site Safety and Health Plan (See Section 5 and Appendix H) for each spill incident.

- Any concern regarding health or safety issues should be immediately addressed.
- The First Responder must consider the spill site as dangerous and the local atmosphere explosive until air monitoring procedures prove that the area is safe.
- The First Responder must exit the area against or across the wind if possible and must also evacuate others who are working in the area.
- All injuries, no matter how minor, must be reported to the Facility Management in a timely manner.
- Prior to entering a spill area, a qualified person must perform an initial safety and health evaluation of the site.

3.6.2 Air Monitoring

A Safety Monitor shall be designated who is trained in the operation of air monitoring equipment. The QI must ensure that Safety Monitors are trained and that their equipment is maintained and ready for use.

- The air monitoring equipment shall be activated and checked at the location in which it is stored.
- Air monitoring measurements which are to be made prior to entry into the spill area include:
  - Lower Explosive Limit (LEL)
  - Oxygen content
  - Benzene level
- LEL readings above 10% require immediate evacuation of the area and elimination of ignition sources.
- Oxygen readings below 19.5% require the use of air supplied respiratory protection.
- After assuring that there are no hazards relating to explosion or oxygen depletion, sampling for benzene shall dictate the appropriate respiratory devices to be used by persons entering the area as follows:
  - The QI and EHS Specialist are responsible for industrial hygiene monitoring in the post discovery period.

3.7 Decontamination

Through training programs, Facility personnel know and understand the importance of the removal of hazardous substances from their person if they are contaminated. Eyewash stations and safety showers provide a means to quickly remove gross contamination of harmful agents, including gasoline. Personnel must immediately shower and remove any clothing which is wet or otherwise contaminated. Showers in the change room are to be used for thorough cleansing. Persons should inspect themselves thoroughly before donning a fresh change of clothing

Contaminated clothing should be disposed of properly. Contaminated personal protective equipment must be washed and sanitized before re-using. The washing of contaminated equipment is performed in a “contained area” to assure that the disposal of the wash water can be handled properly.

Establishing "Exclusion - Hot", "Decontamination - Decon", and "Support - Safe" zones are required to prevent the removal of contaminants from the contaminated area as well as unauthorized entry into contaminated areas.

- Regardless of the decontamination facilities available, all efforts to minimize personnel exposure should be taken.
- Decontamination facilities should be positioned prior to employee/ contractor entrance to areas where the potential for exposure to contamination exists. The appropriate MSDSs are available to aid health professionals treating the injured parties. MSDSs are separately maintained at the Facility.
- Decontamination facilities should be designed to prevent further contamination of the environment and should have a temporary storage area for items that will be reused in the contaminated area.
- Particular attention should be paid to personal hygiene prior to eating, drinking, or smoking.

A sample Decontamination Plan is provided below in Section 3.8.

3.8 Sample Decontamination Plan

Incident Name:	**Location:**
Effective Date of Plan:	**Effective Time Period of Plan:**
Spill Location:	**Plan Prepared By:**

- **Work Zones:**

  - Support (cold) zone
  - Contamination reduction (warm) zone
  - Exclusion (hot) zone

  These zones are identified by signs, barrier tape or other means. Decontamination is performed in the contamination reduction zone. When responders exit the exclusion zone they must be decontaminated.

  Crews are available to assist in decontamination procedures as needed. The crews must wear appropriate personal protective equipment (PPE), and are responsible for packaging and labeling of contaminated PPE.

- **Decontamination Stations:**

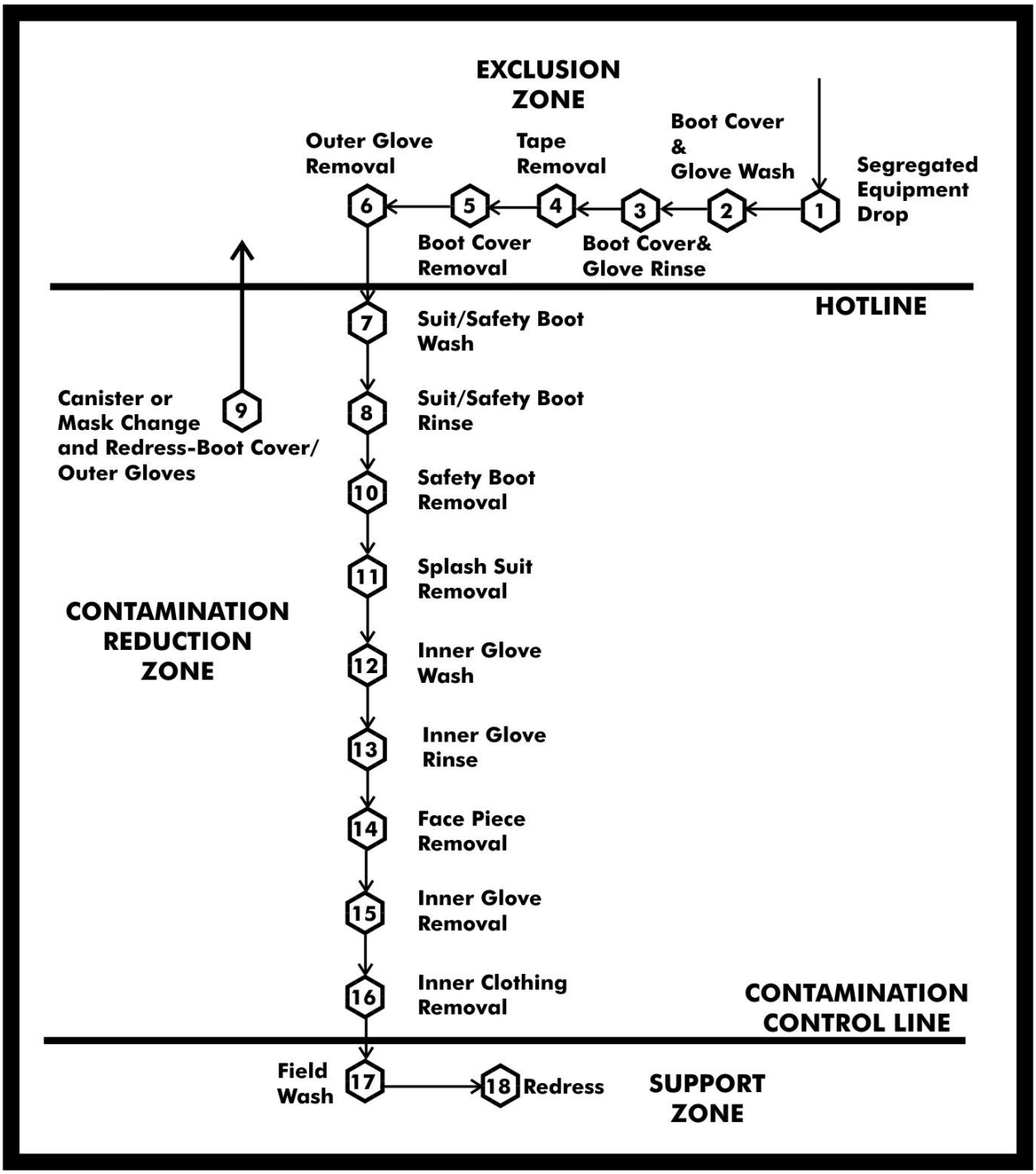
  Decontamination is performed within the contamination reduction zone, which is appropriately lined to prevent the spread of contaminants. Dikes are installed under the lining to contain runoff.

  Procedures for these stations are as follows:

MAXIMUM MEASURES FOR DECONTAMINATION		
STATION 1	Segregated equipment drop	Deposit equipment used on site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2	Boot cover and glove wash	Scrub outer boot cover and gloves with decontamination solution or detergent and water.
STATION 3	Boot cover and glove rinse	Rinse off decontamination solution from Station 2 using copious amounts of water.
STATION 4	Tape removal	Remove tape around boots and gloves and deposit in container with plastic liner.
STATION 5	Boot cover removal	Remove boot covers and deposit in containers with plastic liner.
STATION 6	Outer glove removal	Remove outer gloves and deposit in container with plastic liner.
STATION 7	Suit and boot wash	Wash splash suit, gloves, and safety boots. Scrub with long-handled scrub brush and decontamination solution.
STATION 8	Suit, boot, and glove rinse	Rinse off decontamination solution using water. Repeat as many times as necessary.
STATION 9	Canister or mask change	If worker leaves exclusion zone to change canister or this is the last step in the decontamination procedure; worker's canister is exchanged, new outer gloves and boot covers are donned, joints are taped, and the worker returns to duty.

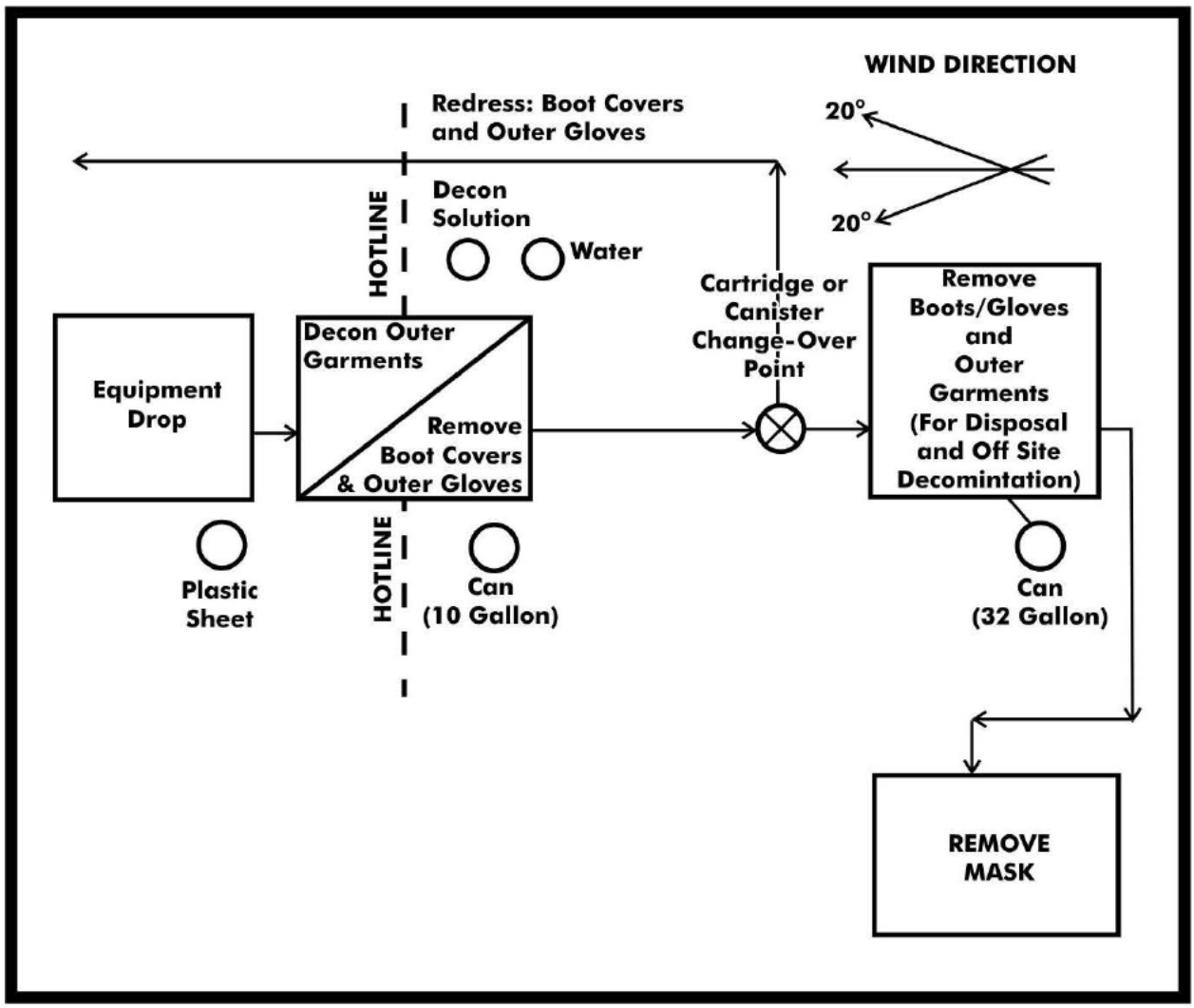
MAXIMUM MEASURES FOR DECONTAMINATION		
STATION 10	Safety boot removal	Remove safety boots and deposit in container with plastic liner.
STATION 11	Splash suit removal	With assistance of helper, remove splash suit. Deposit in container with plastic liner.
STATION 12	Inner glove wash	Wash inner gloves with decontamination solution.
STATION 13	Inner glove rinse	Rinse inner gloves with water.
STATION 14	Face piece removal	Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
STATION 15	Inner glove removal	Remove inner gloves and deposit in lined container.
STATION 16	Inner clothing removal	Remove clothing soaked with perspiration and place in lined container. Do not wear inner clothing off-site since there is a possibility that small amounts of contamination might have been transferred in removing the protective suit.
STATION 17	Field wash	Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
STATION 18	Re-dress	Put on clean clothes.

DECONTAMINATION PROCEDURES, MAXIMUM DECONTAMINATION LAYOUT



MINIMUM MEASURES FOR DECONTAMINATION		
STATION 1	Equipment drop	Deposit equipment used on site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2	Outer garment, boots and gloves wash and rinse	Scrub outer boots, outer gloves, and splash suit with decontamination solution or detergent and water. Rinse off using copious amounts of water.
STATION 3	Outer boot and glove removal	Remove outer boots and gloves. Deposit in container with plastic liner.
STATION 4	Canister or mask change	If worker leaves exclusion zone to change canister (or mask) or this is the last step in the decontamination procedures; worker's canister is exchanged, new outer gloves and boot covers are donned, joints are taped, the worker returns to duty.
STATION 5	Boot, gloves, and outer garment removal	Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
STATION 6	Face piece removal	Face piece is removed. Avoid touching face with fingers. Face piece deposited on plastic sheet.
STATION 7	Field wash	Hands and face are thoroughly washed. Shower as soon as possible.

DECONTAMINATION PROCEDURES, MINIMUM DECONTAMINATION LAYOUT



3.9 Personal Protective Equipment (PPE)

The following represents OSHA/EPA designated PPE levels for responding to emergencies, post emergency cleanup sites, and/or Temporary Storage and Disposal (TSD) sites. The responder's PPE should be chosen based on his/her level of training and assigned job duties.

Personal Protective Equipment (PPE)	
Level A ♦ Self Contained Breathing Apparatus (SCBA) (worn inside suit) ♦ Encapsulated Chemical Protective Suit ♦ Chemical Protective Gloves ♦ Chemical Protective Boots ♦ Hard Hat	**Level B** ♦ SCBA (worn outside suit) ♦ Chemical Protective Suit w/Hood ♦ Chemical Protective Boots ♦ Chemical Protective Gloves ♦ Hard Hat
Level C ♦ Air Purifying Respirator (APR) ♦ APR ½ Face / Full Face ♦ Hard Hat ♦ Glasses (worn with ½ face APR) ♦ Chemical Protective Boots ♦ Chemical Protective Gloves ♦ Chemical Protective Suit/Tyvek	**Level D** ♦ Hard Hat ♦ Safety Glasses ♦ Work Uniform / Clothes ♦ Leather Gloves ♦ Safety Boots ♦ Nomex
Modified Level C Same as Level C except no APR requirements.	

3.10 Emergency Medical Treatment and First Aid

On-site emergency medical response requires the same rapid assessment of the patient as any other situation, but requires the responders to be aware of other considerations that may affect the way they handle the patient. These considerations include the following:

- The potential for contamination of the patient, responders, and equipment should be addressed. Responders should arrange to treat all patients **AFTER** the injured party has been decontaminated according to the Site Safety and Health Plan.
- Site personnel should make the initial assessment of the patient and determine the severity of the injury/illness.
- If the treatment needed is critical care or "life saving" treatment, rapid decontamination of the injured/ill party should be started. Refer to the Site Safety and Health Plan (See Section 5 and Appendix H) for steps to be taken in an "abbreviated" decontamination for medical treatment.
- **The need for full decontamination should be carefully weighed against the need for prompt medical treatment.**
- The ambulance responding to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the contaminant. Telephone reference is provided in Table 2.6.
- MSDS information will be available from the Incident Commander and should be provided to medical personnel to alert them of decontamination requirements.
- If emergency medical treatment is needed, the Incident Commander, or his designated representatives, will request assistance from trained medical personnel.

Section 4
Response/Management Teams

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4.1 Introduction

This section describes organizational features and duties of the Facility Response Team (FRT) and Epic's corporate support team.

The key to an effective emergency response is a rapid, coordinated, tiered response by the affected facility, and the corporate support team, consistent with the magnitude of an incident.

First response to an incident at the Facility will be provided by the Facility Response Team. The Facility Response Team will be coordinated by the Qualified Individual (QI) who has access to subcontract resources as necessary. If a response exceeds the Facility Response Team's capabilities, the QI will activate Epic's subcontractor resources. The QI also has access to environmental, safety and health specialists who are responsible for coordinating regulatory notifications and implementing compliance strategies.

In the event that an emergency situation extends beyond Epic's property boundaries or exceeds the capabilities of Epic's contractor resources, the QI will initiate the National Incident Management System (NIMS) to manage the emergency response activities. NIMS is a management tool that is readily adaptable to incidents of varying magnitude. Staffing levels will be adjusted to meet specific response team needs based on incident size, severity, and type of emergency.

An explanation of NIMS and the roles and responsibilities for primary members of the response teams are provided in Section 4.8. The USCG Incident Management Handbook (IMH) contains an in-depth description of all NIMS positions, NIMS development, response objectives and strategies, command responsibilities, NIMS specific glossary/acronyms, resource typing, the IAP process, and meetings.

For any given incident, the NIMS is commanded by the Federal On-Scene Coordinator (FOSC).

4.2 Qualified Individual

It is the responsibility of the QI or his/her designee to coordinate with the FOSC and State On-Scene Coordinator (SOSC) throughout the response.

Vital duties of the QI include:

- Activate internal alarms and hazard communication systems to notify all Facility personnel.
- Notify all response personnel, as needed.
- Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification.
- Ensures the EHS Specialist notifies and provides necessary information to the appropriate Federal, State, and Local authorities with designated response roles, including the National Response Center (NRC), State Emergency Response Commission (SERC), and local response agencies.
- Assess the interaction of the spilled substance with water and/or other substances stored at the Facility and notify response personnel at the scene of that assessment.
- Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion).
- Assess and implement prompt removal actions to contain and remove the substance released.
- Coordinate rescue and response actions as previously arranged with all response personnel.
- Activate and engage in contracting with oil spill removal organizations.
- Use authority to immediately access company funding to initiate cleanup activities.
- Direct cleanup activities until properly relieved of this responsibility.
- Arrangements will be made to ensure that the QI or the Alternate Qualified Individual (AQI) is available on a 24-hour basis and is able to arrive at the Facility in a reasonable time.
- The AQI shall replace the QI in the event of his/her absence and have the same responsibilities and authority.

4.3 Facility Response Team

The first Facility person on scene will function as person-in-charge until relieved by the QI. The Facility Response Team will act at the direction of the QI. Typically the Facility Response Team will stop small spills or leaks, fight incipient fires, and respond to low level incidents. For response operations within the control of the Facility Response Team, the role of QI will typically be assumed by the Terminal Manager.

The number of positions/personnel required to staff the Facility Response Team will depend on the size and complexity of the incident. The duties of each position may be performed or delegated as the situation demands. The QI is always responsible for directing the response activities and will assume the duties of all the primary positions until the duties can be delegated to other qualified personnel.

A complete functional NIMS organization is shown in Figure 4.1. Detailed job descriptions of the primary response team positions are provided in Section 4.8.

4.4 Corporate Support Team

For spill response operations outside the capabilities of the Facility Response Team, the QI/AQI will determine the need for mobilization of the corporate support team. The members of the Facility Response Team will typically become Task Force members of the corporate support team under the QI/AQI

Once fully staffed the corporate support team is designed to cover all aspects of a comprehensive and prolonged incident response. The number of positions/personnel required to staff the corporate support team will depend on the size and complexity of the incident. During a prolonged response, additional personnel may be cascaded in, and more than one level within the team may be involved to sustain 24-hour operations.

The corporate support team is basically organized according to the NIMS Incident Management System principles. Led by the QI, the team is composed of the following principal components:

- Command
- Operations
- Planning
- Logistics
- Finance

The corporate support team is staffed by specially trained personnel from various facility/corporate locations, and by various contract resources as the situation requires (telephone reference is provided in Figure 2.2.). Responsibilities are described in Section 4.8.

4.5 National Incident Management System

The NIMS is intended to be used as an emergency management tool to aid in mitigating all types of emergency incidents. This system is readily adaptable to very small emergency incidents as well as more significant or complex emergencies. The NIMS utilizes the following criteria as key operational factors:

- Assigns overall authority to one individual
- Provides structured authority, roles and responsibilities during emergencies
- The system is simple and familiar, and is used routinely at all incidents
- Communications are structured
- There is a structured system for response and assignment of resources
- The system provides for expansion, escalation, and transfer/transition of roles and responsibilities
- The system allows for "Unified Command" where agency involvement at the command level is required
- Effective establishment and utilization of the National Incident Management System during response to all types of emergencies can provide for increased safety
- Shorten emergency mitigation time by providing more effective and organized mitigation
- Cause increased confidence and support from local, state, and federal public sector emergency response personnel
- Provide a solid cornerstone for emergency planning efforts

Section 4.8 provides a comprehensive list of every response team member's duty assignment.

4.6 Unified Command

As a component of NIMS, the Unified Command (UC) is a structure that brings together the ICs of all major organizations involved in the incident to coordinate an effective response while still meeting their own responsibilities. The UC links the organizations responding to the incident and provides a forum for the Responsible Party and responding agencies to make consensus decisions. Under the UC, the various jurisdictions and/or agencies and responders may blend together throughout the organization to create an integrated response team. The NIMS process requires the UC to set clear objectives to guide the on-scene response resources.

Multiple jurisdictions may be involved in a response effort utilizing UC. These jurisdictions could be represented by any combination of:

- Geographic boundaries
- Government levels
- Functional responsibilities
- Statutory responsibilities

The participants of UC for a specific incident will be determined taking into account the specifics of the incident and existing response plans and/or decisions reached during the initial meeting of the UC. The UC may change as an incident progresses, in order to account for changes in the situation.

The UC is responsible for overall management of an incident. The UC directs incident activities and approves and releases resources. The UC structure is a vehicle for coordination, cooperation and communication which is essential to an effective response.

UC representatives must be able to:

- Agree on common incident objectives and priorities
- Have the capability to sustain a 24-hour-7-day-a-week commitment to the incident
- Have the authority to commit agency or company resources to the incident
- Have the authority to spend agency or company funds
- Agree on an incident response organization
- Agree on the appropriate Command and General Staff assignments
- Commit to speak with "one voice" through the Information Officer or Joint Information Center
- Agree on logistical support procedures
- Agree on cost-sharing procedures

4.7 Discharge Classification

The severity of a discharge will have a bearing on the level of management involvement necessary and the extent of resource mobilization. The following definitions provide guidance in the early classification of discharges:

Tier I Event
Incident Command will normally be assumed by the Terminal Manager and the EHS Speialist will offer support on an as-needed basis.
Exposure
The potential public and environmental exposure is moderate. The type and quantity of material released, while considering the overall nature of the incident (e.g. fire, proximity to private dwellings, etc.), will have moderate impact on the public and/or the environment.
Degree of Control
The incident can be controlled in a short period of time through implementation of the local resources available to the Facility (including contract resources).
Governmental Involvement
Government involvement maybe moderate and generally restricted to State and local levels.
Media Involvement
Media interest may be moderate and generally restricted to State and Local levels.
Tier II Event
Activation of the site IMT will be anticipated. Local Company resources may have to be supplemented with Head Office and external resources to manage the spill incident.
Exposure
The potential public and environmental exposure is moderately high. The type and quantity of material released, while considering the overall nature of the incident (e.g. fire, proximity to private dwellings, etc.), will have moderately high impact on the public and/or the environment.
Degree of Control
The incident can be brought under control in a moderate period of time through implementation of local resources available to the Facility (including contract resources) with possible implementation of regional resources.
Governmental Involvement
Government involvement will be moderately high and generally restricted to Regional levels.
Media Involvement
Media interest will be moderately high and generally restricted to Regional levels.
Tier III Event
Activation of the IMT will be expected. Maximum Company and external resources must be implemented to respond to the spill incident.
Exposure
The potential public and environmental exposure is significant. The type and quantity of material released, while considering the overall nature of the incident (e.g. fire, proximity to private dwellings, etc.), will have significant impact on the public and/or the environment.
Degree of Control
Maximum Company and third party resources must be implemented in order to gain control of the incident.
Governmental Involvement
Government involvement may be high.
Media Involvement
Media interest may be high.

4.8 NIMS Roles and Responsibilities – Overall Responsibilities

Command

- Coordinates Development of Objectives and Priorities.
- Establish and Maintain UC.
- Keep Company Management informed.
- Handle Media and Government Relations.
- Coordinate Response Operations.
- Provide Legal Services.
- Provide Humanitarian Services.

Operations

- Initiate Emergency Response Operations.
- Organize and Direct Tactical Operations.
  - Fire Fighting
  - Mechanical Containment and Recovery
  - Sensitive Area Protection
  - Land/Water Clean Up
  - Surveillance

Logistics

- Source Response Equipment and Personnel.
- Provide Response Services.
- Provide and Coordinate Communications Equipment.
- Provide and Coordinate Transportation.
- Manage Staging Areas and Response Facilities.

Planning

- Establish and Maintain Lines of Communications.
- Compile/Display Information on the Status of Response Operations and Resources.
- Compile Information on the Nature and Location of Sensitive Resource Areas.
- Generate Spill/Plume Trajectories.
- Coordinate Preparations for Approvals and Permits.
- Organize Waste Management Operations.
- Provide Scientific Support.

Finance

- Handle Accounting Services.
- Process Purchase and Work Orders.
- Establish and Maintain Cash Account.
- Arrange for Audit Services.
- Oversee Personnel Issues.

Public Information

- Reports to the Incident Commander
- Developing and maintaining a media contact list
- Preparing selected team members for interactions with the media
- Escorting media representatives through the operational area
- Issuing press releases

Liaison with Regulatory Agencies

- Gathering and verifying information
- Provides technical documentation of the incident
- Coordinates response objectives
- Assists in identifying at-risk resources

NRC Incident No. #_____

Section 5
Incident Command System

Contents

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NRC Incident No. #_____

5.1 Incident Action Plan

Emergency response activities are planned and coordinated through the use of an Incident Command System (ICS) using the USGS ICS format which is developed for each operational period of a response by the corporate support team. For small responses, an ICS 201 (Incident Briefing Form provided in Figure 5.1), may be used as the ICS and, for all incidents, the ICS 201 will serve as the initial ICS.

For larger or more complex incidents a more complete ICS will be necessary. These ICSs are generally created through the completion and compilation of several standard forms. These forms include, but are not limited to:

ICS Form Number	Form Title	Prepared By*		Plan Location
		Epic Title	ICS Responsibility	
201	Incident Briefing	Qualified Individual	Initial Response IC	Figure 5.1
None	ICS Cover	Qualified Individual	Situation Unit Leader	Figure 5.2
202	Response Objectives	Corporate Support	Planning Section Chief	Figure 5.3
203	Organization Assignment List	Corporate Support Team/Regional Operations Manager	Resources Unit Leader	Figure 5.4
204	Division Assignment List	Qualified Individual	Operations Section Chief & Resources Unit	Figure 5.5
205	Incident Radio Communications Plan	Qualified Individual	Communications Unit Leader	Figure 5.6
206	Medical Plan	Corporate Support Team/ Contractor Resources	Medical Unit Leader	Figure 5.7
232	Resources at Risk Summary	Corporate Support Team/Regional Operations Manager	Situation Unit Leader	Figure 5.8
SSP	Site Safety Plan	Corporate Support Team/EHS Specialist	Safety Officer	Figure 5.9

* The Coordinator – Emergency Preparedness may assign preparation of forms to other personnel on the Incident Management Team if identified position is unassigned or vacant when the IAP is produced.

Depending on the nature and severity of the emergency, additional documents may be included in the IAP. These may include:

- Sensitivity Maps (Provided in Section 6)
- Waste Management & Disposal Plans (Provided in Appendix G)
- Plans for use of Alternative Technologies (Dispersant/In-situ Burn/Bioremediation)
- Security Plans
- Decontamination Plans
- Traffic Plans

5.2 Site Safety Plan

Site Safety Plans (SSP) are required by OSHA (29 CFR 1910.120(b)(4)) for all hazardous waste operations. The SSP should address all on-site operations and hazardous as well as on-site emergency procedures. A template for use in producing an SSP is provided as Figure 5.9.

The SSP is typically prepared by the Safety Officer and approved by the Incident Commander or the Unified Command. All personnel must be familiar with the contents of the SSP and the SSP must be updated as conditions, operations and hazards associated with the response change.

NRC Incident No. #_____

Figure 5.1 - Incident Briefing

1. Incident Name	**2. Prepared by:** (name) Date: Time:	Incident Briefing ICS 201-CG

3. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines, or other graphics depicting situational and response status)

4. Current Situation:

Incident Briefing ICS 201-CG (pg 1 of 4) (Rev 4/04)

NRC Incident No. #___________________________

1. Incident Name	**2. Prepared by:** (name) Date: Time:	Incident Briefing ICS 201-CG

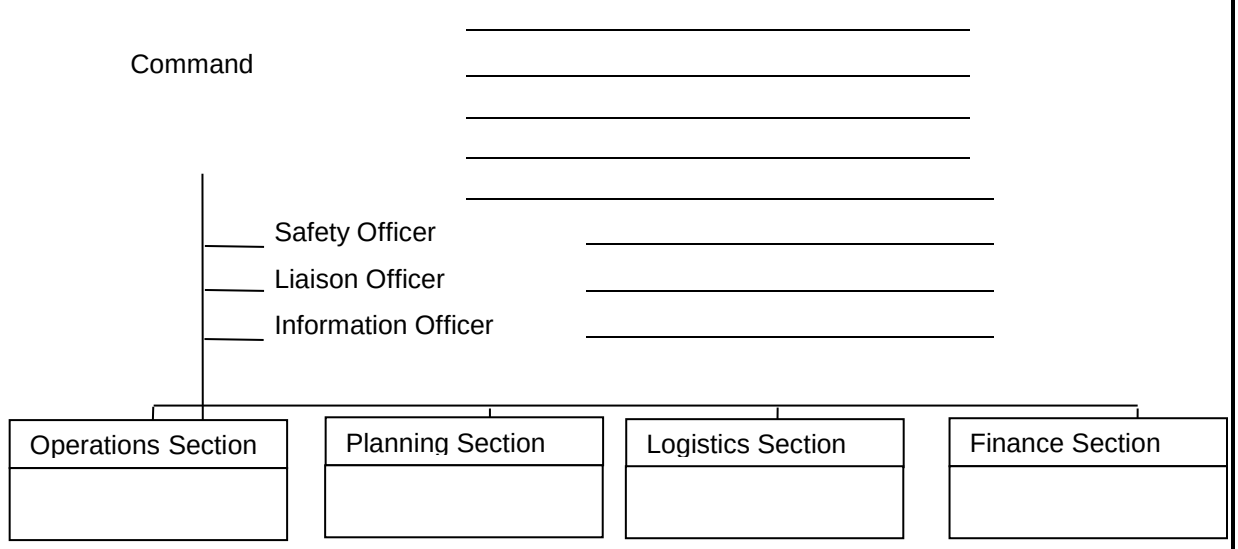
5. Initial Response Objectives, Current Actions, Planned Actions

Incident Briefing ICS 201-CG (pg 2 of 4) (Rev 4/04

NRC Incident No. #_____

1. Incident Name	**2. Prepared by:** (name) Date: Time:	Incident Briefing ICS 201-CG

6. Current Organization (fill in additional appropriate organization)



NRC Incident No. #_____

1. Incident Name	**2. Prepared by:** (name) Date: Time:	Incident Briefing ICS 201-CG

7. Resources Summary Resource	Resource Identifier	Date Time Ordered	ETA	On-Scene (X)	NOTES: (Location/Assignment/Status)

NRC Incident No. #_____

Figure 5.2 - ICS IAP Cover

1. Incident Name	**2. Operational Period to be covered by IAP (Date/Time)** From: To:	**CG IAP COVER SHEET**

3. Approved by Incident Commander(s):

ORG	NAME

Incident Action Plan

The items checked below are included in this Incident Action Plan:

☐ ICS 202-CG (Response Objectives)

☐ ICS 203-CG (Organization List) – OR – ICS 207-CG (Organization Chart)

☐ ICS 204-CGs (Assignment Lists)
One Copy each of any ICS 204-CG attachments:

☐ ICS 205-CG (Communications Plan)

☐ ICS 206-CG (Medical Plan)

☐ ICS 208-CG (Site Safety Plan) or Note SSP Location _____

☐ Map/Chart

☐ Weather forecast / Tides/Currents

Other Attachments

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

4. Prepared by: **Date/Time**

CG IAP Cover Sheet(Rev 4/04)

NRC Incident No. #_____

Figure 5.3 - Response Objectives

1. Incident Name	2. Operational Period (Date/Time) From: To:	INCIDENT OBJECTIVES ICS 202-CG

3. Objective(s)

4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions)

Approved Site Safety Plan Located at:

5. Prepared by: (Planning Section Chief) **Date/Time**

Incident Objectives ICS 202-CG (Rev 4/04)

NRC Incident No. #_____

Figure 5.4 - Organization Assignment List

1. Incident Name	**2. Operational Period (Date/Time)** From: To:	**Organization Assignment List ICS 203-CG**

3. Incident Commander(s) and Staff

Agency	IC	Deputy

Safety Officer:	
Information Officer:	
Liaison Officer:	

4. Agency Representatives

Agency	Name

5. PLANNING/INTEL SECTION

Chief	
Deputy	
Resources Unit	
Situation Unit	
Intel Unit	
Scientific Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	

6. LOGISTICS SECTION

Chief	
Deputy	
a. Support Branch	
Director	
Supply Unit	
Facilities Unit	
Transportation Unit	
Vessel Support Unit	
Ground Support Unit	
b. Service Branch	
Director	
Communications Unit	
Medical Unit	
Food Unit	

7. OPERATION SECTION

Chief		
Deputy		
Deputy		
Staging Area Manager		
Staging Area Manager		
Staging Area Manager		
a. Branch – Division Groups		
Branch Director		
Deputy		
Division Group	□	
Division Group	□	
Division Group		
Division/Group		
Division/Group		
b. Branch – Division/Groups		
Branch Director		
Deputy		
Division/Group	□	
Division/Group	□	
Division/Group	□	
Division/Group		
Division/Group		
c. Branch – Division/Groups		
Branch Director		
Deputy		
Division/Group		
Division/Group	□	
Division/Group		
Division/Group		
Division/Group		
d. Air Operations Branch		
Air Operations Br. Dir		
Helicopter Coordinator		

8. FINANCE/ADMINISTRATION SECTION

Chief	
Deputy	
Time Unit	
Procurement Unit	
Compensation/Claims Unit	
Cost Unit	

9. Prepared By: (Resources Unit) **Date/Time**

Organization Assignment List ICS 203-CG (Rev 04/04)

NRC Incident No. #_____

Figure 5.5 - Division Assignment List

1. Incident Name	2. Operational Period (Date/Time) From: To:	Assignment List ICS 204-CG
3. Branch	4. Division/Group/Staging	

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: _____

Branch Director: _____

Division/Group Supervisor/STAM: _____

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

8. Special Instructions

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager

Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by: Date/Time	11. Reviewed by (PSC): Date/Time	12. Reviewed by (OSC): Date/Time

Assignment List ICS 204-CG (Rev 04/04)

NRC Incident No. #_____

Figure 5.6 - Incident Radio Communications Plan

1. Incident Name	2. Operational Period (Date / Time) From: To:	INCIDENT RADIO COMMUNICATIONS PLAN ICS 205-CG

3. BASIC RADIO CHANNEL USE

SYSTEM / CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS

4. Prepared by: (Communications Unit) **Date / Time**

Incident Radio Communications Plan ICS 205-CG (Rev.07/04)

NRC Incident No. #_____

Figure 5.7 - Medical Plan

1. Incident Name	2. Operational Period (Date / Time) From: To:	MEDICAL PLAN ICS 206-CG

3. Medical Aid Stations

Name	Location	Contact #	Paramedics On site (Y/N)

4. Transportation

Ambulance Service	Address	Contact #	Paramedics On board (Y/N)

5. Hospitals

Hospital Name	Address	Contact #	Travel Time		Burn Ctr?	Heli-Pad?
			Air	Ground		

6. Special Medical Emergency Procedures

7. Prepared by: (Medical Unit Leader) Date/Time	8. Reviewed by: (Safety Officer) Date/Time

MEDICAL PLAN ICS 206-CG (Rev 05/05)

NRC Incident No. #_____

Figure 5.8 - Resources at Risk Summary

1. Incident Name	**2. Operational Period (Date/Time)** From: To:	**Resources At Risk Summary ICS 232-CG**

3. Environmentally-Sensitive Areas and Wildlife Issues

Site #	Priority	Site Name and/or Physical Location	Site Issues

Narrative

4. Archaeo-cultural and Socio-economic Issues

Site #	Priority	Site Name and/or Physical Location	Site Issues

Narrative

5. Prepared by: (Environmental Unit Leader) **Date/Time**

Resources At Risk Summary ICS 232-CG (Rev.07/04)

NRC Incident No. #_____

Figure 5.9 - Site Safety Plan

I. General

☐ Tank Farm Spill ☐ Pipeline Spill ☐ Spill to Water ☐ Excavation ☐ Other: _____ AFE # _____

Facility: _____

Location: _____

Work to be performed: _____

Issuing Date: _____ Time: _____
Temperature: ____° Wind Direction: ___
Humidity: _____

II. Hazards to be Evaluated

Y	N		Y	N				SPECIFIC HAZARDS
☐	☐	Oxygen Deficient/Enriched	☐	☐	Ingestion / Skin Absorption	☐	☐	Gasoline
☐	☐	Flammable Atmosphere (Explosion Fire)	☐	☐	Frostbite (LPG Spills)	☐	☐	JP5-JP8
☐	☐	Toxic Atmosphere: _____	☐	☐	Chemical/MSDS # _____ (Must be attached)	☐	☐	LPG
☐	☐	Boat Operations	☐	☐	Physical Hazard _____	☐	☐	Kerosene / Jet A
☐	☐	Confined Space	☐	☐	Traffic _____	☐	☐	Aromatics
			☐	☐	Vapor Cloud	☐	☐	Diesel Fuel
						☐	☐	Heating Oil
						☐	☐	Other* (see comments) _____

III. Testing & Monitoring (Check required items)

Tests are to be performed in the order listed.

Y	N		Continuous	Frequency
☐	☐	Oxygen Level	☐ Y ☐ N _____	every _____
☐	☐	LEL	☐ Y ☐ N _____	every _____
☐	☐	Hydrogen Sulfide	☐ Y ☐ N _____	every _____
☐	☐	Benzene	☐ Y ☐ N _____	every _____
☐	☐	Total Hydrocarbons	☐ Y ☐ N _____	every _____
☐	☐	Other: _____	☐ Y ☐ N _____	every _____

ACCEPTABLE ENTRY CONDITIONS	SPECIAL WORK PRACTICES OR PPE REQUIRED	PPLC ERT LEAVE AREA WORK EFFORTS SHOULD BE DIRECTED AT REDUCING CONCENTRATIONS
19.5 – 23.0% in air	< 19.5% or 23.0% in air	<16.0 or ≥ 23.5% in air
< 10% in air	≥ 10.0 but < 20.0% in air	≥ 20.0% in air
< 10 ppm	≥ 10 but < 100 ppm	≥ 100 ppm
< .5 ppm	≥ .5 but < 10 ppm	≥ 10 ppm
< 300 ppm	≥ 300 but < 750 ppm	≥ 750 ppm

As allowed by applicable standard(s) Acceptable for 5325 feet of elevation and below.
Hot work is not permitted when LEL is greater than 10% in air.

IV. Required Personal Protective Equipment (Check for required use) NOTE: PPLC EMPLOYEES DO NOT USE SCBA'S A RLINE RESP

General	Eye Prot.	Respiratory Prot.	Hearing Prot.	Gloves	Footwear	Clothing
☐ Hard Hat	☐ Safety Glasses	☐ SCBA/Air Line w/Escape	☐ Ear Plugs	☐ Leather	☐ Steel-toes	☐ FR Coveralls
☐ Safety Harness	☐ Goggles	☐ Air Line	☐ Ear Muffs	☐ Rubber	☐ Rubber	☐ Tyvek
☐ PFD	☐ Face-shield	☐ Air Purifying (Full Mask)	☐ Combination	☐ Nitrile	☐ Hip-boots	☐ Coated Tyvek
	☐ Tinted Lens	Cartridge Type: ☐ OV ☐ Hepa-OVV		☐ PVC	☐ _____	☐ Saranyx
				☐ _____		☐ _____

Any other special PPE: _____

NRC Incident No. #_____

V. Emergency Information and Rescue Services

Emergency Contact Person: _____ Contact by: _____
Fire Department: _____ Contact by: _____
Ambulance: _____ Contact by: _____
Hospital: _____ Contact by: _____
Rescue Services: _____ Contact by: _____
(if not provided by above)

VI. Required Safety & Rescue Equipment (on site)

☐ Lights ☐ Fall Protection ☐ First Aid Kit ☐ Drinking Water ☐ Fire Extinguisher ☐ Tripod ☐ Other:
☐ Ladder ☐ Retrieval Lines ☐ Resuscitator ☐ Communication Method

VII. Comments or Special Work Procedures

VIII. Report All Injuries Immediately

IX. Control Measures

- Isolation & Lockout (identify items to be locked out)
- Establish Work Zones when completed
  - ☐ Hot Zone = Red Ribbon
  - ☐ Warm Zone = Yellow Ribbon
  - ☐ Cold Zone = Blue Ribbon
- Ventilation ☐ Natural ☐ Mechanical
  Continuous ☐ No ☐ Yes
- Flagman / Watchman ☐
- Confined Space – Safety Watch ☐
  (See Exhibit "B" for Permit)
- Evacuation Routes – (Identify on Map)
  - ☐ Air Horn – Emergency
  - ☐ Primary Route
  - ☐ Secondary Route

NRC Incident No. #_____

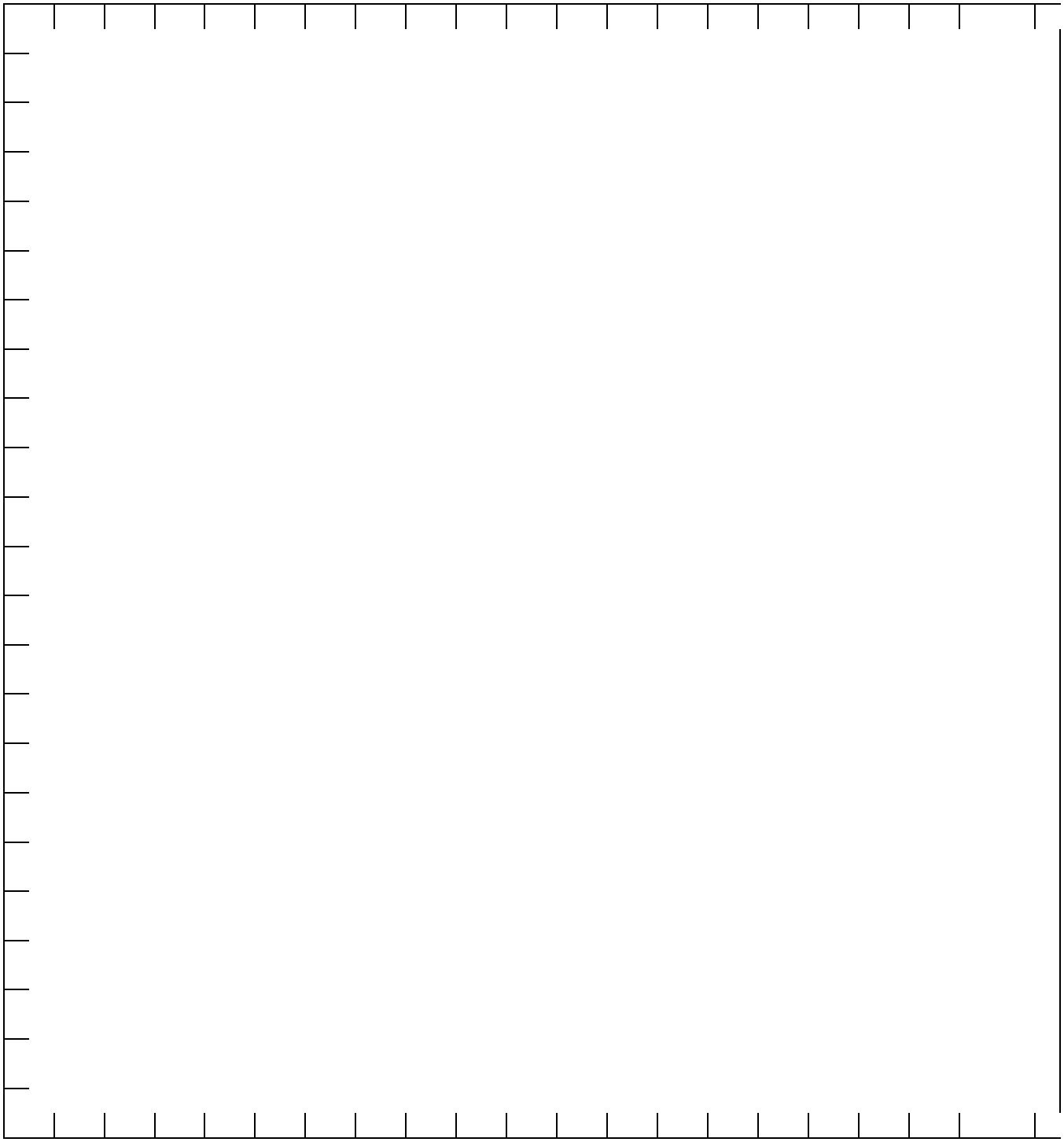
X. Monitoring Results	Zone												
Oxygen	Time												
	Level												
	By												
LEL	Time												
	Level												
	By												
Hydrogen Sulfide	Time												
	Level												
	By												
Benzene	Time												
	Level												
	By												
VOC	Time												
	Level												
	By												
	Time												
	Level												
	By												
	Time												
	Level												
	By												
	Time												
	Level												
	By												
	Time												
	Level												
	By												

Equipment: Type: _____ Mfger: _____ Calibration / Expiration: _____
Type: _____ Mfger: _____ Calibration / Expiration: _____

NRC Incident No. #_____

XI. Work Area Diagram Map

Please include wind direction, exclusion zone, support zone, decon area, evacuation routes and significant landmarks.



NRC Incident No. #_____

5.3 Employee Certification Page

XII. Work Site Signatures

Signature	
Incident Commander	
Safety Officer	

Other Site Personnel	Signature	Other Site Personnel	Signature

XIII. Authorizing Signature

Site Safety Manager: **Printed Name**: _____ **Signature**: _____

I hereby acknowledge and authorize the above work to be performed in accordance with the conditions outlined on his permit. If the work procedures or conditions change creating any unsafe conditions, then this permit is void and work is to be suspended. I understand and affirm that the conditions of this work permit will be followed prior to and during entry into a confined space. I also agree to order the work to be stopped and the confined space evacuated in the event that conditions of the permitted work area fail to meet the permit requirements.

Section 6
Spill Impact Considerations

Contents

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6.1 Critical Areas to Protect

The critical areas to protect are classified as high, moderate, and low sensitivity to oil for non-coastal/inland environments. The Federal, State, and local authorities will further clarify these categories at the time of the response. The categories are defined as follows:

Table 6.1 - Critical Protection Areas
High Sensitivity
• Areas which are high in productivity, abundant in many species, extremely sensitive, difficult to rehabilitate, or inhabited by threatened/endangered species. • Areas which consist of forested areas, brush/grassy areas, wooded lake areas, freshwater marshes, wildlife sanctuaries/refuges, and vegetated river/stream banks.
Moderate Sensitivity
• Areas of moderate productivity, somewhat resistant to the effects of oiling. • Areas which consist of degraded marsh habitat, clay/silt banks with vegetated margins, and gravel/cobble beaches.
Low Sensitivity
• Areas of low productivity, man-made structures, and/or high energy. • Areas which consist of gravel, sand, or clay material, barren/rocky riverbanks and lake edges, man-made structures, and concrete/compacted earthen drainage ditches.

6.2 Environmental/Socio-Economic Sensitivities

Environmental/Socio-economic sensitivities are of extreme importance when planning a response effort. The health and safety of the public and the environment, as well as the protection of the various socio-economic sensitivities, must be promptly addressed in order to mitigate the extent of damage and minimize the cost of the clean-up effort.

All environmental/socio-economic sensitivities are worthy of protection, but must be prioritized during a response effort. When making decisions on which areas to designate as collection areas and which to protect, the following sources may be consulted:

- U.S. Fish and Wildlife Service and related state agencies
- Applicable Area Contingency Plans
- Other industry and private experts

The environmental and socio-economic sensitivities in the vicinity of the Facility have been broken down into specific categories and identified in this section. To further clarify the location of the sensitive areas of concern, a map illustrating environmentally sensitive areas is also provided in this section.

6.3 Wildlife Protection and Rehabilitation

Epic will work with Federal, State, and local agency personnel to provide labor and transportation to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill, as necessary. Oversight of the Epic's wildlife preservation activities and coordination with Federal, State, and local agencies during an oil spill is the responsibility of the Incident Commander.

Special consideration should be given to the protection and rehabilitation of endangered species and other wildlife and their habitat in the event of an oil spill and subsequent response. Jurisdictional authorities should be notified and worked with closely on all response/clean-up actions related to wildlife protection and rehabilitation. Laws with significant penalties are in place to ensure appropriate protection of these species.

6.3.1 Endangered/Threatened Species

The U.S. Fish and Wildlife Service (USFWS) and related state agencies classify the status of various wildlife species in the potentially affected states. A list of protected species known to occur in Bibb, Twigg and Houston Counties, Georgia is provided in Section 6.5.11, and a listing of all protected species known to occur in Georgia is provided in Section 6.7. Strategies to prevent/minimize impact to these areas are discussed in Section 6.6.

6.3.2 Wildlife Rescue

Epic will work with Federal, State, and local agency personnel to provide labor and transportation to retrieve, clean, and rehabilitate wildlife affected by an oil spill, as the situation demands.

The following are items which should be considered for wildlife rescue and rehabilitation during a spill response:

- Bird relocation can be accomplished using a variety of deterrents, encouraging birds to avoid areas of spilled oil. Bird relocation can be accomplished by utilizing deterrent methods including:
  - Use of visual stimuli, such as inflatable bodies, owls, stationary figures, or helium balloons, etc.
  - Use of auditory stimuli, such as propane cannons, recorded sounds, or shell crackers.
  - Use of herding with aircraft, boats, vehicles, or people (as appropriate).
  - Use of capture and relocation.

6.3.3 Search and Rescue - Points to Consider

- **Epic's involvement should be limited to offering assistance as needed or requested by the agencies.**
- Prior to initiating any organized search and rescue plan, **authorization must be obtained from the appropriate federal/state agency.**
- **Initial search and rescue efforts, if needed, should be left up to the appropriate agencies.** They have the personnel, equipment, and training to immediately begin capturing contaminated wildlife.
- With or without authorization it must be anticipated that volunteer citizens will aid distressed/contaminated wildlife of their own. It is important to communicate that it may be illegal to handle wildlife without express authority from appropriate agencies. Provisions should be made to support an appropriate rehabilitator; however, **no support should be given to any unauthorized volunteer rescue efforts.**
- The regulatory agencies and response personnel should be provided the name and location of a qualified rehabilitator in the event contaminated wildlife is captured.
- Resources and contacts that can assist with wildlife rescue and rehabilitation are provided in Section 2.0. This list includes:
  - Outside rehabilitation organizations
  - Local regulatory agencies
  - Other resources

6.4 Staging Areas

When establishing personnel and equipment staging areas for a response to a Facility discharge, the following criteria should be evaluated:

- Access to waterborne equipment launching facilities and/or land equipment.
- Access to open space for staging/deployment of heavy equipment and personnel.
- Access to public services utilities (electricity, potable water, public phone, restroom and washroom facilities, etc.)
- Access to the environmental and socio-economically sensitive areas which are projected for impact.

6.5 Vulnerability Analysis

The general area of the Epic Macon Terminal is a mixture of undeveloped, residential, and commercial properties. Within the first two miles of the predicted flow path from the Terminal are located several industrial areas, roads, wetlands and streams, and a man-made pond. Beyond the first two miles, a release would be contained within a large wetland/waterbody system that is part of the Tobesofkee Creek/Ocmulgee River watershed.

The following is an overview of the vulnerability of ecological and man-made resources. The analysis focuses on the 28.2-mile planning distance (see Appendix B) as a guideline for the unlikely event of an emergency response associated with the release of a reportable quantity of oil/fuel. Figure 6.1 illustrates the predicted flow path of a large release from the Terminal, including locations of sensitive resources identified within the planning distance. Crossing numbers listed in the table below refer to environmentally sensitive areas illustrated on Figure 6.1. The table below identifies each identified environmentally sensitive area.

Table 6.2 - Environmentally Sensitive Areas

Crossing #	Type	Name	Flow Path Distance from Terminal (Miles)
Crossing 1	Transportation Route	Norfolk Southern RR	0.28
Crossing 2	Transportation Route	Allen Road	0.30
Crossing 3	Business	Industrial Area	0.36
Crossing 4	Wetland and Other Sensitive Environment	Wetland 1	0.82
Crossing 5	Lakes and Streams	Lake 1	1.20
Crossing 6	Transportation Route	Houston Road	1.49
Crossing 7	Wetland and Other Sensitive Environment	Wetland 2	1.53
Crossing 8	Lakes and Streams	Tobesofkee Creek	1.93
Crossing 9	Transportation Route	US 41/129	1.95
Crossing 10	Transportation Route	Norfolk Southern RR	2.64
Crossing 11	Transportation Route	Norfolk Southern RR	3.58
Crossing 12	Lakes and Streams	Intermittent Stream	3.82
Crossing 13	Lakes and Streams	Intermittent Stream	3.92
Crossing 14	Business	Electric Trans ROW	4.03
Crossing 15	Lakes and Streams	Intermittent Stream	5.03
Crossing 16	Transportation Route	Jeep Trail	6.31
Crossing 17	Lakes and Streams	Johns Branch	6.43
Crossing 18	Transportation Route	Jeep Trail	7.64
Crossing 19	Lakes and Streams	Ocmulgee River	8.48
Crossing 20	Wetland and Other Sensitive Environment	Bond Swamp	8.80
Crossing 21	Transportation Route	Griffin RD/Jeep Trail	9.71
Crossing 22	Lakes and Streams	Intermittent Stream	10.06
Crossing 23	Lakes and Streams	Intermittent Stream	11.27
Crossing 24	Business	Sand Pits	14.60
Crossing 25	Transportation Route	Jeep Road	15.66
Crossing 26	Lakes and Streams	Echeconnee Creek	15.92
Crossing 27	Lakes and Streams	Intermittent Stream	17.21
Crossing 28	Transportation Route	Jeep Road	18.18

Table 6.2 - Environmentally Sensitive Areas			
Crossing #	**Type**	**Name**	**Flow Path Distance from Terminal (Miles)**
Crossing 29	Lakes and Streams	Intermittent Stream	19.21
Crossing 30	Lakes and Streams	Stone Creek	20.03
Crossing 31	Lakes and Streams	Streetman Creek	20.95
Crossing 32	Lakes and Streams	Intermittent Stream	23.29
Crossing 33	Lakes and Streams	Rosston Creek	24.31
Crossing 34	Business	Bullard Landing	24.66
Crossing 35	Transportation Route	Jeep Road	25.14
Crossing 36	Transportation Route	Jeep Road	27.71
Crossing 37	Lakes and Streams	Horse Creek	28.16

6.5.1 Planning Distance

To evaluate the potential risk to sensitive resources in the area, should a spill occur, a planning distance was calculated (See Appendix B) based on the characteristics of this Facility and vicinity according to 40 CFR 112, Attachment C-III. Factors utilized include distance to the nearest body of moving water/storm sewer/drainage ditch or swale, geology, and topography of the area. Using these inputs, a planning distance of 28.2 miles was calculated for the facility. Please refer to Appendix B for a detailed description of the assumptions and variables used.

The Macon Terminal is located about 10,500 feet from the nearest navigable waterway, Tobesofkee Creek. A release from the facility would migrate off the property to the north and generally follow a series of vegetated drainage swales that direct water into a surface impoundment located just south of the intersection of Houston Road and Hawkinsville Road, approximately 6,000 feet north of the facility. The nearest sensitive receptor, a National Wetland Inventory (NWI)-mapped wetland, is located approximately 4,500 feet north of the terminal, between the Terminal and this surface impoundment. From this impoundment (1,500 feet in length from the entry point to the overflow pipe), the migration path would be through this impoundment's spillway/overflow pipe to a culvert underneath Houston Road and then approximately 3,000 feet to the north to Tobesofkee Creek. After reaching Tobesofkee Creek, the spill would travel approximately 45,000 feet within Tobesofkee Creek to its intersection with the Ocmulgee River.

The planning distance begins at the north edge of the Terminal near Outfall 1. Based on the calculations presented in Appendix B, a WCD from the Terminal would be expected to migrate approximately 28.52 miles in the predicated 27-hour response time. Table 6.2 lists the sensitive receptors that could potentially be affected by a WCD from the Terminal. Table B.5 in Appendix B identifies the times frames and distances associated with these locations.

Visual inspections and preventive maintenance are regularly scheduled to prevent spills. To mitigate spills, various specific response techniques are identified in Section 6.6.

6.5.2 Water Quality

Seven miles of the Ocmulgee River (between Tobesofkee Creek and Echeconnee Creek) within the Terminal's planning distance is listed on the State of Georgia's 2012 Integrated 305(b)/303(d) Report as not currently supporting its designated use for fishing (i.e., is "impaired") and has established Total Maximum Daily Loads (TMDLs) for polychlorinated biphenyls (PCBs) and fecal coliform. The 10-mile stream reach of the Ocmulgee River below this is not identified as impaired, but has a previously established TMDL for PCBs. A 5-mile reach of Rocky Creek which ends at its confluence with Tobesofkee Creek, is also listed as impaired, with a TMDL for fecal coliform.

6.5.3 Water Intakes

No known public water intakes should be impacted by a release from the Facility.

6.5.4 Schools

There are no schools located in close proximity that a spill from this Facility would impact.

6.5.5 Medical Facilities

There are no medical facilities located within the immediate vicinity of the Facility in areas that would likely be impacted by a discharge from the Terminal.

6.5.6 Residential Areas

There are residences located within one-quarter mile of the Facility which could be impacted by response activities during a spill event or a potential fire hazard.

6.5.7 Businesses

The Terminal is situated in a commercial area located west of US-247. Any evacuation efforts for surrounding businesses will be coordinated with the local assistance agencies (police department, fire department, etc.).

6.5.8 Wetlands and other Sensitive Environments

Two forested areas that may represent sensitive environments are located near the flow path from the Facility. The nearest wetland identified is a small scrub-shrub and forested wetland that is part of the wetland fringe for a pond. The flow path intersects a large wetland system at Crossing Number 7 (see Table 6.2) and remains within this wetland system (associated with Tobesofkee Creek and its distributary, Ocmulgee River) for the remainder of the planning distance. During a response situation the USFWS and applicable state agencies should be contacted for information regarding wetlands and other sensitive environments.

6.5.9 Fish and Wildlife

Flora and fauna are always present and are sensitive to the effects of a pollution incident. The wildlife population is limited. A discharge originating from the Facility may impact Bond Swamp National Wildlife Refuge (NWR), which abuts the Ocmulgee River within the Terminal's planning distance. During a response situation the USFWS and applicable state agencies should be contacted for information regarding wetlands and other sensitive environments. Upon contact the agencies will be able to:

- Identify and establish priorities for fish and wildlife, wetlands, and other sensitive environments requiring protection from any direct or indirect effects from a discharge.
- Identify potential environmental effects on fish and wildlife, wetlands, and other sensitive environments resulting from removal actions or countermeasures.

6.5.10 Lakes and Streams

One unnamed lake/pond is within the flow path approximately 6,000 feet north of the Facility. Once the flow path enters the wetland complex associated with Tobesofkee Creek, it crosses the confluence of several tributaries to Tobesofkee Creek, and then enters the Ocmulgee River. The flow path crosses a number of small to large tributaries to the Ocmulgee River, including Echeconnee Creek. Strategies to prevent/minimize impact to these areas are discussed in Section 6.6.

6.5.11 Endangered Flora and Fauna

The U.S. Fish and Wildlife Service lists four federally endangered plant species, Canby's dropwort (*Oxypolis canbyi*), harperella (*Ptilimnium nodosum*), fringed campion (*Silene polypetala*) and relict trillium (*Trillium reliquum*) as being present in Bibb, Houston and Twiggs Counties, Georgia. A complete list of threatened and endangered species in Georgia is provided in Section 6.7. Strategies to prevent/minimize impact to these areas are discussed in Section 6.6.

6.5.12 Recreational Areas

No Bibb County Parks would be impacted by a discharge from the Facility within the planning distance. No National Forest Lands are located in Bibb or Houston County, Georgia. Bond Swamp NWR is located within the facility's planning distance.

6.5.13 Transportation Routes (air, land, and water)

Depending on the magnitude of the spill, vehicular traffic could potentially be impacted on US-129 to the east or the railroad to the west. No impacts are anticipated by air or water traffic from a release from the Facility.

6.5.14 Utilities

There are a limited number of public utilities – phone, power, water and sewer – in the vicinity of the terminal. It is unlikely that a spill at the facility would impact the operation of these utilities. Containment and remedial activities in the vicinity of the utilities need to be accomplished with care and coordinated with the local utility One Call System and utility operator.

Any evacuation efforts necessary for these areas will be coordinated with the local emergency assistance agencies (police department, fire department, etc.), State Police, and other agencies as the situation demands.

6.5.15 Other Areas of Economic Importance

There are no other applicable areas that could potentially be impacted by a spill originating from the facility.

6.6 Containment and Recovery of Spilled Product

General descriptions of various specific response techniques that may be applied during a response effort are discussed below. Epic's responders are free to use all or any combination of these methods as incident conditions require, provided they meet the appropriate safety standards and other requirements relative to the situation encountered. Data was obtained from reports, manuals and pamphlets prepared by the American Petroleum Institute, Environmental Protection Agency and the United States Coast Guard. The most effective cleanup of a product spill will result from an integrated combination of clean-up methods. Each operation should complement and assist related operations and not merely transfer spillage problems to areas where they could be more difficult to handle.

The spill should be assessed as soon as possible to determine the source, extent and location of travel. Terrain and other physical conditions down gradient of the spill site will determine the methods of control at a point in advance of the moving product. Often, the bulk of a spill can be contained at a single location or a few key locations in the immediate vicinity of the source point. When possible, the execution of this type of initial containment strategy helps confine a spill to a relatively limited area.

6.6.1 Spill on Land (Soil Surfaces)

Confinement Methods

Product can be trapped in ditches and gullies by earth dams. Where excavating machinery is available, dams can be bulldozed to contain lakes of product. Dams, small and large, should be effectively employed to protect priority areas such as inlets to drains, sewers, ducts and watercourses. These can be constructed of earth, sandbags, absorbents, planks or any other effective method. If time does not permit a large dam, many small ones can be made, each one holding a portion of the spill as it advances. The terrain will dictate the placement of the dams. If the spill is minor, natural dams or earth absorption will usually stop the product before it advances a significant distance. Cleanup is the main concern in such situations.

In situations where vapors from a spill present a clear and present danger to property or life (possible ignition because of passing automobiles, nearby houses, or work vehicles approaching the area), spraying the surface of the spill with dispersant will greatly reduce the release of additional vapors from the product. This method is especially adapted to gasoline spills on soil surfaces.

Bedrock Habitats

Least Adverse Habitat Impact

- ***Natural Recovery***
  - Sheltered bedrock may need cleanup because of slow natural removal rates
  - Cleanup of larger spills may be needed because of the amount of oil present
  - Heavy oils may persist on all but the most exposed shores
- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on human and sensitive resource use of the site
- ***Sorbents***
  - Overuse generates excess waste
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

Some Adverse Habitat Impact

- ***Flooding and Low-Pressure, Cold-Water Flushing***
  - Most effective on fresh, fluid oils
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***High-Pressure, Cold-Water Flushing***
  - Primarily applicable to medium-crude oils while still fresh and liquid
  - Can be effective in removing oil from crevices and pockets of sediment on bedrock
- ***Manual Oil Removal/Cleaning***
  - Expect significant residues of diesel and medium oils with only manual removal because of their fluidity and difficulty of manual pickup
  - Useful for heavy oils in patches or crevices
- ***Vacuum***
  - Not applicable to gasoline spills because of safety concerns
- ***In-Situ Burning***
  - Can effectively remove heavy oil accumulations
  - Concerns about air pollution, thermal impact on biota, and physical nature of the residue
- ***Shoreline Cleaning Agents***
  - May be only technique to remove sticky oils without hot-water, high-pressure washing
  - Individual products vary in their toxicity and recoverability of the treated oil
- ***Solidifiers***
  - Prevent the oil from being washed back into the water and are most appropriate for heavy accumulations of pooled oil on shelving bedrock
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
- ***Low-Pressure, Hot Water Flushing***

- Any organisms in the application area would be adversely affected by hot water
- Most effective on heavy crudes where heat would make oil more fluid

Probable Adverse Habitat Impact

- ***Nutrient Enrichment***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Concerns about nutrient overloading in poorly flushed areas or where nutrient toxicity, especially ammonia, might be significant
  - Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues
- ***High-Pressure, Hot-Water Flushing***
  - Will likely kill any attached organisms; use is appropriate in limited areas only when oil removal is needed for aesthetic reasons

Most Adverse Habitat Impact

- ***Steam Cleaning And Sand Blasting***
  - Highly intrusive techniques that will kill any organisms present
  - Use only for aesthetic reasons in very limited areas

Insufficient Information

- ***Natural Microbe Seeding***
  - There is insufficient information on impact and effectiveness
  - Chemical Shoreline Pretreatment
  - There is insufficient information on available products, their effectiveness, or impact

Manmade Structures

Least Adverse Habitat Impact

- ***Manual Oil Removal/Cleaning and Debris Removal***
  - Effective for removing debris and small, persistent pockets of oil
- ***High-Pressure, Cold-Water Flushing***
  - Effective for removing sticky oils from solid surfaces and flushing pooled oil from riprap crevices, even for gasoline in populated areas
  - May flush oiled sediments (if present) into nearshore bottom habitats
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Sorbents***
  - Use along riprap structures to recover residual sheening oil after other cleanup methods have been conducted, even for gasoline
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
  - Overuse results in excess waste generation
- ***Vacuum***
  - Early use of vacuum on pooled oil in crevices can increase the oil recovery rate and minimize oil losses during flushing

- Can only remove thick oil from accessible areas, so high residual oil likely

- ***Natural Recovery***
  - Most effective for lighter oils and more exposed settings
  - Heavier oils may necessitate removing persistent residues

Some Adverse Habitat Impact

- ***Flooding***
  - Not applicable to seawalls; on riprap, only effective when the oil is fluid
  - May be used on riprap in developed areas, even for gasoline spills, where pockets of the spilled product pose human health concerns
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

- ***Low-Pressure, Cold-Water Flushing***
  - Only effective when the oil is fluid
  - Directed water spray can help remove trapped oil, even for gasoline
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

- ***Low-Pressure, Hot-Water Flushing and High-Pressure, Hot-Water Flushing***
  - Assumes that there are no biological communities in or immediately downslope from treatment area
  - High water temperatures are often needed to liquefy heavy oils
  - High water pressures are often needed to remove weathered oils from solid substrates and riprap

- ***Shoreline Cleaning Agents***
  - Individual products vary in their toxicity and ability to recover the treated oil

- ***Solidifiers***
  - Appropriate to recover and control chronic sheening, even for gasoline
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
- ***In-Situ Burning***
  - Thick oil likely to occur as isolated pockets that are difficult to access and burn
  - There will be concerns about air pollution and physical nature of the residue
  - Public safety issues for burning in developed areas will be of special concern

Probable Adverse Habitat Impact

- ***Nutrient Enrichment***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Concerns about nutrient overloading in poorly flushed areas or where nutrient toxicity, especially ammonia, might be significant
  - Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues

- ***Steam Cleaning and Sand Blasting***

- Used when removing persistent oil is required for aesthetic reasons

Insufficient Information

- ***Chemical Shoreline Pretreatment***
  - There is insufficient information on available products, their effectiveness, and impact
  - Natural Microbe Seeding
  - There is insufficient information on impact and effectiveness, particularly for applications on manmade structures

Sand Habitats

Least Adverse Habitat Impact

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
- ***Natural Recovery***
  - Lower impact for small spills, lighter oil types, and remote areas
- ***Flooding***
  - Only effective when the oil is fluid and on the sand surface, rather than penetrated or buried
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats.
- ***Sorbents***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
  - Overuse results in excess waste generation

Some Adverse Habitat Impact

- ***Manual Oil Removal/Cleaning***
  - Minimizes sediment removal and problems of erosion and waste disposal
  - Effective when oil is mostly on the surface, not buried beneath clean sand
  - Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated by manual cleanup are not balanced by benefits in removing oil
- ***Mechanical Oil Removal***
  - Tends to remove large amounts of clean sand with the oiled sand
  - Use on high-use beaches where rapid removal of oil is required and where long stretches of shoreline are heavily oiled
  - Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated from mechanical cleanup are not balanced by benefits in removing oil
- ***Low-Pressure, Cold-Water Flushing***
  - Only effective when the oil is fluid and adheres loosely to the sediments
  - Optimize pressure to minimize the amount of sand washed downslope
- ***Vacuum***

- Early use of vacuum on pooled, liquid oil can prevent deeper penetration
- Will minimize amount of sorbent waste when used with flushing efforts
- Can vacuum heavy, non-sticky oil from sand substrates completely, but slowly

- ***Sediment Reworking***
  - Appropriate for lightly oiled and stained sediments, to speed removal rates, and as a final step to polish recreational beaches
  - Because gasoline tends to quickly evaporate, habitat disruption, worker safety concerns, and waste generated from sediment reworking are not balanced by benefits in removing oil

- ***Nutrient Enrichment***
  - Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues
  - May be concern about nutrient overloading in poorly flushed areas
  - Not applicable to gasoline spills because they rapidly evaporate

- ***Shoreline Cleaning Agents***
  - May be only technique to remove viscous oils without removing sediment
  - Individual products vary in their toxicity and ability to recover the treated oil

- ***Solidifiers***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Early use may prevent pooled oil from penetrating deeper
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

- ***In-Situ Burning***
  - Can effectively remove pooled surface oil accumulations
  - Concerns about air pollution, physical nature of the residue, and thermal impact on biota
  - May have to dig trenches to accumulate oil in pools
  - Lighter oils will penetrate the sand, leaving insufficient surface concentrations to burn

Probable Adverse Habitat Impact

- ***Low-Pressure, Hot-Water Flushing***
  - May be needed to soften and lift sticky oil off the sand surface
  - Any organisms present will be adversely affected by hot water

Most Adverse Habitat Impact

- ***High-Pressure, Cold-Water Flushing And High-Pressure, Hot-Water Flushing***
  - High-pressure water jets will fluidize sand-sized sediments, erode the beach, and wash the oiled sediment into near shore habitats

Insufficient Information

- ***Chemical Shoreline Pretreatment***
  - More information needed on available products, their effectiveness, and impact

- ***Natural Microbe Seeding***
  - There is insufficient information on impact and effectiveness in freshwater habitats

Mixed Sand and Gravel Habitats

Least Adverse Habitat Impact

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on amount of use by humans and sensitive resources
- ***Flooding***
  - Most effective when the oil is fluid and adheres loosely to the sediments
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
- ***Natural Recovery***
  - Least impact for small spills, lighter oil types, and remote areas
- ***Low-Pressure, Cold-Water Flushing***
  - Most effective when the oil is fluid and adheres loosely to the sediments
  - Excessive pressures can cause erosion
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Sorbents***
  - Overuse generates excess waste
  - Useful for recovering sheens, even for gasoline spills
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

Some Adverse Habitat Impact

- ***Vacuum***
  - Early use of vacuum on pooled, liquid oil can prevent deeper penetration
- ***Manual Oil Removal/Cleaning***
  - Gasoline tends to evaporate quickly; therefore manual cleanup causes habitat disruption, worker safety concerns, and generates waste with no benefits due to removing oil
  - Minimizes sediment removal and problems of erosion and waste disposal
  - Preferable when oil is mostly on the surface, not deeply penetrated or buried
- ***Sediment Reworking***
  - Use to break up heavy surface oil or expose persistent subsurface oil deposits, particularly where sediment removal will cause erosion
  - Use where there is sufficient exposure to waves to rework the sediments into their original profile and distribution
  - Gasoline tends to evaporate quickly; therefore sediment reworking causes habitat disruption, worker safety concerns, and generates waste with no benefits due to removing oil
- ***Mechanical Oil Removal***
  - Tends to remove large amounts of sediment with the oil
  - Applicable for heavier oil types, which are difficult to remove otherwise

- Gasoline tends to evaporate quickly; therefore mechanical cleanup causes habitat disruption, worker safety concerns, and generates waste with no benefits from removing oil

- ***Shoreline Cleaning Agents***
  - May be only technique to remove viscous oils without removing sediment
  - Individual products vary in their toxicity and ability to recover the treated oil

- ***Nutrient Enrichment***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues
  - Most applicable as a secondary technique after gross oil removal
  - Concerns about nutrient overloading in poorly flushed areas

- ***In-Situ Burning***
  - Can effectively remove pooled surface oil accumulations
  - Concerns about air pollution, physical nature of the residue, and thermal impact on biota
  - May have to dig trenches to accumulate oil in pools
  - Lighter oils will not remain on the sediment surface

- ***Solidifiers***
  - Early use may prevent pooled oil from penetrating deeper
  - Not applicable to gasoline spills because they rapidly evaporate
  - May be useful in recovering sheens when deployed as booms and pillows
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
  - Could use for lighter oils with correct product and situation

Probable Adverse Habitat Impact

- ***High-Pressure, Cold-Water Flushing***
  - High-pressure water jets will flush oiled sediments into nearshore habitats
  - Excessive pressures can cause erosion if large amounts of sand are present

- ***Low-Pressure, Hot-Water Flushing***
  - Any organisms present will be affected by hot water
  - Use on gasoline spills may transport the oil to more sensitive habitats

Most Adverse Habitat Impact

- ***High-Pressure, Hot-Water Flushing***
  - Will flush oiled sand into nearshore zone and affect any organisms present

- ***Steam Cleaning***
  - Highly intrusive technique; will kill any organisms present
  - Potential for released oil to penetrate deeper into the porous sediments

Insufficient Information

- ***Chemical Shoreline Pretreatment***
  - Need more information on available products, their effectiveness, and impact

- ***Natural Microbe Seeding***
  - There is insufficient information on impact and effectiveness in freshwater habitats

Gravel Habitats

Least Adverse Habitat Impact

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
- ***Low-Pressure, Cold-Water Flushing***
  - Only effective when the oil is fluid and loosely adheres to the sediments
  - Usually used in conjunction with vacuum and sorbents
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
- ***Flooding***
  - Only effective when the oil is fluid and adheres loosely to the sediments
  - Usually used with various flushing techniques
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
- ***Natural Recovery***
  - Least impact for small spills, lighter oil types, remote areas, and eroding areas
- ***Sorbents***
  - Overuse generates excess waste
  - Useful for recovering sheens, even for gasoline spills
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

Some Adverse Habitat Impact

- ***Vacuum***
- Early use of vacuum on pooled, liquid oil can prevent deeper penetration
- ***High-Pressure, Cold-Water Flushing***
  - High-pressure water jet is likely to flush finer sediments into nearshore submerged habitats
  - Very viscous oils will require extremely high pressure to mobilize them
- ***Nutrient Enrichment***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Concerns about nutrient overloading in poorly flushed areas or where nutrient toxicity, especially ammonia, might be significant
  - Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues
- ***Manual Oil Removal/Cleaning***
  - Gasoline tends to quickly evaporate; therefore manual cleanup causes habitat disruption, worker safety concerns, and generates waste with no benefits from removing oil
  - Minimizes sediment removal and problems of erosion and waste disposal
  - Deep penetration of oil in porous gravel reduces effectiveness

- ***Sediment Reworking***
  - Used where gravel removal is not feasible because of erosion concerns
  - Sufficient exposure to waves is required to rework the sediments into their original profile and distribution
  - Gasoline tends to evaporate quickly; therefore sediment reworking causes habitat disruption, worker safety concerns, and generates waste with no benefits from removing oil
- ***Shoreline Cleaning Agents***
  - May be only technique to remove viscous oils without removing sediment or using hot-water flushing
  - Individual products vary in their toxicity and ability to recover the treated oil
- ***In-Situ Burning***
  - Can effectively remove pooled surface oil accumulations
  - May have to dig trenches to accumulate oil in pools
  - Lighter oils will not remain on the sediment surface
  - Concerns about air pollution, physical nature of the residue, and thermal impact on biota
- ***Solidifiers***
  - Early use may prevent pooled oil from penetrating deeper
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
  - May be useful in recovering sheens when deployed as booms and pillows

Probable Adverse Habitat Impact

- ***Low-Pressure, Hot-Water Flushing***
  - May be needed to flush viscous or deeply penetrated oil
- Any organisms present will be adversely affected by hot water
- ***Mechanical Oil Removal***
  - Likely to remove large amounts of gravel with the oil
  - Foot and vehicular traffic on gravel could mix oil deeper into the sediments

Most Adverse Habitat Impact

- ***High-Pressure, Hot-Water Flushing***
  - High-pressure water jets are likely to flush oiled sediments into nearshore submerged habitats
  - Any organisms present will be adversely affected by hot water and high pressure
- ***Steam Cleaning***
  - Highly intrusive technique; will kill any organisms present
  - Potential for released oil to penetrate deeper into the porous sediments

Insufficient Information

- ***Chemical Shoreline Pretreatment***
  - Need more information on available products, their effectiveness, and impact
- ***Natural Microbe Seeding***

- There is insufficient information on impact and effectiveness in freshwater habitats

Vegetated Shoreline Habitats

Least Adverse Habitat Impact

- ***Natural Recovery***
  - Low impact for small or moderate-size spills and lighter oils
  - More impact for large spills of medium- or high-viscosity oils
- ***Flooding***
  - Operationally difficult and marginally effective for steep banks
  - Appropriate for gentle banks where persistent oil has pooled, assuming that the released oil can be directed towards recovery devices or sorbents
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Low-Pressure, Cold-Water Flushing***
  - Effective for washing oil stranded on the banks into the water for recovery
  - Vegetation cover minimizes the potential for sediment erosion from flushing
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

Some Adverse Habitat Impact

- ***Sorbents***
  - Useful for recovering sheens, even for gasoline spills
  - Physical removal rates of medium and heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
  - Overuse generates excess waste
- ***Manual Oil Removal/Cleaning***
  - Some mixing of oil into the substrate and trampling of vegetation is unavoidable with foot traffic in oiled areas
  - Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated by manual cleanup are not balanced by benefits in removing oil
- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
  - Minimal concerns where substrate is firm or work is conducted from boats
- ***Vacuum***
  - Potential damage where substrate will not support vehicular traffic
  - Most effective where access is good and substrate can support vehicles
  - Only useful when oil is pooled
- ***Vegetation Removal***
  - Usually not necessary to reduce oil impact on vegetation
  - May be required in areas used by sensitive animals

- ***Nutrient Enrichment***
  - Applicable where nutrients are a limiting factor for oil degradation
  - More effective after gross oil removal is completed
  - Not applicable to gasoline spills because they rapidly evaporate
- ***In-Situ Burning***
  - May be the least physically damaging means of oil removal from the banks
  - Least impact for grassy areas versus banks covered with trees and shrubs

Probable Adverse Habitat Impact

- ***High-Pressure, Cold-Water Flushing***
  - High-pressure water spray will disturb plants and erode sediments
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Mechanical Oil Removal***
  - Excessive physical disruption likely from use of equipment

Most Adverse Habitat Impact

- ***Low-Pressure, Hot-Water Flushing***
  - Hot water could kill plants and potentially erode and degrade habitat
- ***High-Pressure, Hot-Water Flushing***
  - Combination of high pressure and hot water poses high risk of sediment and vegetation loss
- ***Sediment Reworking***
  - Will result in extensive habitat disruption
- ***Solidifiers***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Application of loose particulates may impede removal of oil mixed with, and adhered to, vegetation, litter, and debris
  - May be useful in recovering sheens when deployed as booms and pillows
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil or penetrate netting or fabric encasing the loose particulates

Insufficient Information

- ***Chemical Shoreline Pretreatment***
  - There is insufficient information on impact and effectiveness in freshwater vegetation
- ***Shoreline Cleaning Agents***
  - More information needed on available products, their effectiveness, and impact of use on vegetated bank habitats
  - Individual products vary in their toxicity and ability to recover the treated oil
- ***Natural Microbe Seeding***

- There is insufficient information on impact and effectiveness in freshwater vegetated shorelines

Mud Habitats

Least Adverse Habitat Impact

- ***Natural Recovery***
  - Least impact for small spills and lighter oils, to prevent disruptions associated with cleanup efforts
  - For large spills or heavy oils, expect long-term persistence in low-energy settings
- ***Flooding***
  - Effective only for fresh, fluid oils
  - Local topography may limit the ability to control where the water and released oil flow and effectiveness of recovery
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Sorbents***
  - Useful as long as the oil is mobilized and recovered by the sorbent
  - Overuse generates excess waste
  - Careful placement and recovery is necessary to minimize substrate disruption

Some Adverse Habitat Impact

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by sensitive resources
  - Extensive disruption of soft substrate likely
- ***Vacuum***
  - Not applicable to gasoline spills because of safety concerns
  - Use to remove oil pooled on the surface
  - Avoid digging trenches to collect oil because they can introduce oil deeper into the sediment
  - Disruption of soft substrates can be limited by placing boards on the surface and controlling access routes

Probable Adverse Habitat Impact

- ***In-Situ Burning***
  - Heat may impact biological productivity of habitat, especially where there is no standing water to act as a heat sink on top of the mud
- ***Low-Pressure, Cold-Water Flushing***
  - Mud is readily suspended if substrate is not firm
  - Not effective for higher-viscosity oils that will not move with low pressure
  - Local topography may limit the ability to control where the water and released oil flow and effectiveness of recovery
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Manual Oil Removal/Cleaning***

- Use where persistent oil occurs in moderate to heavy amounts, or where sensitive resources must be protected
- Response crews may trample soft substrates, mix oil deeper into the sediments, and contaminate clean areas

- ***Low-Pressure, Hot-Water Flushing***
  - Physical and thermal impacts to habitat likely

Most Adverse Habitat Impact

- ***Solidifiers***
  - High likelihood of disruption and mixing of oil deeper into the substrate during application and retrieval
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
- ***Mechanical Oil Removal***
  - Soft substrate will not support vehicular traffic
  - Will probably cause extensive physical habitat disruption
- ***High-Pressure, Cold-Water Flushing and High-Pressure, Hot-Water Flushing***
  - High-pressure water will cause extensive sediment suspension and erosion
  - Potential for burial of oiled sediments and transport of oil to adjacent areas
- ***Sediment Reworking***
  - Will extensively disrupt physical habitat
  - Increases oil penetration, burial, and persistence
- ***Shoreline Cleaning Agents***
  - Current products are designed for use with high-pressure flushing; since used with flushing, water pressure needs to be considered
  - Individual products vary in their toxicity and ability to recover the treated oil

Insufficient Information

- ***Natural Microbe Seeding and Nutrient Enrichment***
  - Not applicable to gasoline spills because they rapidly evaporate
  - There is insufficient information on impact and effectiveness in mud habitats
- ***Chemical Shoreline Pretreatment***
  - There is insufficient information about direct toxicity of the products, disturbances resulting from application and retrieval, effectiveness, and net benefit

Wetland Habitats

Least Adverse Habitat Impact

- ***Natural Recovery***
  - Least impact for small to moderate spills and lighter oils; avoids damage often associated with cleanup activities
  - Some cleanup may be warranted where large numbers of animals are likely to become oiled during wetland use
- ***Sorbents***

- Care is necessary during placement and recovery to minimize disturbance of substrate and vegetation
- Overuse generates excess waste

- ***Flooding***
  - Erosion of substrate and vegetation may be a problem
  - Can be used selectively to remove localized heavy oiling
  - Can be difficult to direct water and oil flow towards recovery devices
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

- ***Low-Pressure, Cold-Water Flushing***
  - If water pressures are too high, the substrate and vegetation may be disturbed
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

Some Adverse Habitat Impact

- ***In-Situ Burning***
  - May be one of the least physically damaging means of heavy oil removal
  - Presence of a water layer on marsh surface can protect roots
  - Time of year (vegetation growth stage) is important consideration
  - May be appropriate for gasoline spills trapped in ice

- ***Vacuum***
  - Can be effective in removal of pooled oil from the marsh surface
  - Trampling of vegetation and substrate can be limited by placing boards on the surface and limiting traffic

- ***Debris Removal***
  - The removal of heavily oiled and mobile debris may reduce the tracking of oil off-site and contamination of wildlife

Probable Adverse Habitat Impact

- ***Vegetation Removal***
  - Used to prevent oiling of sensitive animals using the wetland
  - Most appropriate for oils that form a thick, sticky coating on the vegetation, such as medium and heavy oils
  - May delay recovery of the vegetation due to both oil impact and physical destruction by cleanup crews
  - Trampling of vegetation may be reduced by controlling access routes, using boards placed on surface, or conducting operations from boats

- ***Manual Oil Removal/Cleaning***
  - Used where persistent oil occurs in heavy amounts and where sensitive resources using the wetlands are likely to be oiled
  - Response crews may trample roots and mix oil deeper into the sediments

Most Adverse Habitat Impact

- ***High-Pressure, Cold-Water Flushing***
  - High-pressure spray will disrupt sediments, root systems, and animals
- ***Low-Pressure, Hot-Water Flushing and High-Pressure, Hot-Water Flushing***
- Hot water will likely kill the vegetation
- ***Mechanical Oil Removal***
  - Using vehicles in soft substrate will probably cause extensive physical disruption
  - Can completely alter the marsh substrate, hydrology, and vegetation patterns for many years
  - Use in heavily oiled wetlands when all other techniques have failed and there is an overriding reason for oil removal
- ***Sediment Reworking***
  - No benefit from mixing oil deeper into fine-grained and organic soils
- ***Solidifiers***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Use likely to increase adherence to vegetation and slow weathering/removal rates of residual oil
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

Insufficient Information

- ***Shoreline Cleaning Agents***
  - More information needed on available products, their effectiveness, and impact of use on vegetated bank habitats
  - Individual products vary in their toxicity and recoverability of the treated oil
- ***Nutrient Enrichment and Natural Microbe Seeding***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Concerns include eutrophication and acute toxicity, particularly from ammonia, because of shallow waters and low mixing rates
  - There is insufficient information on impact and effectiveness in wetlands
- ***Chemical Shoreline Pretreatment***
  - There is insufficient information about product toxicity, disturbances resulting from application and retrieval, effectiveness, and net benefit

Removal Methods

The recovery and removal of free product from soil surfaces is a difficult job. The best approaches at present seem to be:

- Removal with suction equipment to tank truck if concentrated in volumes large enough to be picked up. Channels can be formed to drain pools of product into storage pits. The suction equipment can then be used.
- Small pockets may have to be dipped up by hand.
- If practicable after removal of the bulk of the spill, controlled burning presents the possibility of a fast, simple, and inexpensive method of destruction of the remainder of the product. If all other options have been executed and the site is still unsafe for further activity because explosive vapors persist, the vapors may need to be intentionally ignited to prevent an accumulation

sufficient to become an explosive mixture, provided the other requirements of these guidelines for controlled burning are met.

Intentional ignition to remove released product should be utilized only if all of the following conditions are met:

- Other steps and procedures have been executed and a determination has been made that this is the safest remaining method of control.
- Intentional burning will not unduly damage the pipeline, adjacent property, or the environment.
- Controlled burning is permitted by government authorities. Local government authorities to be contacted may include city council, county board of commissioners, city or county fire chiefs, the county forestry commission or fire tower, and the local environmental protection agency. In seeking permission from these authorities, be prepared to convince them that adequate safety precautions have been and will be taken during the operation.
- Controlled burning is conducted with the consent of local landowners.
- Safety must always be a prime consideration when considering controlled burning of product. Sparks and heat radiation from large fires can start secondary fires and strong winds make fire control difficult. There must be no danger of the fire spreading beyond control limits. All persons must be at a safe distance from the edge of the inflammable area. Remember that all burning must be controlled burning.

6.6.2 Spill on Lake or Pond (calm or slow-moving water)

Confinement Methods

A lake or pond offers the best conditions for removal of product from water. Although the removal is no easy task, the lake or pond presents the favorable conditions of low or no current and low or no waves. The movement of product on a lake or pond is influenced mainly by wind. The product will tend to concentrate on one shore, bank or inlet. Booms should be set up immediately to hold the product in the confined area in the event of a change in wind direction.

If the spill does not concentrate itself on or near a shore (no wind effect), then a sweeping action using boats and floating booms will be necessary. The essential requirement for this operation is that it be done very slowly. The booms should be moved at not more than 40 feet per minute. Once the slick is moved to a more convenient location (near shore), the normal operations of removal should begin. If the slick is small and thin (rainbow effect) and not near the shoreline, an absorbent boom instead of a regular boom should be used to sweep the area very slowly and absorb the slick. The product may not have to be moved to the shoreline.

Group 5 oils, which have a specific gravity greater than 1 (water) and therefore not accumulate on the water's surface cannot be contained using surface booms. In addition, identifying the extent of oil migration is challenging since Group 5 oils will suspend throughout the water column or settle onto bottom sediments. In these cases, reliance on OSROs with certified divers and forward looking infrared (FLIR) thermal imaging technology to locate submerged product will be necessary. Containment booms and/or silt curtains will be deployed to prevent the spread of Group 5 oil that may remain on the water surface or that has settled to the water-body bottom.

Small Lake and Pond Environments

Least Adverse Habitat Impact

- ***Booming***
  - Use containment booms to keep oil from spreading
  - Safety concerns limit the containment of gasoline spills; however, booms can be used to
  - Exclude or deflect the spill away from sensitive resources
- ***Skimming/Vacuum***
  - Not applicable to gasoline spills because of safety concerns

- Land-based operations need site-specific restrictions and monitoring to minimize physical destruction

- ***Sorbents***
  - Overuse results in excess waste generation
  - Inhibit the evaporation of gasoline spills

Some Adverse Habitat Impact

- ***Natural Recovery***
  - Low impact for light oils but may have significant impact for medium crudes and heavier fuel oils because they persist and affect shoreline habitats

- ***In-Situ Burning***
  - Less environmental impact in winter when snow and ice provide some protection, plants are dormant, and fewer animals are present
  - Safety concerns limit containment of gasoline, but may be safely used with natural containment, such as gasoline trapped in ice

- ***Herding Agents***
  - Most effective under calm conditions
  - Should be coupled with recovery when used to protect sensitive habitats
  - Not effective on heavy oils because oil must be fluid

Least Adverse Habitat Impact

- ***Booming***
  - Use containment booms to keep oil from spreading
  - Safety concerns limit the containment of gasoline spills; however, booms can be used to
  - Exclude or deflect the spill away from sensitive resources

- ***Skimming/Vacuum***
  - Not applicable to gasoline spills because of safety concerns
  - Land-based operations need site-specific restrictions and monitoring to minimize physical destruction

- ***Sorbents***
  - Overuse results in excess waste generation
  - Inhibit the evaporation of gasoline spills

Least Adverse Habitat Impact

- ***Natural Recovery***
  - Low impact for light oils but may have significant impact for medium crudes and heavier fuel oils because they persist and affect shoreline habitats

- ***In-Situ Burning***
  - Less environmental impact in winter when snow and ice provide some protection, plants are dormant, and fewer animals are present
- Safety concerns limit containment of gasoline, but may be safely used with natural containment, such as gasoline trapped in ice

- ***Herding Agents***
  - Most effective under calm conditions
  - Should be coupled with recovery when used to protect sensitive habitats
  - Not effective on heavy oils because oil must be fluid
- ***Debris Removal***
  - Debris may be associated with nests or living areas (e.g., beaver lodges), so impacts on resident animal habitat may need consideration
  - Operate from small boats to minimize substrate disruption
- ***Vegetation Removal***
  - If oil is trapped in floating vegetation, may be only way to recover the oil in the absence of water currents
  - May be appropriate to prevent secondary oiling of wildlife
- ***Physical Herding***
  - Care should be taken not to drive oil into the water column or sediment
- ***Visco-Elastic Agents/Solidifiers***
  - Visco-elastic agents, by improving overall oil recovery from the water surface, reduce secondary shoreline oiling
  - Not applicable to gasoline spills because of safety concerns during application and inhibition of evaporation
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

Probable Adverse Habitat Impact

- ***Manual Oil Removal/Cleaning***
  - Inherent inefficiency of manual removal of fluid oils would require large crews or repeated entries, resulting in disruption to substrate and wildlife
  - Not applicable for gasoline spills because of safety concerns
- ***Mechanical Oil Removal***
  - May be needed where oil has heavily contaminated bottom sediments
  - May require very intrusive recovery techniques

Most Adverse Habitat Impacts

- ***Dispersants***
  - Inhibit the evaporation of gasoline spills
  - Shallow water depths and low dilution rates may result in high aquatic toxicity from oil/dispersant mixtures

Insufficient Information

- ***Emulsion-Treating Agents***
  - Not applicable to oils that do not form emulsions, such as gasoline
  - Insufficient toxicity data to evaluate environmental impact of shallow freshwater environment use
- ***Nutrient Enrichment and Natural Microbe Seeding***

- Not applicable to gasoline spills because they rapidly evaporate
- There is insufficient information on impact and effectiveness for other oil types
- There are special concerns about nutrient overloading in small, restricted water bodies.

Removal Methods

If the confined slick is thick enough, regular suction equipment may be used first; however, in most instances, a floating skimmer should be removed. If judged appropriate or useful, a surface collecting agent should be applied once the slick is isolated to facilitate the removal. The surface collecting agent will concentrate the product into a smaller area and make the floating skimmer work more efficiently. If the floating skimmer starts picking up excess water (slick becomes thin), do not stop using it if it is not removing any appreciable amount of product.

Additions of more surface collecting agent from time to time may improve the skimming efficiency of the skimmer. It will continue to concentrate the slick into a smaller area, thus making the film thickness greater. Drawing the boom closer to the bank as product is removed will also keep film of product thicker. However, when the slick becomes too thin, the skimmer should be stopped and an absorbent applied (with a boat if necessary) to remove the final amounts. The floating skimmer (if speed is a must) or hand skimmers (if water is shallow enough) or both can be used to pick up the product-soaked absorbent. Before pumping the product-soaked absorbent with a floating skimmer, ensure that the absorbent in question can be pumped and will not harm the pump. Several types are nonabrasive to pump internals. If the floating skimmer is used first, the product-soaked absorbent/water mixture should be pumped into a tank truck.

A better method of retrieving the product-soaked absorbent is to draw it in as close to the shore as possible with the booms used to confine the product initially. The absorbent can then be hand skimmed from the water surface and placed in drums, on plastic sheets or in lined roll-off boxes. It should then be disposed of by acceptable means.

The final rainbow on the surface can be removed with additions of more absorbent.

6.6.3 Spill on Small to Medium Size Streams (relatively fast-flowing creeks)

Confinement Methods

The techniques used for product containment on fast-flowing shallow streams are quite different from the ones used on lakes, ponds, or other still bodies of water. The containment and removal processes require a calm stretch of water to allow the product to separate onto the surface of the water. If a calm stretch of water does not exist naturally, a deep slow-moving area should be created by damming. The dam can be constructed by using sandbags, planks or earth. If a dam is required, it should be situated at an accessible point where the stream has high enough banks. The dam should be constructed soundly and reinforced to support the product and water pressure.

- Underflow dam - The underflow dam is one method that can be used, especially on small creeks. The water is released at the bottom, of the dam using a pipe or pipes which are laid during construction of the dam. The flow rate through the pipe must be sufficient to keep the dam from overflowing. One method is to lay the pipe at an angle through the dam (while dam is being constructed) so that the height of the downstream end of the pipe will determine the height the water will rise behind the dam.
- Overflow dam – Another method of containment is the overflow type dam. The dam is constructed so that water flows over the dam, but a deep pool is created which slows the surface velocity of the water. Therefore, the condition of a calm stretch of water is met. The overflow dam may be used where larger flow rates (medium size creeks) of water are involved.

  With this type dam, a separate barrier (floating or stationary boom) must be placed across the pool created by the dam. The separate barrier arrests the surface layer of product. At the same time, the water is flowing under the barrier and over the top of the dam. The barrier should be placed at an

angle of 45 degrees across the pool to decrease the effective water velocity beneath it. Also, it helps to concentrate the product at the bank and not all along the barrier. A second barrier should be placed approximately 10 to 15 feet downstream of the first one as a secondary back-up.

The stationary boom type barrier should be made of wood planks or other suitable material. The stationary boom should be soundly constructed and sealed against the bank. The ends of the planks can be buried in the banks of the stream and timber stakes driven into the stream bed for support as needed. The necessary length of the boom will be approximately 1-1/2 times the width of the waterway. The plank boom should extend six to eight inches deep into the water and about two inches or higher above the water level. If the increase in velocity under the stationary boom is causing release of trapped product, it should be moved upward slightly. At no time should barrier be immersed more than 20% of the depth of the pool at the barrier location; that is, if the pool created by damming is three feet deep, do not exceed an immersion depth of seven inches with the barrier at the position the barrier is installed.

Another method used with the underflow dam is having the pipe or pipes sized to carry only a portion of the flow needed. The pipe would be placed at the bottom of the dam and level with the creek bed. The remaining flow of the creek could be siphoned or preferably pumped around the dam from a point away from the dam and from the deepest portion of the pool. The pumping or siphoning can be controlled to maintain the desired water level at the dam. The key is the removal of water through or around the dam at the lowest point in the basin. This prevents the oil from escaping with the released water.

A floating boom can be used in place of the stationary type if the created pool's size (bank to bank) and depth will permit. Since changing the depth and/or length of a standard floating boom in a small stream is difficult, the use of the separation of product and water. The advantages of using a floating boom are the speed of deployment and the fact that there is no need for additional support as with the stationary boom.

- Multiple Impoundments – Since emergency built dams (either underflow or overflow) are seldom perfect, a series of dams is usually required. The first one or two will trap the bulk and the ones that are downstream will trap the last traces of product. Precautions should be taken to ensure that the foundations of emergency dams are not washed away by the released water. If earth is used to construct an overflow dam, a layer of earth-filled bags should be placed on top of the dam so erosion will not take place.

Small River and Stream Environments

Least Adverse Habitat Impact

- ***Booming***
  - Used primarily to divert slicks towards collection points in low-current areas
  - Safety concerns limit the containment of gasoline spills; however, booms can exclude or deflect the spill away from sensitive resources
  - Expect low effectiveness with fast currents, shallow water, and steep banks
- ***Skimming/Vacuum***
- To protect public health and downstream resources where spreading is limited, recovery of large gasoline spills could be attempted with firefighting foam to suppress vapors and respiratory protection for workers
- ***Sorbents***
  - Deploy in booms to recover sheens in low-current areas and along shore
  - Trampling of stream bank and bed habitats during deployment and recovery of sorbents can disrupt streamside vegetation and drive oil into the sediment
  - Overuse results in excess waste generation

- ***Barriers/Berms***
  - Potential for physical disruption and sediment contamination in immediate area of the barrier/berm
  - If all or most of the flow is diverted, may need to monitor water requirements to habitats downstream of the barrier to mitigate potential impacts
  - Safety concerns limit actions at gasoline spills, although berms built ahead of the slick could be used to exclude oil from sensitive areas, such as side channels

Some Adverse Habitat Impact

- ***Physical Herding***
  - May be only means to flush oil trapped in log jams, beaver dams, behind rocks, and in vegetation debris along banks to downstream collection areas
  - Spraying of gasoline spills can mix the oil into the water column
- ***Natural Recovery***
  - For small gasoline and diesel-like oil spills, evaporation and natural dispersion would rapidly remove surface slicks
  - For all other types and sizes of spills, recovery of free or pooled oil and/or protection of sensitive resources should be attempted
- ***Debris Removal***
  - Will release trapped oil and speed natural flushing rates
- ***Visco-Elastic Agents/Solidifiers***
  - Visco-elastic agents may speed recovery of contained oil when time is critical
  - Solidifiers may immobilize even gasoline spills, preventing their transport downstream and further impact
  - Ineffective on heavy oils, which are too viscous to allow the product to mix into the oil.
- ***Vegetation Removal***
  - May be needed to remove oil trapped in floating and fringing vegetation
  - Remove oiled vegetation to prevent chronic sheening in sensitive areas or secondary oiling of wildlife
  - Monitor crews to minimize physical disturbance, which can be severe
- ***In-Situ Burning***
  - May be difficult to protect stream-side vegetation
  - Safety concerns limit containment of gasoline, but may be safely used if natural containment is present
  - Less impact in winter when snow/ice provide some protection, plants are dormant, and fewer animals are present
  - May not be practical in fast flowing streams where containment and maintenance of minimum slick thickness (1-3 millimeters) may be difficult

Probable Adverse Habitat Impact

- ***Manual Oil Removal/Cleaning***
  - Viable for heavy oils that have solidified versus fluid oils that have spread
  - Stream bank disruption likely from movement of work crews

- ***Mechanical Oil Removal***
  - Only consider when large amounts of solidified oil have accumulated in the stream channel and need to be removed quickly

Most Adverse Habitat Impact

- ***Dispersants***
  - Enhanced mixing of oil into the water column with restricted dilution will increase acute toxicity to aquatic organisms
- ***Herding Agents***
  - Toxicity concerns when early life stages are present
  - May not be practical due to fast currents and rough water surface
  - Oil must be fluid, so not appropriate to heavy oils

Insufficient Information

- ***Emulsion-Treating Agents***
  - Insufficient toxicity data to evaluate environmental impact of shallow freshwater environment use
  - Not applicable to oils that do not form emulsions, such as gasoline
- ***Nutrient Enrichment and Natural Microbe Seeding***
  - Not applicable to gasoline spills because they rapidly evaporate
  - There is insufficient information on impact and effectiveness, particularly for applications in small rivers and streams

Removal Methods

Once the containment dams are constructed, the problem or removal of the product from the water surface should be the prime consideration. The removal must be continuous or else build-up of product behind the dams or booms might lead to product escaping the traps.

The type of removal procedures used depends largely on the amount of product being trapped in a given span of time, if the amount of product moving down the stream is of sufficient quantity, the first dam or fixed boom would quite possibly trap enough for the floating skimmer to work efficiently. The skimmer will pump the product and possibly some water to a tank truck or other holding tank. Separated water may be released from the bottom of the tank truck if it becomes necessary. The absorbents (straw, ground corncobs, or other stocked absorbent) could then be used at downstream dams or booms. It is inadvisable to place an absorbent in the stream prior to or at the first dam in anticipation of the arriving product. Let the product accumulate at the first dam and use the floating skimmer to recover the product.

Disposal of gross amount of product-soaked absorbent would not then be a problem. Follow directions on use of each absorbent. Some are designed to be placed on water before product arrives (straw and other new types); others are intended only to be placed on the product after it accumulates on the water (ground corncobs and others). Plastic sheets should be used to place the product- soaked absorbent on as it is hand skimmed from the water. Alternatively, the material may be placed in drums or lined roll-off boxes.

If the amount of product in the stream is minor, a straw-bale may be constructed to filter out the product. The slowing of the water would not be necessary, but several dams might be necessary to ensure complete removal. The downstream dams would also offer protection when the upstream bales are removed, releasing traces of product. Straw-bale dams can also be used downstream from underflow and overflow dams for added protection.

Thus, the containment and removal of spilled product on small to medium fast-flowing streams might require a combination of underflow or overflow dams, fixed booms, skimmers, absorbents, and straw-bale dams to ensure a complete cleanup.

6.6.4 Spill on Large Streams and Rivers

Confinement Methods

The containment techniques differ considerably on large streams and rivers versus small streams. First, the smooth calm area of water necessary for product-water separation must be found along the stream or river rather than making one as with small streams. Floating booms (rather than fixed booms or dams) must be used to trap the surfaced product.

Local conditions of current and wind must be considered when selecting the site for the boom. A point with a low water velocity near the bank, sufficient depth to operate the product removal equipment, and good access are required. The fact that wind may tend to concentrate the product against one bank must be considered. A smooth, undisturbed area of water is required immediately upstream of the boom to ensure that the product has opportunity to separate out onto the surface. The boom should be positioned where the current is at a minimum. It is more effective to boom at a wide, slow position than on a narrow, fast stretch of water.

If the booms are positioned straight across a river or stream, at right angles to the flow, surface water tends to dive beneath the barrier (boom) when current velocities exceed about ½ knot (0.8 ft./sec.). However, if the current of the entire river is ½ knot or less, then a boom can be positioned straight across the river or large stream, but angled slightly in relation of the banks. By placing the boom at an angle to the banks, product on the surface is diverted along the boom to the side of the river.

The current velocity is usually much slower near the river bank than in the center and the product will move along the boom toward the bank for removal. A water-tight seal between the bank and the boom is essential. A secondary boom should be set up immediately downstream of the first one to capture the amounts that escape the upstream boom. A boom can be employed parallel to the river flow at the bank to form the seal with the booms used to trap the product.

Where the current velocity of the chosen site exceeds ½ knot, the boom should be positioned in two smooth curves from a point of maximum velocity (usually the center of the river) to both banks. However, this double-boom required product to be removed from both sides of the river. To determine the appropriate angle of boom placement and support (mooring) needed to hold the booms in position, the current velocity should be measured by timing a floating object which is 80% submerged over a distance of 100 feet. A time of 60 seconds over this distance indicates a water current of approximately 1 knot. For currents from 1 to 2.5 knots (1.7 to 4.2 ft./sec.), the more the boom will have to be angled acute to the bank. The length of the boom will have to be such to reach the center of the river. For currents between ½ and 1 knot (0.8 and 1.7 ft./sec.), the angle of employment can be enlarged.

The major load on the boom is taken by the terminal moorings, particularly the one in the center of the river. However, intermediate moorings are also required both to maintain the smooth curve of the boom to prevent breaking of the boom and to assist with preventing skirt deflection. The intermediate moorings are preferably positioned every 25 feet and must be adjusted to avoid the formation of indentations in the boom profile. These trap product in pockets, prevent its deflection to the bank, and also encourage diving currents. The moorings' ropes should be five times the water depth.

In certain situations, it might be advantageous to position booms to deflect the approaching spilled product to a slower moving area. Naturally, additional booms would have to be positioned around this slower moving area prior to deflecting the product to the area. This approach has been used along rivers that have lagoons, etc., with a very low current action. The recovery would take place in the lagoons and not along the river bank.

Large River Environments

Least Adverse Habitat Impact

- ***Booming***

- Used primarily for diverting slicks towards collection points in low-current areas
- Safety concerns limit the containment of gasoline spills; however, booms can be used to exclude or deflect the spill away from sensitive resources

- ***Skimming/Vacuum***
  - Not applicable to gasoline spills because of safety concerns

Some Adverse Habitat Impact

- ***Natural Recovery***
  - For small gasoline and diesel-like spills, evaporation and natural dispersion would rapidly remove surface slicks
  - For all other types and sizes of spills, oil recovery and/or protection of sensitive resources should be attempted

- ***Physical Herding***
  - May be needed to flush oil trapped in debris, eddies, etc. toward recovery devices
  - Water spray onto gasoline spills will likely enhance mixing of the product into the water column

- ***Sorbents***
  - Not applicable to gasoline spills because of safety concerns and inhibition of evaporation
  - May not be practical for large rivers because oil will spread and drift rapidly
  - Overuse results in excess waste generation

- ***In-Situ Burning***
  - May not be practical in rivers because oil will spread rapidly
  - Containment and maintenance of minimum thickness for burning (1-3 millimeters) is difficult in fast currents

- ***Emulsion-Treating Agents***
  - Not applicable for gasoline products, which do not emulsify

- ***Vegetation Removal***
  - May be considered where oil is trapped in floating vegetation along shore and in eddies
  - Removal of oiled vegetation may be required to prevent secondary oiling of wildlife or chronic sheening

- ***Debris Removal***
- River debris can trap persistent oils, causing chronic sheening and exposure of aquatic resources
- ***Visco-Elastic Agents/Solidifiers***
  - Not applicable to gasoline spills because of safety concerns during application and inhibition of evaporation
  - Recovery of treated oil may be difficult
  - May not be practical in rivers because oil will spread and drift rapidly
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

- ***Manual Oil Removal/Cleaning***

- Concentrations of heavy oils that have hardened into solid or semi-solid masses can be manually picked up, from boat or shore
- Hand tools can be used to pick up small accumulations of oiled debris
- Operations conducted from boats minimize potential for habitat disruption by trampling onshore

- ***Mechanical Oil Removal***
  - May be needed to recover large amounts of oil/oily debris trapped in booms or along shore
  - Equipment can be operated from barges with less impact; shore-based operations are likely to cause localized disruption of shoreline habitat

Probable Adverse Habitat Impact

- ***Dispersants***
  - Inhibit the evaporation of gasoline spills
  - Not effective on heavy or weathered oils
  - For large spills, limited dilution of dispersed oil in rivers likely to raise toxicity concerns
  - Impacts on water intakes downstream would have to be evaluated

Most Adverse Habitat Impact

- ***Herding Agents***
  - High currents make proper application difficult and carry product away
  - Not applicable to heavy oils because oil must be fluid

Insufficient Information

- ***Nutrient Enrichment and Natural Microbe Seeding***
  - Not applicable to gasoline and diesel-like oil spills because they rapidly evaporate
  - There is insufficient information on impact and effectiveness for other oil types, particularly for applications in rivers

Open Water Environments

Least Adverse Habitat Impact

- ***Booming***
  - Most effective in low-wave conditions and slow currents
- Safety concerns limit the containment of gasoline spills; however, booms can be used to exclude or deflect the spill away from sensitive resources
- ***Skimming/Vacuum***
  - Effectiveness limited by current velocities and widely spread, thin sheens
  - Not applicable to gasoline spills because of safety concerns
- ***In-Situ Burning***
  - Most appropriate in offshore, rather than nearshore, areas
  - More difficult to ignite emulsified and heavy oils and sustain the burn
  - Safety issues for workers, vessels, and aircraft must be addressed
  - Not applicable to gasoline spills due to safety concerns and containment difficulties
- ***Natural Recovery***

- Low impact except for medium- to heavy-category oils, which are persistent and would eventually strand on shorelines

Some Adverse Habitat Impact

- ***Physical Herding***
  - May be needed under calm conditions to move oil toward recovery devices
  - Water spray onto gasoline likely to mix the product into the water column
- ***Sorbents***
  - Not a stand-alone technique except for very small spills
  - Inhibit the evaporation of gasoline spills
- ***Vegetation Removal***
  - May be appropriate if oil is trapped in floating vegetation
- ***Emulsion-Treating Agents***
  - Not applicable to oils that do not form emulsions, such as gasoline
- ***Visco-Elastic Agents/Solidifiers***
  - Not appropriate to gasoline spills because of safety concerns during application and inhibition of evaporation
  - The recovery of treated oil must be considered
  - Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
- ***Dispersants***
  - Inhibit the evaporation of gasoline spills
  - Use requires comparing the impact of dispersed versus undispersed oil
  - Not effective on heavy or weathered oils
- ***Herding Agents***
  - Most effective under calm conditions
  - Not applicable to heavy oils because oil must be fluid
  - Inhibit the evaporation of gasoline spills
- ***Manual Oil Removal/Cleaning and Mechanical Oil Removal***
  - Effective only when heavy oils have solidified into large masses
  - Complete removal of heavy oil is rarely achieved

Insufficient Information

- ***Nutrient Enrichment and Natural Microbe Seeding***
  - Not applicable to gasoline and diesel-like oils because they rapidly evaporate
  - There is insufficient information on impact and effectiveness for other oil types, particularly for open-water applications in fresh water

Removal Methods

The product collected upstream of the floating booms in a large stream or river should be removed from the water surface as it accumulates. Regular suction equipment, a floating skimmer, and/or absorbents (including absorbent booms) should be used to remove the product as appropriate to the quantity being trapped in a given span of time. If the amount moving down the stream is of sufficient quantity, the

primary floating boom would possibly trap enough for the floating skimmer to work efficiently. The skimmer will pump the product and some water to a tank truck or other holding tank.

The absorbents (type that can be placed on water before product arrival straw is an example) would then be used upstream of the secondary boom to absorb the underflow from the primary boom. An absorbent boom (Sea-Serpent) or other stocked absorbent boom can also be placed between the primary and secondary booms to help the other absorbents control the underflow from the primary boom. If the underflow from the primary boom is significant, then the type absorbent which can be placed on the water only after product is collected may be used. An example of this type of absorbent is ground corncobs. It is best to hand skim the saturated absorbents and place on plastic sheets. However, if the absorbent used can be pumped after product absorption and speed of removal is a necessity, the floating skimmer can be used to remove the product-soaked absorbent.

The disadvantage of pumping the product-soaked absorbent to a truck is the volume that will accumulate (skimmer will pump excess water) and the disposal problems associated with the large water/product-soaked absorbent mixture.

If the volume of product moving toward the boomed area is expected to be small, an absorbent (straw) should be placed in the river upstream of the primary and secondary booms. If regular booms are not necessary, a screen filter could be stretched across the river to contain the straw, or an absorbent boom could be constructed by tightly fastening hay bales together, forming a chain. Boats (either rented or furnished by contractors) would be necessary to retrieve the product-soaked absorbents.

6.6.5 Spill on Stream which Flows into Lake or Pond

There are certain locations along the pipeline where streams (small and large ones) flow into lakes or ponds at relatively short distances from the pipeline. It is conceivable that a spill that reached the streams in question could reach or almost reach the lakes before containment and recovery operations could be set up. If time permits for containment operations to be set up on the stream in question, it then would be handled as described above depending upon the stream size involved.

However, if product in the stream is near the lake site or if product is flowing into the lake with a significant amount yet to arrive, a different containment should be employed.

Confinement Methods

Product on a stream flowing into a lake should be boomed as close to the entrance as possible. The boom should be positioned on the lake at an angle to the residential stream current so as to direct the surface water to a slower moving area. The area where the product is being deflected should be enclosed by booms to contain it. An additional boom for sweeping the product to the bank will be required. This area of containment should not have a current velocity of more than 1/2 knot (0.8 ft./sec.), preferably less.

Removal Methods

The removal of product from the lake or pond's surface would be handled as described earlier.

For sizable releases, collected product will usually be pumped into tank trucks and transported to a storage facility. Tank trucks are available at several locations throughout.

6.6.6 Spill in Urban Areas

Oil spills in urban areas can greatly impact recreational use, human health, wildlife habitat(s), and potential beach or park closures. Manmade structures along waterways require unique protection strategies. Manmade structures could include vertical shore protection structures such as seawalls, piers, and bulkheads, as well as riprap revetments and groins, breakwaters, and jetties. Vertical structures can be constructed of concrete, wood, and corrugated metal. They usually extend below the water surface, although seawalls can have beaches or riprap in front of them. These structures are very common along developed shores, particularly in harbors, marinas, and residential areas. The range in degree of exposure to waves and currents varies widely, from very low in dead-end canals, to very high on offshore breakwaters. Boat wakes can generate wave energy in otherwise sheltered areas.

Maintaining shipping or other kinds of vessel traffic through navigation channels or waterways during a spill response is a difficult consideration because there is usually economic and political pressure to re-establish normal operations as soon as possible. This consideration extends to vehicular traffic through urban areas. Deploying booms and skimmers or constructing recovery sites can conflict with such traffic for several days. Also, passage of deep-draft vessels through the waterway can suddenly change water level and flow or create wakes, causing booms to fail. For these reasons, recovery efforts must be coordinated through the Unified Command to ensure the cooperation of all parties involved.

6.7 List of Threatened and Endangered Species in Georgia

A list of species near the area that are classified as threatened and endangered species is provided in Section 6.5. The following is a listing of endangered/threatened species with known or possible occurrence in the State of Georgia by the Environmental Protection Agency and U. S. Fish and Wildlife Service.

Table 6.3 - Threatened and Endangered Species in Georgia

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Stork, wood AL, FL, GA, SC	*Mycteria americana*	Marshes, swamps, lagoons, ponds, flooded fields; also occurs in brackish wetlands	E	Georgia
Acornshell, southern	*Epioblasma othcaloogensis*	Freshwater with strong currents and coarse particle substrates	E	Georgia
Bat, gray	*Myotis grisescens*	Caves and mines; rivers adjacent to forests	E	Georgia
Bat, Indiana	*Myotis sodalis*	Caves, mines, upland forests	E	Georgia
Campion, fringed	*Silene polypetala*	Well-drained, sandy-loam soils of deciduous woods, usually hillsides	E	Georgia
Chaffseed, American	*Schwalbea americana*	Acidic, sandy or peaty soils in open pine flatwoods	E	Georgia
Clubshell, southern	*Pleurobema decisum*	Sand and gravel in the center of the stream or in sand along the margins of the stream	E	Georgia
Combshell, upland	*Epioblasma metastriata*	Shoals in rivers and large streams	E	Georgia
Coneflower, smooth	*Echinacea laevigata*	Openings in woods, such as cedar barrens and clear cuts, and on dry limestone bluffs	E	Georgia
Darter, amber	*Percina antesella*	Flowing pools and deeper runs with clean substrates of sand and fine gravel with boulders	E	Georgia
Darter, Etowah	*Etheostoma etowahae*	Riffles of streams with moderate to strong current over gravel or cobble substrate	E	Georgia
Dropwort, Canby's	*Oxypolis canbyi*	Pond cypress savannahs, cypress/pond pine ponds, sloughs, and wet pine savannas	E	Georgia
Grass, Tennessee yellow-eyed	*Xyris tennesseensis*	Moist to wet seepage slopes, springy meadows, and banks of small streams	E	Georgia
Harperella	*Ptilimnium nodosum*	Rocky or gravelly shoals of clear, swift-flowing streams	E	Georgia
Kidneyshell, triangular	*Ptychobranchus greenii*	Freshwater, moderate gradient, pool, riffle	E	Georgia

Table 6.3 - Threatened and Endangered Species in Georgia				
COMMON NAME	**SCIENTIFIC NAME**	**HABITAT**	**STATUS**	**STATE**
Leather flower, Alabama	*Clematis socialis*	Silt and clay of alluvial, grass-sedge openings along a highway right-of-way	E	Georgia
Logperch, Conasauga	*Percina jenkinsi*	Deep, fast-flowing chutes and pools	E	Georgia
Manatee, West Indian	*Trichechus manatus*	Shallow coastal waters, estuaries, bays, rivers, and lakes	E	Georgia
Meadowrue, Cooley's	*Thalictrum cooleyi*	Open, savanna-like forest edges and clearings	E	Georgia
Moccasinshell, Coosa	*Medionidus parvulus*	Sand and gravel in highly oxygenated, clear streams with moderate flow	E	Georgia
Moccasinshell, Gulf	*Medionidus penicillatus*	Streams and rivers where there is a moderate current and sand and gravel substrates	E	Georgia
Moccasinshell, Ochlockonee	*Medionidus simpsonianus*	Sand and gravel substrates in moderate current	E	Georgia
Pigtoe, oval	*Pleurobema pyriforme*	Medium-sized creeks to small rivers with silty sand to sand and gravel substrates	E	Georgia
Pigtoe, southern	*Pleurobema georgianum*	High quality rivers with stable gravel and sandy-gravel substrates	E	Georgia
Pitcher-plant, green	*Sarracenia oreophila*	Wet areas, bogs swamps and moist woods and sandy floodplains	E	Georgia
Pocketbook, shinyrayed	*Lampsilis subangulata*	Muddy sand and sand in slight to moderate current	E	Georgia
Pondberry	*Lindera melissifolia*	Floodplain hardwood forests and forested swales	E	Georgia
Quillwort, black spored	*Isoetes melanospora*	Shallow, flat-bottomed, temporary pools formed in depressions on granite outcrops	E	Georgia
Quillwort, mat-forming	*Isoetes tegetiformans*	Shallow, flat-bottomed, temporary pools formed in depressions on granite outcrops	E	Georgia
Rattleweed, hairy	*Baptisia arachnifera*	Open sandy areas within longleaf pinesaw palmetto flatwoods	E	Georgia
Salamander, Reticulated flatwoods	*Ambystoma bishopi*	Wet pine flatwoods and pine savannas	E	Georgia
Sawfish, smalltooth	*Pristis pectinata*	Shallow coastal waters of tropical seas and estuaries; sheltered bays, on shallow banks, and in estuaries or river mouths	E	Georgia
Sea turtle, hawksbill	*Eretmochelys imbricata*	Clear offshore waters off the mainland and on island shelves	E	Georgia
Sea turtle, Kemp's ridley	*Lepidochelys kempii*	Shallow areas with sandy and muddy bottoms	E	Georgia
Sea turtle, leatherback	*Dermochelys coriacea*	Warm sands of tropical beaches	E	Georgia
Sturgeon, shortnose	*Acipenser brevirostrum*	Rivers, estuaries, and the sea	E	Georgia

Table 6.3 - Threatened and Endangered Species in Georgia				
COMMON NAME	**SCIENTIFIC NAME**	**HABITAT**	**STATUS**	**STATE**
Sumac, Michaux's	*Rhus michauxii*	Sandy or rocky open woods	E	Georgia
Three-ridge, fat (mussel)	*Amblema neislerii*	Channels of small to large rivers in slow to moderate current	E	Georgia
Torreya, Florida	*Torreya taxifolia*	Rich, dark, sandy loam soils of hardwood hammock slopes, ravines, and bluffs	E	Georgia
Trillium, persistent	*Trillium persistens*	Deciduous or conifer-deciduous woods of ravines or gorges	E	Georgia
Trillium, relict	*Trillium reliquum*	Mesic hardwood forests	E	Georgia
Whale, finback	*Balaenoptera physalus*	Offshore ocean waters	E	Georgia
Whale, humpback	*Megaptera novaeangliae*	Surface of the ocean	E	Georgia
Whale, right	*Balaena glacialis (incl. Australis)*	Surface of the ocean	E	Georgia
Woodpecker, redcockaded	*Picoides borealis*	Open pine forests with large, widely-spaced older trees	E	Georgia
Amphianthus, little	*Amphianthus pusillus*	Vernal pools on granite outcrops of the southeastern Piedmont	T	Georgia
Bankclimber, purple (mussel)	*Elliptoideus sloatianus*	Gravel or muddy sand substrates in large rivers or streams	T	Georgia
Button, Mohr's Barbara	*Marshallia mohrii*	Seasonally wet glades or openings in woods with exposed rock and sandy clay soil	T	Georgia
Darter, Cherokee	*Etheostoma scotti*	Small to medium warm-water creeks	T	Georgia
Darter, goldline	*Percina aurolineata*	Small to medium rivers in areas of whitewater rapids and substrates of bedrock, boulders, rubble and gravel	T	Georgia
Darter, snail	*Percina tanasi*	Sand and gravel shoals of moderately flowing, vegetated, large creeks	T	Georgia
Moccasinshell, Alabama	*Medionidus acutissimus*	Margins of streams with a typical sand and gravel substrate in clear water of moderate flow	T	Georgia
Pink, swamp	*Helonias bullata*	Acidic wetlands	T	Georgia
Plover, piping except Great Lakes watershed	*Charadrius melodus*	Sandy beaches, islands	T	Georgia
Pocketbook, finelined	*Lampsilis altilis*	Creek, high gradient, low gradient, medium river, moderate gradient, riffle	T	Georgia
Pogonia, small whorled	*Isotria medeoloides*	Cidic soils, in dry to mesic second-growth	T	Georgia
Salamander, frosted flatwoods	*Ambystoma cingulatum*	Mesic longleaf pine, wiregrass, flatwoods and savannas	T	Georgia
Sea turtle, green except where endangered	*Chelonia mydas*	Coasts, open sea	T	Georgia
Sea turtle, loggerhead	*Caretta caretta*	Estuaries, coastal streams and salt marshes	T	Georgia

Table 6.3 - Threatened and Endangered Species in Georgia				
COMMON NAME	**SCIENTIFIC NAME**	**HABITAT**	**STATUS**	**STATE**
Shiner, blue	*Cyprinella caerulea*	Sand and gravel substrate among cobble in cool, clear water	T	Georgia
Skullcap, large-flowered	*Scutellaria montana*	Rocky, well-drained, slightly acidic slope, ravine, and stream bottom forests	T	Georgia
Snake, eastern indigo	*Drymarchon corais couperi*	Hardwood forests, moist hammocks, pine flatwoods, prairies, and around cypress ponds	T	Georgia
Spiraea, Virginia	*Spiraea virginiana*	Flood-scoured banks of high-gradient mountain streams, point bars, and natural levees	T	Georgia
Tern, roseate Western Hemisphere except NE U.S.	*Sterna dougallii dougallii*	Coastal islands and beaches	T	Georgia
Water-plantain, Kral's	*Sagittaria secundifolia*	Undammed riverine reaches or among loose boulders in sands, gravels, and silts in pools	T	Georgia

Figure 6.1 - Environmental Sensitivity Maps

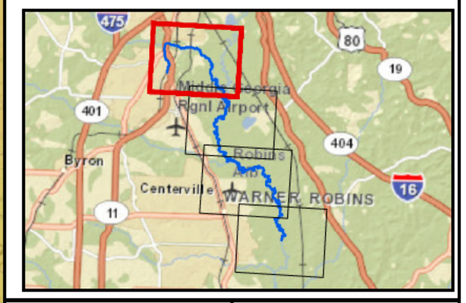
US 41/129
Tobesofkee
Norfolk Southern RR
Intermittent Stream
Electric Trans ROW
Itermittent Stream
Intermittent Stream
Wetland 2
Houston Road
Lake 1
Wetland 1
Industrial Area
Allen Road
Norfolk Southern RR
Macon Terminal
Jeep Trail
Johns Branch
Jeep Trail
Ocmulgee River
Bond Swamp National Wildlife Refuge
2.0
2.5
3.0
3.5
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
1.5
1.0
0.5
0.0

Epic
USGS 24K Topographic Map
with Spill Flow Direction

Figure 6.1

Legend

- Sensitive Receptors
- Flow Route
- Bond Swamp NWR
- NWI Wetland Polygons
- Terminal



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Projection	Datum	Page Size
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Jeep Trail
8.0
Ocmulgee River
8.5
Bond Swamp
9.0
9.5
Griffin RD/Jeep Trail
Intermittent Stream
10.0
10.5
11.0
Intermittent Stream
11.5
12.0
12.5
13.0
13.5
14.0
14.5
15.0
Sand Pits

Bond Swamp National Wildlife Refuge

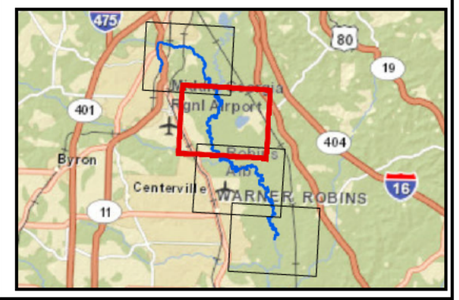
GRIFFIN ROAD
JEEP TRAIL
FEAGIN ROAD
SOUTHERN
Avondale
Trailer Park
Cochran Field Academy
Reids
TAILINGS POND
Huber
Claypit Cem
DENSON
Dry MARSH
Stone Creek
Branch
Creek

Epic
USGS 24K Topographic Map
with Spill Flow Direction

Figure 6.1

Legend

- Sensitive Receptors
- Flow Route
- Bond Swamp NWR
- NWI Wetland Polygons
- Terminal



AECOM
AECOM
27755 DIEHL RD. SUITE 100
WARRENVILLE, ILLINOIS 60555
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FAX: (630) 836-1711
WEB: HTTP://WWW.AECOM.COM

Date
September 2012

Project

Epic

Projection	Datum	Page Size
UTM 17N M	NAD83(CORS 96)	11x17
Designed	Approved	Project Number
MG	JT	60266996-20

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Epic
USGS 24K Topographic Map
with Spill Flow Direction

Figure 6.1

Legend

- Sensitive Receptors
- Flow Route
- Bond Swamp NWR
- NWI Wetland Polygons
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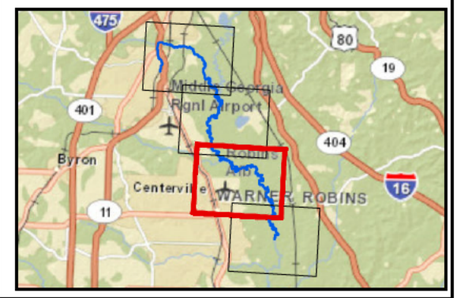

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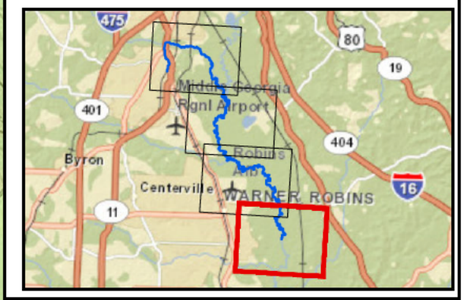
Bullard Landing
25.0
Jeep Road
25.5
26.0
26.5
27.0
27.5
Jeep Road
Horse Creek
28.0
End of Planning Distance at 28.52 Miles
28.52

Epic
USGS 24K Topographic Map
with Spill Flow Direction

Figure 6.1

Legend

- Sensitive Receptors
- Flow Route
- Bond Swamp NWR
- NWI Wetland Polygons
- Terminal



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Appendix A
Response Resources

Appendix A
Response Resources

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A.1. Response Equipment/Resources

The following sections outline the various response equipment/resources available from the Facility, other Epic facilities, Oil Spill Removal Organizations (OSROs), and other outside resources.

A.1.1 Facility Response Equipment

Emergency response equipment that is available on-site in the event of a release is listed in Table A-1. An Emergency Response Equipment Inspection Form is provided in Section A.13 and exercised semi-annually as detailed in Appendix D. The facility holds only incidental response equipment, which does not require extensive testing or deployment. Epic response equipment is tested and inspected as noted below. The Terminal Manager is responsible for ensuring that the following response equipment and testing procedures are implemented. These consist of:

Containment Boom: During semiannual boom deployment exercises, booms will be inspected for signs of structural deficiencies. If tears in fabric or rotting are observed, booms will be repaired or replaced. In addition, end connectors will be inspected for evidence of corrosion. If severe corrosion is detected, the equipment will be repaired or replaced. After use, these materials are properly disposed and replaced by new equipment.

Miscellaneous Equipment: Other response equipment identified in this Plan, comprising hand tools and fire extinguishers, will be inventoried and tested on a semiannual basis to ensure that the stated quantities are in inventory and in proper working order. After use during any emergency response, this equipment will be cleaned and rendered fit for its intended use before operations are resumed. The equipment inspection and deployment exercises are recorded and maintained at the facility and retained for a period of five years. Exercise requirements are listed in Section 1.13. A Spill/Exercise Documentation form, Emergency Response Equipment Inspection Form and Equipment Deployment Exercise Form are included in the ERAP and provided in Sections A.12, A.13, and A.14, respectively. A Spill Equipment Deployment Log is included in Section A.15.

The Qualified Individual has the authority to activate other Epic resources or that of private contractors and other experts and consultants as the situation demands.

A.1.2 Other Company Resources

For tank cleaning and spill cleanup, the Mason Terminal utilizes Prim Industrial Contractors, Inc., in Macon, GA. For waste disposal, the facility uses Liberty Environmental Solutions, Inc., based in Ponte Vedra Beach, FL.

A.1.3 Contract Resources

In addition to the response equipment available on site, the Terminal has a contract with First Environmental Nationwide, Inc. to provide emergency response services. Evidence of the emergency response contract is provided below in Section A.9. Telephone reference is provided in Table 2-7. A list of the emergency response equipment maintained by with First Environmental Nationwide, Inc. is provided in Section A.10 and a training matrix for First Environmental Nationwide, Inc. is provided in Section A.11.

The OSRO will periodically test and deploy equipment and provide the documentation to the Facility. *(Note: Epic will ensure that each OSRO has a comprehensive maintenance program and applicable training / drills programs in place at contract renewal).*

A.1.4 Experts and Consultants

Epic maintains a relationship with various environmental and technical consultants that can provide support in the event of an emergency incident. These consultants can provide expertise and support in

the areas of emergency response management, environmental services, site assessment, permitting, waste treatment, recycling, dewatering, hazardous waste disposal, and remediation.

A.1.5 Volunteers

Volunteers will not be utilized by Epic for the response operations. All volunteers will be referred to the State or Federal On-Scene Coordinator.

A.2. Communications

Effective and efficient communications systems are essential for emergency response at every level. The communications system will be utilized to gather information and current status reports as well as to provide coordination and direction to widely separated work groups involved in search, containment/ diversion, repair, traffic control, public control or evacuation, and restoration.

Lines of communication between the QI/AQI, Facility Response Team and the corporate support team members are via two-way radio and cell phones. Communication of the overall spill response operation between Epic and the responsible government agencies in the Federal Regional Response Team (RRT) will occur between the QI and the Federal On-Scene Coordinator.

A.3. Central Communications System

The notification procedures and telephone contacts documented in Section 2.0 will be reviewed in accordance with the earlier documented updating procedures. The predetermined communications channels include the following:

- A list of emergency telephone numbers for internal management and emergency response personnel (Section 2).
- A list of emergency telephone numbers for various external resources such as the fire and police department, medical, and regulatory agencies (Section 2).
- A list of emergency telephone numbers for contract response resources (Section 2).

A.4. Communications Equipment

Field communications during a spill response to a small or medium discharge will be handled via two-way radios and cell phones between QI, Facility Response Team and subcontractors. Communication may also be handled via fax machines and computers. In the event of a Worst-Case Discharge, field communications will be enhanced with other Epic and contract resources as the situation demands.

A.5. Facility Owned Emergency Response Equipment Lists

Table A.1 - Facility Owned Spill Response Equipment

TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS
SORBENTS			
Absorbent Boom	50 feet	Warehouse	Operational
Absorbent Pads	4 bundles	Warehouse	Operational
HAND TOOLS			
Rakes and Shovels	2 each	Warehouse	Operational

TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS
FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT			
Dry chemical fire extinguisher	4	Loading Rack	Operational
Dry chemical fire extinguisher	4	Impoundment 5 Area	Operational
Dry chemical fire extinguisher	1	Company Truck	Operational
Dry chemical fire extinguisher	2	Main Office	Operational

A.6. Equipment Limitations

Winds, currents and wave action seriously reduce the ability of boom to contain and of skimmers to recover oil. When containment and recovery is attempted it is important to select equipment that is suitable for the type of oil and the prevailing weather and lake conditions. Efforts should target the heaviest oil concentrations and areas where collection will reduce the likelihood of oil reaching sensitive resources and shorelines. Booms should not be towed at speeds greater than 0.5 knots, and wave height should be considered when determining booming strategies.

Because skimmers float on the water surface, they experience many of the operational difficulties which apply to booms, particularly those posed by wind, waves and currents. Even moderate wave motion greatly reduces the effectiveness of most skimmer designs. In calm waters more satisfactory performance can be achieved provided the skimmer is suited to the viscosity of the oil in question.

A.7. Contracted Response Resources

Epic has ensured by contract the availability of private personnel and equipment (through First Environmental Nationwide, Inc.) necessary to respond, to the maximum extent practicable, to the worst case discharge or the substantial threat of such discharge. Since First Environmental Nationwide, Inc. is not a United States Coast Guard (USCG) classified OSRO, they are required to deploy and inspect the booms to meet National Preparedness for Response Exercise Program (PREP) guidelines. Epic requires that these exercises are completed annually.

Response times are based on 35 miles per hour for land (five knots for water) and take into account traffic, weather, and other environmental conditions that could restrict response efforts.

Table A.2 - Oil Spill Removal Organization

Company Name	Response Time
First Environmental Nationwide, Inc. 1266 Sixth Street Macon, Georgia 31206 (478) 477-2323 www.firstenvironmental.com	0.5 hours

In the event of a discharge which is beyond the initial response capabilities of the Facility Response Team and the Terminal's OSRO, contract manpower and equipment resources can be obtained through additional OSROs. These OSROs can provide manpower and containment/clean-up equipment for the response operation. The resources will be secured from an Epic approved contractor. The QI will typically handle Notification/implementation of these resources. Table A-3 provides a quick reference to additional Oil Spill Removal Organizations and details their response capability and estimated response times.

Table A.3 - Additional Response Resources	
Contractor Name	**Response / Mobilization Time**
Prim Industrial Contractors, Inc.	30 minutes
AECOM Environment (Epic Midstream, LLC EHS consultant)	15 minutes

A.8. OSRO Contract - First Environmental Nationwide, Inc.

First Environmental
NATIONWIDE

MASTER SERVICES AGREEMENT

This MASTER SERVICES AGREEMENT (this "*Agreement*"), is made and entered into this 13TH day of JUNE, 2012 (the "Commencement Date"), by and between First Environmental Nationwide, Inc., a Georgia corporation, at 1266 6th Street Macon, Georgia 31210 (hereinafter, "FENI") and EPIC MIDSTREAM LLC, a DELAWARE, LLC, located at the address 125 TOWNPARK DRIVE, STE 300, KENNESAW, GA 30144 (hereinafter, "Customer").

SUMMARY: The purpose of this Agreement is to provide terms and conditions for FENI to provide work to Customer. This Agreement defines the work to be performed, the manner of performance, and the duties and obligations of each party. It provides a mechanism for dispute resolution and indemnity in the case of losses arising from the services under this Agreement.

RECITAL: The parties hereby acknowledge that the purpose of this Agreement is to enable FENI immediately to begin Work upon verbal notification by Customer, streamlining the response time for performance of the Work. Customer hereby engages FENI to provide certain emergency response and / or environmental and industrial cleaning services for Customer or its clients or Payer's (as hereinafter defined) (the "Work"), under the terms and conditions of this Agreement. Customer understands that FENI will perform the Work in the most prompt and efficient manner practical, and Customer agrees to all terms and conditions herein.

1. This Agreement shall be executed in two (2) originals, one for the Customer and one for FENI. A facsimile of the Agreement bearing the signature of the Customer's authorized representative shall be sent to FEN at 478-477-1128 before commencement of the Work and one original returned via U.S. Mail to FENI's address. The term of this Agreement shall begin on the Commencement Date, and shall continue until terminated as herein provided. Notwithstanding anything herein to the contrary, this Agreement may be terminated immediately by either FENI or its Customer at any time during the term hereof and for any reason by providing written notice of termination hereof. Upon termination, Customer shall pay FEN for any costs of the Work completed to the date of termination.

2. It is understood that the nature of the Work performed under this Agreement is such that at the time the parties enter into this Agreement, a definite and complete scope cannot be accurately determined and, therefore, that a definite and complete cost of the Work must be determined upon completion of the Work.

3. Customer shall pay the cost of the Work and be solely responsible therefore, unless Customer and FEN agree and express in writing that Customer is the agent acting for or on behalf of a third party (the "Payer") and that such Payer is responsible for payment. Should Customer be an agent acting for or on behalf of a Payer, Customer's signature on the signature page of this Agreement shall represent and warrant its expression of same. Customer and/or such Payers represented by Customer may be required to provide FEN with information, at FENI's request and as FENI deems appropriate in its sole discretion, of the validity and scope of the Customer's agency and the financial position of such Payer(s). Should Customer not provide FEN with information adequate to establish Customer's agency as hereinabove expressed, Customer agrees that it shall be responsible for payment of the cost of all Work performed hereunder. All references to "Customer" in this Agreement shall include Customer and any Payer(s) represented by Customer, as the case may be; and Customer hereby represents and warrants that it has authority to bind said Payer(s) with regard to the terms and conditions of this Agreement.

4. The cost of the Work is to be determined upon completion and shall include the items listed in this paragraph and, where applicable, shall be in accordance with either FENI's published Emergency Work Rate Schedule or its Standard Rate Schedule, as amended from time to time at FENI's sole discretion, in effect on the date of the execution of this Agreement. Such Emergency Work Rate Schedule or Standard Rate Schedule, as amended from time to time, shall be deemed a part of this Agreement and incorporated as if fully set forth herein. The costs of the Work shall include: 1) costs incurred for personnel, equipment and other items as reflected in the Emergency Work Rate Schedule; 2) FENI's overhead costs incurred including, without limitation, costs for telephone, facsimile, cell phone, and travel; 3) direct costs including, without limitation, costs for permits, shipping, transportation, storage, and disposal or unloading fees; 4) any amounts expended for work required by any local, state or federal government entity or official, including costs of laboratory testing and other Work required to satisfy such entity or official as to the completeness or condition of the Work; 5) the cost of subcontractors engaged by FENI to perform all or part of the Work; 6) FENI's profit margin; and 7) any other Work-related costs.

MASTER SERVICES AGREEMENT Page 2

5. Customer agrees to pay the cost of the Work and/or Additional Work within 15 days of the date of Customer's receipt of FENI's invoice for the Work and/or Additional Work. If Customer fails to make payment within such 15 day time period, interest on the amount invoiced shall accrue at the rate of 1% per month for each day that such payment is late.

6. The Work performed under this Agreement shall comply with all applicable federal, state and local codes, laws, ordinances and regulations (the "law"); however, nothing in this Agreement shall be construed as imposing an liability or obligation upon FEN that the law imposes upon the person, entity or organization that generates or creates the environmental waste.

7. Customer shall reimburse FENI for any amounts that FENI expends in any effort to collect any payment, including, without limitation, the expenses of litigation, and attorney's fees.

8. To the fullest extent permitted by law, each party shall indemnify, defend and hold harmless the other and all of its affiliates, subsidiaries, officers, directors, employees, successors and assigns, from and against all claims, law suits, actions, losses, cost or expense, and damages, (collectively the "Claim") including reasonable attorneys' fees and reasonable costs of litigation, arising out of or resulting from the performance of the Work, provided that any such Claim: 1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use therefrom, and is caused or alleged to be caused in whole or in part by any act or omission of the other party or anyone directly or indirectly employed by the other party, or 2) arises out of or relates to the other party's performance under this Agreement, or results from any claimed failure of the other party to properly fulfill its obligations under this Agreement. This indemnity obligation shall not be construed to negate, or abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist under law. Such indemnity obligation shall not apply to an indemnified party where the claim is caused or allegedly caused by the sole negligence of such indemnified party.

9. Customer hereby designates BRIAN RUHOLT as its representative and point of contact for the purposes of administering this Agreement. Customer further designates and authorizes the following individuals to communicate with FENI directly and authorize (verbally or otherwise) FENI's performance of Work under the terms and conditions of this Agreement:

Print Name: BRIAN RUHOLT Title: REGIONAL OPERATIONS MGR.

Print Name: EDDIE NORLES Title: TERMINAL MGR.

Print Name:_____ Title:_____

Print Name:_____ Title:_____

Print Name:_____ Title:_____

10. The partial or complete invalidity of any provisions(s) of this Agreement shall not affect the validity or continuing force and effect of any other provision(s). No officer, director, employee, agent, or manager of the Customer or FENI shall have authority to modify this Agreement through such officer, director, employee, agent, or manager's course of conduct. This Agreement may only be modified by written amendment, signed by both parties hereto.

11. The parties agree that proper jurisdiction and venue for any and all disputes arising out of or related to this Agreement shall be in Bibb County, Macon, Georgia.

12. Except as hereinafter provided, it is the intention of both parties that no dispute under this Agreement shall initially be the subject of any court action or litigation in the court system. The parties recognize that the process of mediation is proper to resolve issues between the parties.

If any party wishes to resolve an issue under or relating to this Agreement, then such party must give notice of a request for mediation to the other party, which notice shall set forth the names of not less than four (4) court approved mediators from the lists available from the local circuit court. The party receiving such notice shall agree upon one or more of such mediators within seven days of receipt of such notice and mediation will be scheduled as soon as feasible between the parties and their respective advisors. The parties and their advisors will cooperate fully with respect to sharing of information and attendance at meetings in order to seek resolution. The parties will share mediation expenses with the party requested mediation to pay one-half of such expenses of the mediator fees and the other party to pay the other one-half of such expenses. However, if the mediator should find the charge of the complaining party to be groundless, the mediator may direct that all expenses shall be paid by the complaining party. If resolution of the matters between the parties cannot be resolved in mediation within thirty days of the selection of a mediator by the party receiving such notice, then, with the parties' mutual consent, the mediation shall terminate, and Section 12 of the Agreement shall apply to any action or proceeding thereafter.
It is the intention of the parties that this Agreement shall be construed and interpreted in a fair and equitable manner based upon the facts and circumstances of the parties, taking into account the present intention of the parties to have a fair and equitable agreement under the terms and conditions set forth herein.

MASTER SERVICES AGREEMENT Page 3

CUSTOMER:	FENI:
BY:	BY:
Title: CEO	Title: Vice Pres.

A.9. OSRO Equipment List

First Environmental Nationwide, Inc. Equipment List	
Commercial Heavy Vehicle Trucks	
2008 Guzzler Ace Wet/Dry Vacuum Truck	
2006 Guzzler Classic Wet/Dry Vacuum Truck w/ High Rails	
2001 Cusco Mastervac Wet/Dry High-Dump Vacuum Truck	
1995 Presvac Stainless Steel Wet/Dry Vacuum Truck w/ Static Interrupter	
2006 Peterbilt Roll-Off Straight Truck	
Pick-Up Trucks	**Trailers**
2008 Nissan ½-Ton Pickup (2)	Hose Trailer 14'-21' (2)
2007 Chevy 1-Ton Pickup (2)	Equipment Trailer 20'
2006 Chevy 1-Ton Pickup	Emergency Response Trailer 24' (2)
2011 Dodge 1-Ton Pickup	Emergency Response Trailer 20'
2012 Dodge 1-Ton Pickup (3)	Boom Deployment Trailer
Pressure Washer/Attachments	**Field Electronics**
10K-psi Water Blaster (3)	Hand-held Radio (6)
20K-psi Water Blaster	Digital Camera (5)
Pressure Cleaner 2500psi	Video Camera (2)
Steam Cleaner (2)	Laptop Computer (5)
3-D Tank Cleaning Nozzle	
2-D Pipe Cleaning Nozzle	
Line Lances (Rigid and Flex)	
Transfer Equipment	**Containment Equipment**
Diaphragm Pump 2" (3)	River Boom 12" (1200')
Diaphragm Pump 3" (1)	Boom Anchors (2)
In-line Valves	12' Work Boat
2" Transfer Hose (250')	12' Work Boat w/ motor
3" Transfer Hose (400')	14' Work Boat w/ motor
4" Transfer Hose (300')	18' Work Boat w/ motor
6" Transfer Hose (500')	Life Supporting Floats (5)
Trash Pump	Manta Ray Skimmer
Miscellaneous Discharge Hose (300')	Duck-bill Skimmer (2)
In-line Valves (ball/gate) (4)	Hazmat Hammock
Health & Safety Equipment	
SCBA's w/30-min. (8)	Personnel Fall Protection Wench (2)
Full Face Respirators (10) (Stock of various cartridge replacements)	6-Point Harness System w/Lanyards (10)
Cascade System	Portable Eye Wash Station (2)
Breathing Air Line (250')	Explosion Proof Lighting (2)
Drager Pump System (Stock of various tubes)	Grounding Cable (4)
Coppus Blower	Grounding Rods (4)
Venturi Blower	GFCI Plugs/Extensions (4)
PID	Work Tent (2)
4-gas Multi-meter (3)	Portable Fans (3)
Personnel Retrieval System (2)	

A.10. OSRO Training Matrix

First Environmental Nationwide, Inc. Training Matrix

Employee Name	Hire Date	Status	40 Hr. OSHA Training	Medical Surveillance	Resp. Medical	CPR/ First Aid	New Hire Orientation	8 hr. OSHA/ Refresher	Confined Space	Supv. Lock Out/Tag Out	Equipment Operation	RRT	LPS	Test Net	Meth Lab Training	Ethanol Training	GA Trans. QOQN
Scott Pilnicki	06/20/05	FT	05/18/07	04/30/12	04/30/12	11/13/09	06/21/06	03/23/12	03/23/12	01/18/09	4/10/2012	4/12/2012					
Louie Sampson	11/20/06	FT	07/27/07	02/16/12	02/16/12	11/13/09	11/21/08	02/16/12	03/23/12	01/18/07	4/10/2012	4/12/2012			02/07/12		
Dwight Bivens	11/04/08	FT	06/16/10	04/02/12	04/02/12	11/13/09	11/05/08	03/23/12	03/23/12	03/06/09	3/12/2012	4/9/2012	01/21/11		02/07/12		
George Reid	12/03/07	FT	04/30/04	04/30/12	04/30/12	11/13/09	12/04/07	03/23/12	03/23/12	01/18/07	4/10/2012		01/21/11	01/26/12	02/07/12	03/26/12	9/9/2011
Chad Phillips	07/13/09	FT	10/12/09	11/24/10	11/24/10	11/13/09	07/13/09	03/23/12	03/23/12		3/12/2012		01/21/11	01/26/12	02/07/12	03/26/12	
Raymond Gardner	01/18/10	FT	10/24/06	04/03/12	04/03/12	12/11/08	01/19/10	02/16/12	03/23/12	06/26/07		4/12/2012	01/21/11			03/26/12	
Josh Rozier	12/01/09	FT	04/30/04	03/16/12	03/16/12		12/01/09	03/23/12	03/23/12	05/20/09	4/10/2012	4/12/2012	01/21/11		02/07/12		
Robert Samuel	07/22/10	FT	10/15/10	02/16/12	02/16/12		07/22/10	02/16/12	03/23/12		4/10/2012	4/12/2012			02/07/12		
Marvin Williams	07/21/10	FT	04/03/98	02/20/12	02/20/12		07/21/10	02/16/12	03/23/12		4/10/2012	4/12/2012			02/07/12		
Jonathan Maxwell	02/07/11	FT	03/23/12	04/02/12	04/02/12		02/07/11	03/23/12	03/23/12		3/12/2012	4/9/2012			02/07/12	03/26/12	
Stacey Adcock	04/03/11	FT	07/13/09	04/02/12	04/02/12		04/03/11	03/23/12	03/23/12		3/12/2012	4/9/2012			02/07/12		
Jose Flores	11/19/10	FT	04/15/11	02/16/12	02/16/12		11/19/11	02/16/12	03/23/12		4/10/2012	4/12/2012			02/07/12		
Jonathan Maxwell	02/26/08	PT	10/04/10	02/26/08				10/07/10									
Fred Ingram	08/13/11	FT					08/13/11		10/21/11								
Heath Blodgette	08/07/11	FT	02/16/12	07/16/12	10/20/12		08/07/11	02/16/12	03/23/12			4/12/2012			03/12/12		
Deontrae Zeigler	02/22/12	FT	03/23/12	07/09/12	12/14/11		02/22/12	03/23/12	03/23/12		4/10/2012	4/12/2012					
Tamayo Adams	01/09/12	FT	03/23/12	01/11/12	01/11/12		01/09/12	03/23/12	03/23/12		4/10/2012	4/12/2012			02/07/12		
Stephen Mason	01/04/12	FT	10/12/10	02/16/12	02/16/12		01/04/12	03/23/12	03/23/12		4/10/2012	4/12/2012			02/07/12		
Charlie Richardson	0822/11	FT	03/23/12	02/20/12	02/20/12		08/22/11	03/23/12	03/23/12		4/10/2012	4/12/2012			02/07/12		
Derrian Ward	12/01/11	FT	02/16/12	12/01/11			12/10/11	02/16/12	02/16/12			4/12/2012			03/12/12		
Chris Minshew	10/31/11	FT	02/16/12	10/31/11			10/31/11	02/16/12	02/16/12			4/12/2012			03/12/12		
Myron Daniels	01/23/12	FT	02/16/12	07/16/12	07/16/12		01/23/12	02/16/12	02/16/12			4/12/2012			03/12/12		
Corey Johnson	08/02/10	FT	03/23/12	07/23/12	02/08/12		08/02/10	03/23/12	03/23/12		3/12/2012	4/12/2012			02/07/12		
Derek Woods	12/28/11	FT	02/16/12	12/28/11			12/28/11	02/16/12	02/16/12			4/12/2012			03/12/12		
Henry Gibson	08/29/11	FT	02/16/12	10/20/12	10/01/12		08/29/11	02/16/12	10/21/11			4/12/2012			03/12/12		
Jacob Oliver	05/11/12	FT		05/11/12			05/11/12										
Howard Gurley	05/21/12	FT		05/21/12	05/29/12		05/21/12										
Curtis Neal	07/31/12	FT	07/31/12	07/31/12			07/31/12										

A.11. Spill/Exercise Documentation Form

Date(s) performed:					
☐ Exercise	☐ Actual spill				
If exercise:					
☐ Announced	☐ Unannounced	☐ Deployment	☐ Notification	☐ Tabletop	
If exercise, frequency					
☐ Quarter	☐ 1st	☐ 2nd	☐ 3rd	☐ 4th	☐ Annual
Location of exercise/spill:					
Time started:					
Description of scenario or spill including volume and content (crude oil, condensate, etc.):					
Describe how the following objectives were exercised:					
Team's knowledge of the Oil Spill Response Plan					
				Yes	**No**
Was briefing meeting conducted:					
Established field Command Post:					
Confirmed source was stopped:					
Developed Site Safety and Health Plan:					
Prepared ICS 201:					
Established work zones and perimeter security:					
Developed short range tactical plan:					
Developed long range tactical plan:					
Proper Notifications					
Qualified Individual (or designee):					
Terminal Manager:					
Release/Spill Report Form completed:					
Notification to agencies completed (attach log):					
Transportation/Communication System					
Established primary/secondary communication system:					
Primary: ☐ Cellular phone	☐ Two way radio	☐ Land telephone line			
Secondary: ☐ Cellular phone	☐ Two way radio	☐ Land telephone line			
☐ Other					
Motor vessel deployed:					
Provider name:					
Helicopter/Sea plane deployed:					
Call sign:					

Describe function (i.e., transportation, surveillance, dispersant application):		
Ability to access contracted Oil Spill Removal Organizations (OSROs)		
Who contacted – (name of individual and OSRO):		
When contacted:		
Response time projection for deployment:		
Type and amount of containment used:		
Spilled material recovered:		
Spilled material disposed:		
Where?		
Ability to coordinate spill response with on-scene coordinator, state, and applicable agencies		
Was regulatory on-scene coordinator(s) contacted:		
List person and agency represented:		
Ability to access sensitive site and resource information in the Area Contingency Plan (ACP)		
Was pre-impact assessment conducted:		
Were pre-impact samples taken:		
Were pre-impact photographs taken:		
Were NRDA specialists mobilized:		
Were deficiencies identified:		
If yes, changes implemented:		
If no, why were changes not implemented:		

LESSONS LEARNED	PERSON RESPONSIBLE FOR FOLLOW-UP OF CORRECTIVE MEASURES
	Name:
	Position:
	Certifying Signature:

A.12. Emergency Response Equipment Inspection Form

Record Retention: 5 Years
Distribution: Local File
Frequency: Semi-Annual

Facility Name:		Date of Inspection:		Inspectors Signature:	
Location of response equipment:					
Note: This record should be kept in the Integrated Contingency Plan (ICP) for the affected facility.					

Equipment Description	Operational Status	Age	Date of most recent fuel change	Rated Capacity (skimmers and pumps only)	Containment Booms:		Absorption Capacity (sorbents only)
					Type	Containment Capacity	

A.13. Equipment Deployment Exercise Form

1. Date(s) performed: _____

2. Exercise or actual response? _____
   If exercise, is it announced or unannounced? _____

3. Deployment location(s):

4. Time started:_____ Time completed:_____

5. Equipment deployed was: ☐ Facility-owned
   ☐ Oil spill removal organization
   ☐ Both

6. List type and amount of all equipment (e.g., boom and skimmers) deployed and number of support personnel employed:

7. Describe goals of the equipment deployment and list any Area Contingency Plan strategies tested. List or examples? (Attach a sketch of equipment deployments and booming strategies):

8. For deployment of facility-owned equipment, was the amount of equipment deployed at least the amount necessary to respond to your facility's average most probable spill?

9. Was equipment deployed in its intended operating environment?

10. For deployment of OSRO-owned equipment, was a representative sample (at least 1000 feet of each boom type and at least one of each skimmer type) deployed?

11. Are all facility personnel that are responsible for response operations involved in a comprehensive training program, and all pollution response equipment involved in a comprehensive maintenance program?
    ☐
    If so, describe the program:

    Date of last equipment inspection: _____

12. Was the equipment deployed by personnel responsible for its deployment in the event of an actual spill? _____

13. Was all deployed equipment operational? If not, why not?

14. Identify which of the 15 core components of your response plan were exercised during this particular exercise: list?

15. Attach a description of lesson(s) learned and person(s) responsible for follow up of corrective measures.

_____
Certifying Signature

Retain this form and other documentation related to this exercise on file for a a minimum of 5 years (for EPA).

A.14. Epic Macon Terminal Owned Spill Equipment Deployment Log

DATE	LOCATION	SORBENTS	HAND TOOLS	FIRE APPARATUS

Appendix B
Worst-Case Discharge Analysis and Scenarios

Appendix B
Worst-Case Discharge Analysis and Scenarios

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B.1. Group I (Non-persistent) Oils

The Epic Macon Terminal is classified as a "Complex Facility" which operates in an inland area per definition below. Group I oils stored at the facility include jet fuel (JP-8) and comprise a large majority (~80%) of the product stored at the Terminal. Though the facility also uses and stores Group II and III oils, due to their comparatively small volume, calculations are not provided for these oil groups in this plan.

"Complex" means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act (CWA).

Complexes must perform discharge calculations for each jurisdictional agency and plan for the largest Worst-case Discharge Volume pursuant to the respective regulations.

B.1.1. EPA Response Planning Volume Calculations – Group I Oils:

Table B.1 EPA Discharge Volume Calculations – Group I Oils

- **Worst-case Discharge (WCD) – Group I Oil**

  100% of the largest single tank plus capacities of tanks

  (b) (7)(F) [redacted]

- **Medium Discharge (MD)**

  Discharge greater than 2,100 gallons (50 Bbls) and less than or equal to 36,000 gallons (857 Bbls) or 10% of the capacity of the largest tank, whichever is less and not to exceed the WCD

  MD = 857 Bbls of jet fuel

- **Small Discharge (SD)**

  Discharge of less than or equal to 2,100 gallons (50 Bbls), not to exceed the WCD

  SD = 50 Bbls of jet fuel

B.1.2. DOT/PHMSA Worst Case Discharge Volume Calculations

The worst case discharge (WCD) for the DOT/PHMSA portion of the pipeline and/or facility, as defined in 49 CFR 194.105(b), is the largest volume of the following:

1. The pipeline's maximum shut-down response time in hours (based on historic discharge data or in the absence of such data, the operators best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest drainage volume after shutdown of the line section(s) in the response zone expressed in barrels; or
2. The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels (cubic meters), based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or
3. If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.

Under PHMSA's current policy, operators are allowed to reduce the worst case discharge volume derived

from 49 CFR 194.105(b)(3) by no more than 75% if an operator is taking certain spill prevention measures for their breakout tanks and presents supporting information in the response plan. An operator can reduce the worst case discharge volume based on breakout tanks in the response zones as follows:

Spill Prevention Measures	Percent Reduction Allowed
Secondary containment capacity greater than 100% capacity of tank and designed according to NFPA 30	50%
Tank built, rebuilt, and repaired according to API Std 620/650/653	10%
Automatic high-level alarms/shutdowns designed according to NFPA/API RP 2350	5%
Testing/cathodic protection designed according to API Std 650/651/653	5%
Tertiary containment/drainage/treatment per NFPA 30	5%*
Maximum allowable credit or reduction	75%

* The facilities do not have tertiary containment

Based on available response capability, resources and geographic characteristics, two Response Zones have been established for the Epic Macon Terminal. Response Zone 1 incorporates the PHMSA-regulated portion of the Terminal, which includes Tanks 3001, 3002, 3003 and 5501, the entirety of the Plantation pipeline owned by the terminal, the entirety of the Norfolk Southern pipeline, and that part of the 12-mile Robins AFB pipeline that extends from the Terminal to Hawkinsville Road. Response Zone 2 includes the remainder of the Robins AFB pipeline, from the east side of Hawkinsville Road to Robins AFB. The PHMSA-regulated portion of the Terminal and the response zones are illustrated in Figure B-1.

Table B.2 - PHMSA Discharge Volume Calculations – Group I Oils – Response Zone 1

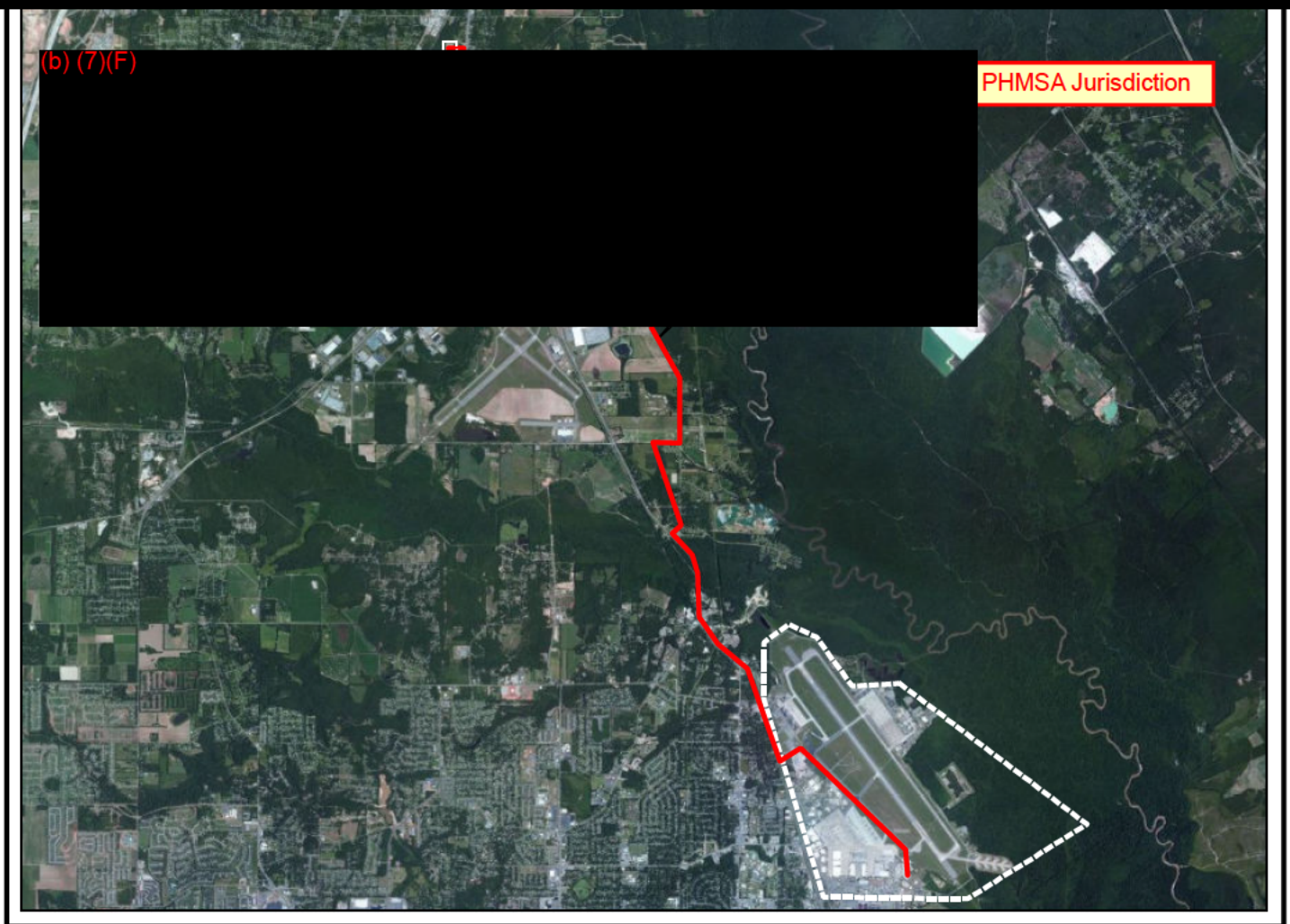
- **Worst-case Discharge – Group I Oil**

  Due to the relatively small volumes of the pipelines within Epic Macon Terminal Response Zone 1 compared to the volume of the largest tank battery, the WCD for Response Zone 1 is calculated as the adjusted capacity of the tank battery located in Impoundment 4. This includes Tanks 3001, 3002, and 3003. Epic has implemented all of the spill prevention measures, listed above, except tertiary containment. Therefore, the percent reduction allowed

(b) (7)(F) [redacted] *f the total volume.*

Figure B.1 – Map of PHMSA-Regulated portion of the Epic Macon Terminal and Response Zones

(b) (7)(F)



Path: Z:\GIS\Projects\EPIC\Macon_GA\MXD\Site_Vicinity_Map_ICP-B.1_2012.mxd

Integrated Contingency Plan
Epic Macon Terminal
Macon, Georgia
Project No.: 60266996.20
Date: 09/18/2012

MAP OF PHMSA-REGULATED PORTION OF THE EPIC MACON TERMINAL AND RESPONSE ZONES

[redacted]

Figure: B.1

(b) (7)(F)

The following planning volume calculations must be performed to determine the required response resources for a Worst-case Discharge:

Planning Volume for On-Shore Recovery (OSR)

OSR = WCD * % Oil On Shore * Emulsification Factor

Planning Volume for On-Water Recovery (OWR)

OWR = WCD * % Recovered Floating Oil * Emulsification Factor

Recovery Capacity (RC)

RC = OWR * On-Water Recovery Resource Mobilization Factors

The recovery capacity determined by these equations is compared to the appropriate response capability caps from the EPA tables, the actual contracted response amount is the lesser of the two values. If the calculated capacity exceeds the capability caps, sufficient response resources should be available for twice the amount of the caps or up to the total planning volume, whichever is less.

B.1.3. USCG/EPA Tables For Worst-Case Discharge Response Resources Determination and Removal Capacity Planning

Spill Location	(1) Rivers & Canals			(2) Nearshore/Inland/Great Lakes		
	3 Days			4 Days		
Sustainability of on-water oil recovery		D	E		D	E
Oil Group	% Natural Dissipation	% Recovered Floating Oil	% Oil On Shore	% Natural Dissipation	% Recovered Floating Oil	% Oil On Shore
I. Non-persistent oils	80	10	10	80	20	10
II. Light crudes	40	15	45	50	50	30
III. Medium crudes and fuels	20	15	65	30	50	50
IV. Heavy crudes and fuels	5	20	75	10	50	70

EMULSION FACTORS

F	
NON-PERSISTENT OIL	
Group I	1.0
PERSISTENT OIL	
Group II	1.8
Group III	2.0
Group IV	1.4
Group V	1.0

RESPONSE CAPABILITY CAPS (bbls/day)
(Maximum Required Recovery levels)

AREA	TIER 1	TIER 2	TIER 3
Rivers and Canals	1,875	3,750	7,500
Great Lakes	6,350	12,300	25,000
Inland/Nearshore	12,500	25,000	50,000

ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS

AREA	TIER 1	TIER 2	TIER 3
River	.30	.40	.60
Inland/Nearshore Great Lakes	.15	.25	.40

NOTE: These mobilization factors are for total resources mobilized, not incremental response resources.

RESPONSE TIME (hours)

AREA	TIER 1	TIER 2	TIER 3
Higher volume port area	6	30	54
All Other	12	36	60

B.1.4. EPA - Response Planning Volume Calculations Tables – Group I Oils

Table B.4 - EPA - Response Planning Volume Calculations Tables – Group I Oils			
Location Data			
Location Type			Nearshore/Inland/Great Lakes
Port Type			Non-High Volume
WCD Product Type			JP-8
Product Group			I
Capacity of the Largest Single Tank (bbls) Tank 5501			(b) (7)
Capacity of Tanks with Insufficient Secondary Containment (bbls)			0
Discharge Volumes/Calculations			
Average Most Probable or Small Discharge (bbls)			50
Maximum Most Probable or Medium Discharge (bbls)			857
Worst Case Discharge - Based on EPA criteria (bbls)			(b) (7)
EPA WCD Calculation: 100% * Capacity of the Largest Single Tank + 100% Capacities of Any Tanks with Insufficient Secondary Containment			
Selected Calculation Factors (Based on EPA Tables)			
Removal Capacity Planning Volume - Percent Natural Dissipation			80%
Removal Capacity Planning Volume - Percent Recovered Floating Oil			20%
Removal Capacity Planning Volume - Percent Oil Onshore			10%
Emulsification Factor			1
Tier 1 - On Water Oil Recovery Resource Mobilization Factor			15%
Tier 2 - On Water Oil Recovery Resource Mobilization Factor			25%
Tier 3 - On Water Oil Recovery Resource Mobilization Factor			40%
Response Planning Volume Calculations			
On-Water Recovery Volume (bbls)			(b) (7)(F)
Shoreline Recovery Volume (bbls)			
Shoreline Cleanup Volume (bbls)			
	Tier 1	Tier 2	Tier 3
On-Water Recovery Cpcty (bbls/day)	1,650	2,750	4,400
Shallow Water Resp Cpblty (bbls/day)	330	550	880
Storage Capacity (bbls/day)	3,300	5,500	8,800
On-Water Response Caps (bbls/day)	12,500	25,000	50,000
Additional Response Req'd (bbls/day)	0	0	0
Response Time (hrs)	12	36	60

B.1.5. Planning Distance Calculations

Table B.5 - Planning Distances			
Overland Transport to First Receptor			
First Receptor	Wetland		
Elevation difference between origin and receptor (feet)	45.00		
Horizontal distance between origin and receptor (miles)	0.82	4340	feet
Stream slope (no units)	0.01		
Hydraulic radius (feet) =r	0.67		
Manning's roughness coefficient (n)	0.04		
Velocity $v=1.5/n \times r^{2/3} \times s^{1/2}$ (feet/second)	2.92		
Planning Distance (known) in miles	0.82	4340	feet
c (conversion factor)	0.68		
Time to reach Receptor (hours)	0.41		
Time to reach Receptor (minutes)	24.88		
Total Elapsed Time (hours)	0.41		
Total Mileage	0.82		
First Receptor to Unnamed Lake			
Elevation difference between origin and receptor (feet)	25.00		
Horizontal distance between origin and receptor (miles)	0.37	1976	feet
Stream slope (no units)	0.01		
Hydraulic radius (feet) =r	0.67		
Manning's roughness coefficient (n)	0.04		
Velocity $v=1.5/n \times r^{2/3} \times s^{1/2}$ (feet/second)	3.22		
Planning Distance (known) in miles	0.37	1976	feet
c (conversion factor)	0.68		
Time to reach Receptor (hours)	0.17		
Time to reach Receptor (minutes)	10.26		
Total Elapsed Time (hours)	0.59		
Total Mileage	1.20		

Table B.5 - Planning Distances			
Overland Transport to First Receptor			
Oil Transport over Still Water - Unnamed Lake			
Oil Transport over Still Water - Unnamed Lake (length in miles)	0.27	1400	Feet
V - WCD Volume (gallons)	(b) (7)(F)		
C - constant conversion factor	0.16		
Surface Area of spill ($A=10^5*V^{3/4}*C$) (square feet)	973,523,744		
Radius of spill (R= Sqrt ((2*A)/Pi)) feet	24895		
Radius of spill (miles)	4.71		
Assuming 23 mile per hour wind and that the oil slick moves at 3 percent of the wind speed	0.69	miles/hour	
Time to cross Pond - Since the pond is 1400 feet (.27 miles) across, it will take 0.27 miles/0.69 miles/hour to reach the outlet (hours)	0.38		
Time to cross Pond (minutes)	23.06		
Total Elapsed Time (hours)	0.97		
Total Mileage	1.46		
Unnamed Lake to Tobesofkee Creek			
Elevation difference between origin and receptor (feet)	15.00		
Horizontal distance between origin and receptor (miles)	0.47	2475	feet
Stream slope (no units)	0.01		
Hydraulic radius (feet) =r	0.67		
Manning's roughness coefficient (n)	0.04		
Velocity $v=1.5/n\times r^{2/3}\times s^{1/2}$ (feet/second)	2.23		
Planning Distance (known) in miles	0.47	2475	feet
c (conversion factor)	0.68		
Time to reach Receptor (hours)	0.31		
Time to reach Receptor (minutes)	18.56		
Total Elapsed Time (hours)	1.28		
Total Mileage	1.93		

Table B.5 - Planning Distances			
Overland Transport to First Receptor			
Tobesofkee Creek to Ocmulgee River			
Velocity (From USGS)	1.41	ft/sec	
	5076.00	ft/hour	
Planning Distance (known) in miles	6.55	34595	feet
c (conversion factor)	0.68		
Time to reach Receptor (hours)	6.83		
Time to reach Receptor (minutes)	410.02		
Total Elapsed Time (hours)	8.11		
Total Mileage	8.48		
Ocmulgee River			
Velocity (From USGS)	1.56	ft/sec	
	5616.00	ft/hour	
Planning Distance in miles (d=v*t*c)	20.04		
c (conversion factor)	0.68		
Time to reach Receptor (hours)	18.89		
Time to reach Receptor (minutes)	1133.23		
Total Elapsed Time (hours)	27.00		
Total Mileage	28.52		

Additional sensitive receptors are listed in Table 6.2 and illustrated on Figure 6.1, both of which are provided in Section 6.

B.1.6. Response Capability Scenarios

The occurrence of a Small/Average Most Probable, Medium/Maximum Most Probable, or Worst-case Discharge could be the result of any number of scenarios at the Facility including:

- Loading and unloading operations.
- Facility maintenance operations.
- Facility piping.
- Pumping stations and sumps.
- Oil storage locations.
- Vehicle refueling operations.

The response actions to each of these scenarios are outlined in the following sections. Responses to the general classes of scenarios are also described in Section 3.1. The response resources, including detail on equipment and manpower, are identified in Appendix A. Facility response personnel list/telephone numbers and other internal/external resources telephone numbers are also detailed in Appendix A.

B.1.7. Discharge Scenarios for Group I Oils

The following table lists various facility operations and corresponding components which might be the source of a discharge and scenarios that might result in such a discharge.

Table B.6 - EPA – Discharge Scenarios for Group I Oils

Facility Operations and Components	Small Discharge (2,100 gallons or less of Group I Oils)	Medium Discharge (36,000 gallons of Group I Oils)	Worst Case Discharge (b) (7)(F) [redacted] ils)
Product Transfer Operations	Scenario 1 - Hose failure or truck overfill during transfer operations at the loading racks, resulting in a small spill into the loading rack containment area and oil/water separator system. Upset or failure of the oil/water separator system combined with a breach of the outer secondary containment system would be required for product to exit the Terminal.	Scenario 1 - A pump failure during truck loading or facility transfer operations in the loading racks, resulting in a medium spill into the loading rack containment area and oil/water separator system. Upset or failure of the oil/water separator system combined with a breach of the outer secondary containment system would be required for product to exit the Terminal.	Scenario 1 – A pump failure during facility transfer operations, coupled with a failure to identify and block in appropriate piping, resulting in the WCD, coupled with a breach or failure of the secondary containment system, allowing a WCD to exit the Terminal.
	Scenario 2 – A transfer pump failure that moves product between storage tanks, or between process units and storage tanks, resulting in a small spill into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 2 – The failure of a pump or pipe that transfers product between storage tanks and product pipelines, or between process units and storage tanks, coupled with a failure to block in appropriate piping, resulting in a medium spill into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 2 - A pump failure during facility product transfer operations, coupled with a failure to identify and block in appropriate piping, resulting in the WCD into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.

Table B.6 - EPA – Discharge Scenarios for Group I Oils			
Facility Operations and Components	**Small Discharge (2,100 gallons or less of Group I Oils)**	**Medium Discharge (36,000 gallons of Group I Oils)**	**Worst Case Discharge** (b) (7)(F) [redacted])
Facility Maintenance Operations	Scenario 1 – A release from a line that was not completely drained before opening, resulting in a small spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 1 – A release from a line that was not completely drained before opening or was not properly blocked in, resulting in a medium spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 1 – A release from a line that was not properly blocked in, allowing the contents of Tank 5501 to be completely drained, resulting in a WCD spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.
		Scenario 2 – A release from a line that was not properly blocked in, coupled with a failure to identify the release, coupled with a failure of the secondary containment system, allowing a medium spill of product to exit the Terminal.	Scenario 2 – A release from a line that was not properly blocked in, coupled with a failure to identify the release, allowing the contents of Tank 5501 to be completely drained, resulting in a WCD spill. A breach or failure of the secondary containment system would be required for product to exit the Terminal.
Facility Piping	Scenario 1 – A release from a flange, gasket, threaded connection, or piping failure that is not promptly identified and blocked in, resulting in a small spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 1 – A release from a flange, gasket, threaded connection, or piping failure that is not promptly identified and blocked in, resulting in a medium spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 1 – A release from a line that was not properly blocked in, allowing the contents of Tank 5501 to be completely drained, resulting in a WCD spill. A breach or failure of the secondary containment system would be required for product to exit the Terminal.

Table B.6 - EPA – Discharge Scenarios for Group I Oils			
Facility Operations and Components	**Small Discharge (2,100 gallons or less of Group I Oils)**	**Medium Discharge (36,000 gallons of Group I Oils)**	**Worst Case Discharge** (b) (7)(F) [redacted]
		Scenario 2 – A release from a flange, gasket, threaded connection, or piping failure that is not promptly identified and blocked in, coupled with a failure to identify the release, coupled with a failure of the secondary containment system, allowing a medium spill of product to exit the Terminal.	Scenario 2 – A release from a line that was not properly blocked in, coupled with a failure to identify the release, allowing the contents of Tank 5501 to be completely drained, resulting in a WCD spill. A breach or failure of the secondary containment system would be required for product to exit the Terminal.
Pumps and Sumps	Refer to Product Transfer Operations Small Spill Scenarios 1 and 2 above	Refer to Product Transfer Operations Medium Spill Scenarios 1 and 2 above	Refer to Product Transfer Operations WCD Scenarios 1 and 2 above
Oil Storage Tanks	Scenario 1 - Corrosion, material defect, or overfill of storage tanks resulting in a small spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 1 - Corrosion, material defect, or overfill of storage tanks resulting in a medium spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 1 - Corrosion, material defect, or overfill of Tank 5501, resulting in a WCD of product. A breach or failure of the secondary containment system would be required for product to exit the Terminal.
Age and Condition of Facility and Components	Scenario 1 – As a result of the age of the facility, corrosion of facility piping, tanks, or components that may be inadvertently missed in facility maintenance or inspection schedules could result in spills in the tank farm area, resulting in a small spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Scenario 1 – As a result of the age of the facility, corrosion of facility piping, tanks, or components that may be inadvertently missed in facility maintenance or inspection schedules could result in spills in the tank farm area, resulting in a medium spill of product into the secondary containment system. A breach or failure of the secondary containment system would be required for product to exit the Terminal.	Refer to Storage Tanks WCD Scenario 1 above

B.1.8. Descriptions of Factors Affecting Response Efforts

There are many factors which may affect the ability to respond to an incident. These factors are described in the following table:

Table B.7 – Factors Affecting Response Efforts

Factors	Considerations Affecting Response Efforts for Small, Medium, and Worst Case Discharges
Size of discharge	• Small or medium discharges would likely remain on site and in secondary containment, or would only travel a short distance off site • Breach of the outer secondary containment system could include physical breach of the dikes and/or improperly closed/broken dike drain valves. • In some rare cases, a small or medium discharge could reach Tobesofkee Creek. • All tanks are located within secondary containment dikes, and many have tertiary protection, since the impoundments are linked together with piping. • A release that reaches the unnamed impoundment located approximately 6,000 feet north of the Terminal could be substantially slowed by this impoundment, depending on the water level and wind/wave conditions.
Proximity to down gradient water intakes and well head protection areas	• There are no drinking water intakes within the planning distance. • There are no known wellhead protection areas that would be affected.
Proximity to fish & wildlife and sensitive environments	• The nearest sensitive receptor, a National Wetland Inventory (NWI)-mapped wetland, is located approximately 4,500 feet north of the terminal, between the Terminal and a surface impoundment located about 6,000 feet north of the terminal. • Beyond the first two miles, and to the end of the panning distance, a release would be contained within a large wetland/waterbody system that is part of the Tobesofkee Creek/Ocmulgee River watershed. • Four endangered plant species and no threatened/endangered animal species are identified within the three counties within the facility's planning distance. • Bond Swamp NWR is located near the end of the facility's planning distance.
Likelihood that discharge will travel offsite	• A small medium spill would likely remain on-site, but could travel offsite if the secondary containment system failed or was breached. • A medium or worst case spill would likely remain on-site, but could travel offsite if the secondary containment system failed or was breached. • A worst case discharge has the potential to travel a significant distance off site via Tobesofkee Creek and the Ocmulgee River, though it would have to travel about 2 miles before reaching Tobesofkee Creek.
Location of material spilled	• Spilled materials would float due to their specific gravity and would move down slope via gravity or as affected by currents and wind.
Material discharged	• Group I oils would spread quickly, would not generally emulsify, and would exhibit a high degree of evaporative loss under warm weather conditions.

Table B.7 – Factors Affecting Response Efforts	
Factors	**Considerations Affecting Response Efforts for Small, Medium, and Worst Case Discharges**
Weather or aquatic conditions	• The facility area has the potential to receive heavy rains and wind that would exacerbate containment and recovery operations, both on- and off-site. • Winter weather and ice conditions could significantly affect containment and recovery efforts.
Available remediation equipment	• The facility has sufficient remediation equipment, as described previously, to contain and recover small discharges. • For medium and worst-case discharges, facility personnel would initiate containment activities and would rely on response contractors to undertake recovery and clean-up activities.
Probability of a chain reaction or failures	• Chain reaction or failure is possible and could exacerbate containment and recovery operations, both on- and off-site.
Direction of spill pathway	• A WCD spill would flow downhill (and generally to the north-northeast).

Appendix C
Hazard Evaluation

Appendix C
Hazard Evaluation

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C.1 Hazard Identification

C.1.1 Loading / Unloading of Transportation Vehicles

The Facility conducts truck loading/unloading operations. These operations are typically conducted as follows:

Table C.1 - Loading/Unloading Operations

Truck Loading/Unloading	
Number of Loading Areas:	The Terminal has a four-bay tank truck rack. One bay has three nozzles, one bay has two nozzles and two of the bays have only one nozzle each.
Loading Rate:	857 bbls/hr/nozzle *(typical)*
Truck Capacity:	9,000 gallons (*maximum*)
Simultaneous	Eight trucks at one time
Loads per day:	4 to 8 trucks per day (*maximum*)
Products:	Diesel and JP-8

Pipelines

Plantation Pipeline

All of the product received, stored and dispensed at the Terminal is received via the pipeline or by truck (additives mostly).

Pipeline	Oil Group	Product(s)	Diameter (Inches)	Transfer Rate (bph)	Pipeline Length (Feet)
Plantation Pipeline	I and II/III	JP-8 and ULSD	6	1,200-1,300	2,900
Norfolk Southern Pipeline	II/III	ULSD	8	275	1,500
Robins AFB Pipeline	I	JP-8	4	300	~63,360 (12 mi)

C.1.2 Day-to-Day Operations

This Facility may store various types of commodities including but not limited to:

- Glycol Ether DM (FSII)
- JP-8
- Ultra Low Sulfur Diesel (ULSD)
- Stadis 450
- Transmix
- Unicor J Additive

The Facility has a total storage capacity of approximately 310,000 barrels with an average storage volume of 150,000 barrels. Product is received and shipped out via pipeline and truck. The key chemical and physical characteristics of each of these oils and/or other small quantity products/chemicals are identified in Material Safety Data Sheets (MSDSs). Copies of MSDSs are available at the facility at the Terminal main office. A table of commodity characteristics is included in Section C.4 of this Appendix.

The truck rack has four (4) lanes and is currently configured to issue JP-8, diesel and transmix. The truck rack is connected to a vapor combustion unit. The tank trucks loading racks have four collection drains at each bay that allow any pollutants to feed into an underground sand drain then to underground piping that gravity flows to the facility's oil/water separator. The oil portion goes to Tank #8 and the water portion

goes to Tank #1 and #2.

The day-to-day operations at the Facility that may present a risk of discharging oil or releasing a hazardous substance are:

- Truck loading/unloading operations for diesel and JP-8 (max rate of 857 bbls per hour - up to 9,000-gallon capacity)
- Product transfer between loading racks, storage tanks, and process units

Work such as piping replacement/repair is rare and would only be done on portions of the system that are isolated from the active system.

C.1.3 Terminal Transfer Operations, Pumping, and Facility Processes

C.1.3.1 Transfer Operations

Terminal personnel perform all loading of product at the Facility. Only Epic employees or authorized persons operate starter controls for loading or unloading of petroleum products. Epic secures all gates and does not allow unauthorized access to the facility. When Facility piping, including loading/unloading connections, is not in service, all openings and connections are securely capped and/or blank flanged to prevent accidental discharge of petroleum products.

C.1.3.2 Buried Piping Installations

Integrity and leak testing of buried piping shall be performed at the time of installation, modification, construction, relocation, or replacement. In the event that buried pipe is exposed for maintenance, it will be carefully inspected to identify any corrosion. Any corrosion of buried pipe shall require the affected area to be replaced and pressure tested prior to returning the pipe to service. All underground piping is equipped with a protective coating and included in the impressed current cathodic protection system.

C.1.3.3 Pipeline Out of Service

Out-of-service piping will also be properly labeled to identify the nature of the pipe condition. Any piping considered to be out of service will be disconnected from product transfer equipment and identified as such by the installation of caps and/or blind flanges.

C.1.3.4 Piping Supports

Pipelines are secured on pipe supports to prevent unnecessary movement that might allow the pipe to fall from the support. All piping is configured to allow for expansion, while minimizing abrasion that might cause deterioration of the steel. Pipe supports and associated piping are protected against corrosion by exterior coatings. Pipelines and supports are inspected monthly to determine conditions. All pipe supports have been designed and installed using applicable engineering techniques.

C.1.3.5 Aboveground Valves and Pipelines

Newly installed, modified, relocated, or replaced underground piping must be integrity and leak tested. Operators will inspect the product transfer areas daily, and correct any operations that show leakage. All Facility equipment, including pipelines and valves, shall be inspected monthly to verify the integrity of each item. Aboveground valve and pipeline inspections shall involve assessment of the general condition of items, including flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. In the event underground pipeline inspections identify excessive corrosion and/or actual leaks, the facility will pressure test these pipelines to verify their integrity. If a pipeline fails the integrity testing, the facility shall repair or replace the pipe prior to returning the pipeline to service.

C.1.3.6 Vehicular Traffic

All drivers are instructed to observe caution where overhead piping may interfere with the movement of

tank trucks. Epic has developed procedures for training new truck drivers on the use of the loading rack and associated equipment. Signs have been posted at the facility, warning drivers of the presence of aboveground piping. Loading racks and the driveways that lead to and from the loading racks have been designed to allow the unobstructed movement of tank trucks through the facility.

C.1.3.7 Tank Overfill

To prevent overfilling of bulk storage tanks, Epic personnel monitor all filling operations using direct "sidereading" level gauges and manual gauging techniques. Tanks are equipped with side reading automatic gauges. These gauges are utilized to directly verify product level in the tank without the requirement to handline the tank from the top. The side gauges are regularly inspected to verify their operational integrity.

Additionally, Epic personnel communicate with Plantation Pipeline personnel via telephone every two hours to very gauge readings and monitor inbound receipts. For the Robins pipeline a low/high pressure value setting is configured along with a leak detection setting on the computer system, and if any of the actual values hit the setpoints, the delivery system will shutdown.

C.1.3.8 Oil/Water Separator

The tank truck rack is a curbed concrete area which drains initially to an underground, three-stage oil/water separator (capacity 9,000 gallons). From the oil water separator, flow travels by pump to the Berm 2 area. From Berm 2, discharge is controlled by outfall valve. The oil/water separator has a capacity of 9,000 gallons. Approximately 75% of this volume (6,740 gallons) can be relied upon to handle a product surge.

C.1.4 Secondary Containment Volumes

For the majority of spill scenarios, the spilled material will be contained within a secondary containment structure. All of the tanks at the Epic Macon Terminal are located inside secondary containment berms with sufficient storage capacity. Calculations of the secondary containment volumes at the Epic Macon Terminal are provided in Appendix H.

C.1.5 Normal Daily Throughput

The Normal Daily Throughput for the Facility:

Normal Daily Throughput	Average Daily Storage	Total Storage
5,500 Bbls/Day	150,000 Bbls (Oil)	310,000 (Oil)

The Facility is manned Monday-Friday from 8AM to 4PM. Terminal personnel are on-call and available 24 hours a day, 7 days a week. The loading/unloading operations at the Terminal are conducted on an 8-hour (6AM to 2PM), 5-day basis and on weekends on a per-need basis.

(b) (7)(F)

[redacted]

(b) (7)(F)

Based on the maximum storage capacity of the tank, the following tanks pose the greatest risk for each Oil Product Group.

(b) (7)(F)

- Group I Oils (JP-8)
- Group II/III Oils (ULSD)

C.1.7 Hazard Identification Tank Table

A tank listing which provides potential causes of failure for each tank, and a direction of flow for a potential release from each tank at the Epic Macon Terminal is provided in Section C.5 of this Appendix. This table also lists the facility outfall number that would be first reached by a significant release.

C.1.8 Discharge Detection

Detailed information pertaining to discharge detection is located in Appendix H.

(b) (7)(F)

The probability of a spill occurring at this facility is minimal for the following reasons:

- Tanks are constructed in accordance with applicable engineering standards.
- Truck loading facilities are equipped with concrete pads with a spill collection drain system which returns spills to the recovery system.
- All trucks are monitored during tank unloading procedures.
- Facilities are inspected frequently for evidence of corrosion and leaks according to applicable API standards.
- Personnel are trained in procedures to prevent pollution.
- Natural disasters are not likely at this facility; however, this facility may experience flooding, hurricanes, tornadoes or a lightning strike.
- Epic personnel prepare for natural disasters by monitoring weather reports and warnings and taking appropriate safety precautions.
- The potential for a natural disaster is acknowledged, as appropriate, during drills and exercises.

C.2.1 Tank Age

Probability of AST failure due to tank age is moderate to low. The oldest tanks at the Macon Terminal are approximately 44 years old (constructed in 1968). While there is an underground tank associated with the facility's oil-water separator, there are no underground fuel storage tanks at the Terminal. Please refer to Section C.5 for a listing of individual tank ages.

C.2.2 Horizontal Range of a Spill

Secondary containment dikes at the Terminal will prevent the horizontal migration of a spill. A release in Impoundments 1, 2, or 3 would have to compromise two or more containment dikes to escape the secondary containment system, since these impoundments are linked together (cascaded into the next impoundment). Attenuations of any spilled material which might escape a diked area would be accomplished through the implementation of spill response activities by: (1) Facility personnel, or if necessary, (2) one of the spill response contractors listed in this Plan.

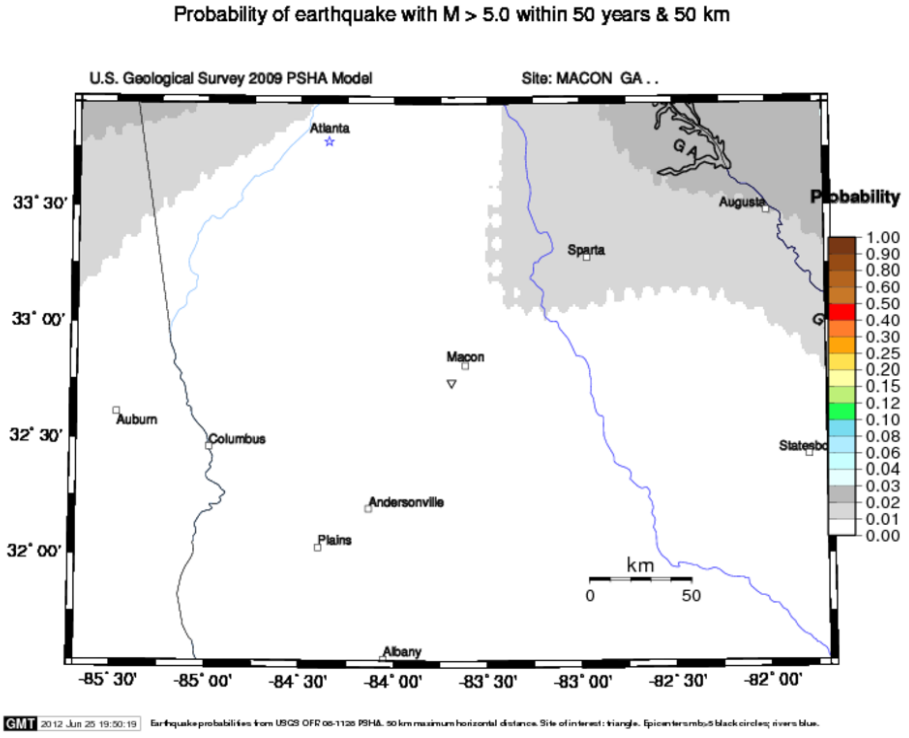
Nonetheless, the facility has the potential to cause substantial harm to environmental and economic receptors of concern along Tobesofkee Creek and the Ocmulgee River if a large discharge were to reach these resources. Please refer to Appendix B for discussion of the environmentally sensitive areas within the facility's planning distance.

Detailed drainage information for various portions of the Terminal is contained in Figure H.1 in Appendix H.

C.2.3 Vulnerability to a Natural Disaster

Earthquake

The seismic risk to the facility is low based on earthquake probability data for the Macon area as developed by the United States Geologic Survey. It is possible distant earthquakes may be felt and cause slight damage to poorly built structures, but no significant damage is predicted. The two historical earthquake events that had recorded magnitudes of 3.5 or greater near Macon, GA occurred in 1964 and 1983. There is a very small probability that Macon will experience an earthquake with a magnitude greater than 5.0 within the next 50 years. Below is a figure produced by the U.S. Geological Survey 2009 PSHA Model.



https://geohazards.usgs.gov/eqprob/2009/index.php

Hurricane

Macon has not received a lot of hurricane activity in the last few decades. In 1994, the brunt of Alberto hit Middle Georgia during hurricane season. The Ocmulgee crested at 35.4 feet, setting a record for the river's water level. Macon, Georgia is likely to experience storms from a hurricane after making landfall along the southeast coast, but because the City is located in the middle of the state, it is not susceptible to a direct hit.

Other Natural Occurrences

Severe weather which might produce high winds, frequent lightning, hail, and possibly tornadoes are likely to occur throughout the spring and summer months, and could damage either the tanks or the dike walls. According to the U.S. Tornado and Weather Extremes database of 1960-2010, there have been 55 historical tornado events with a recorded magnitude of 2 or greater found in or near Macon, GA.

C.3 Reportable Spill History

The Facility maintains a separate Oil Spill History file in the Facility's Environmental Office. The Facility's file contains the below listed information to the extent that such information is reasonably identifiable.

- Date of discharge.
- Location of discharge.
- Discharge cause(s).
- Material(s) discharged.
- Amount discharged.
- Amount of discharge that reached navigable waters.
- Amount recovered.
- Effectiveness and capacity of secondary containment.
- Clean-up actions taken.
- Steps taken to reduce possibility of recurrence.
- Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.
- Enforcement actions.
- Effectiveness of monitoring equipment.
- Description of how spill was detected.

The facility has had no reportable spills for the past five (5) years that affected navigable waters. Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. Spills are recorded using the Spill/Exercise Documentation Form in Appendix D of this plan.

C.4 Summary of Commodity Characteristics

The table below summarizes the hazardous characteristics, firefighting procedures and extinguishing agents, and a health hazard warning statement for each product stored at the facility.

Table C.2 - Summary of Commodity Characteristics

COMMON NAME	MSDS NAME	HEALTH HAZARD	FLASH POINT	SPECIAL HAZARD	REACTIVITY	DESCRIPTION OF APPEARANCE AND ODOR[a]	FIREFIGHTING PROCEDURES AND EXTINGUISHING AGENTS[a]	HEALTH HAZARD WARNING STATEMENT
FSII	Glycol Ether DM Fuel Add	1	2	N/A	0	Clear liquid, pleasant mild aromatic odor	For a small fire, use dry chemicals CO2, water spray or alcohol-resistant foam. For a large fire, use water spray, water fog or alcohol-resistant foam. Do not get water inside containers.	May irritate eyes, skin, and respiratory tract. CNS depressant. Combustible liquid
JP-8	Appropriate Product Name	2	2	C	0	Pale yellow liquid, petroleum/solvent odor	Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use straight streams of water. Use water spray to cool fire exposed surfaces and to protect personnel.	Combustible. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an incendiary electrical discharge. May cause dermatitis. May irritate skin, eyes, respiratory and digestive tracts, mouth, throat, nose, stomach. May cause CNS depression. Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss or coordination.
Ultra Low Sulfur Diesel	Appropriate Product Name	0	2	C	0	Color varies depending on specification, liquid, petroleum odor	Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.	Combustible liquid and vapor. Harmful or fatal if swallowed – may cause lung damage if swallowed. Causes skin irritation. Long term, repeated exposure may cause skin cancer
JP-8 Additive	Stadis® 450	2	3	C	0	Clear dark amber liquid, toluene odor	Use water spray, foam, dry chemical, or CO2 as extinguishing media.	May cause neurological effects and irritation to skin, eye, respiratory, lung, and gastrointestinal tract. Those with preexisting diseases of the central nervous system, cardiovascular system, bone marrow, liver or kidneys may have increases susceptibility. Exposure by inhalation may cause irritation of the upper respiratory passages, with coughing and discomfort; or possibly modest initial symptoms of lung irritation followed in hours by severe shortness of breath requiring prompt medical attention.
Transmix	Appropriate Product Name	1	3	C	0			May cause cancer. May irritate eyes, skin, and/or respiratory tract. May cause lung damage if swallowed. Toxic to aquatic organisms

Table C.2 - Summary of Commodity Characteristics

COMMON NAME	MSDS NAME	HEALTH HAZARD	FLASH POINT	SPECIAL HAZARD	REACTIVITY	DESCRIPTION OF APPEARANCE AND ODOR[a]	FIREFIGHTING PROCEDURES AND EXTINGUISHING AGENTS[a]	HEALTH HAZARD WARNING STATEMENT
Unicor J Additive	Appropriate Product Name	2	2	C	0	Yellow or brown liquid, petroleum odor	For a small fire, use dry chemical powder. For a large fire, use water spray, fog or foam. Do not use water jet.	Combustible liquid and vapor. Vapor may cause fire. May damage blood, kidneys, liver, respiratory tract, skin, CNS, eye, lens, cornea. May irritate skin and eyes. Possible cancer hazard.

Health Hazard	**4 = Extremely Hazardous** **3 = Hazardous** **2 = Warning** **1 = Slightly Hazardous** **0 = No Unusual Hazard**	**Fire Hazard (Flash Point)**	**4 = Below 73°F, 22°C** **3 = Below 100°F, 37°C** **2 = Below 200°F, 93°C** **1 = Above 200°F, 93°C** **0 = Will not burn**
Special Hazard	**A = Asphyxiant** **C = Contains Carcinogen** **W = Reacts with Water** **Y = Radiation Hazard** **COR = Corrosive** **OX = Oxidizer** **H_2S = Hydrogen Sulfide** **P = Contents under Pressure** **T = Hot Material**	**Reactivity Hazard**	**4 = May Detonate at Room Temperature** **3 = May Detonate with Heat or Shock** **2 = Violent Chemical Change with High Temperature and Pressure** **1 = Not Stable if Heated** **0 = Stable**
		[a]As required by 33 CFR 154.1035, USCG OPA 90 Requirements	

C.5 Tank Table

The following table lists information for each tank at the Epic Macon Terminal, including the tank contents, most likely cause of a release from the tank, the direction that a release would be expected to travel from the tank, and the outfall number most likely to be impacted by a release from that tank.

Table C.3 - Macon Terminal Tank Inventory

Tank No.	Failure/Cause	(b) (7)(F)	Tank Type	Direction of Flow/Rate (see Plot Plan)	Impoundment	Outfall	Product Stored
1	Overfill / Rupture / Leakage		Horizontal	North / Instantaneous	3	1	Petroleum Contact Water
2	Overfill / Rupture / Leakage		Horizontal	North / Instantaneous	3	1	Petroleum Contact Water
3	Overfill / Rupture / Leakage		Cone	North / Instantaneous	5	1	Additive
4	Overfill / Rupture / Leakage		Cone	North / Instantaneous	4	1	Additive
5	Overfill / Rupture / Leakage		Horizontal	North / Instantaneous	3	1	Empty
7	Overfill / Rupture / Leakage		Cone	North / Instantaneous	4	1	Transmix
8	Overfill / Rupture / Leakage		IFR	North / Instantaneous	3	1	Transmix
2001	Overfill / Rupture / Leakage		IFR	North / Instantaneous	1	1	Empty
2201	Overfill / Rupture / Leakage		Cone	North / Instantaneous	4	1	Empty
3001	Overfill / Rupture / Leakage		Cone	North / Instantaneous	4	1	ULSD
3002	Overfill / Rupture / Leakage		Cone	North / Instantaneous	4	1	JP-8
3003	Overfill / Rupture / Leakage		Cone	North / Instantaneous	4	1	JP-8
3004	Overfill / Rupture / Leakage		IFR	North / Instantaneous	3	1	Empty
3005	Overfill / Rupture / Leakage		IFR	North / Instantaneous	3	1	Empty

Table C.3 - Macon Terminal Tank Inventory

Tank No.	Failure/Cause	(b) (7)(F)	Tank Type	Direction of Flow/Rate (see Plot Plan)	Impoundment	Outfall	Product Stored
3006	Overfill / Rupture / Leakage		IFR	North / Instantaneous	4	1	Empty
3007	Overfill / Rupture / Leakage		Cone	North / Instantaneous	4	1	Empty
5501	Overfill / Rupture / Leakage		IFR	North / Instantaneous	2	1	JP-8
Drums	Overfill / Rupture / Leakage		Drum	North / Instantaneous	2, 4, 5	1	Waste
Load Rack Retains	Overfill / Rupture / Leakage		Horizontal	North / Instantaneous	N/A	OWS	Petroleum Mixture
OWS	Overfill / Rupture / Leakage		UST	North / Instantaneous	N/A	N/A	Petroleum Mixture

Containment Type : 1=Earthen Berm a arthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Dou Concrete Berm and Earthen, 9=Asphalt, Soil, and walls and Earthen Floor * Not in Containment Area, ** Curbing an

Figure C.1 - Terminal Tank and Piping Locations, Capacities and Contents

(b) (7)(F)

Appendix D
Training and Drills

Appendix D
Training and Drills

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D.1 Response Team Training

As a first line of defense against spills, which could reach navigable waters, terminal facility personnel are provided training in the procedures outlined in this Plan. Terminal employees are also provided emergency response training in accordance with Occupational Safety and Health (OSHA) regulations 29 CFR 1910.120 (q). Training ensures that facility personnel have a safe work environment. The most important training issues are ensuring the safety of these personnel and mitigating environmental impacts from facility operations.

Epic's QI shall ensure that all appropriate facility personnel are trained in the laws and regulations regarding spills and releases and pollution control, the contents of the ICP, and the operation and maintenance of equipment to prevent, contain, and affect countermeasures of discharges. The level of detail for employee training will depend on the person's level of responsibility for spill prevention and countermeasures and will be given additional training that may include "dry-run" training exercises to ensure a thorough understanding of spill prevention and countermeasures. The table below summarizes the training requirements for facility personnel.

Table D.1 - Facility Personnel Training Requirements

TRAINING TYPE	TRAINING CHARACTERISTICS
Training in use of spill response plan	1. All terminal personnel will be trained to properly report/monitor spills. 2. Plan will be reviewed annually with employees 3. The Personnel Response Training Log is located in Section D.4.
OSHA training requirements	1. All Epic responders designated in Plan must have 24 hours of initial spill response training. 2. Laborers having potential for minimal exposure must have 24 hours of initial oil spill response instruction and eight hours of actual field experience. 3. Responders having potential exposure to hazardous substances at levels exceeding permissible exposure limits must have 40 hours of initial training offsite and 24 hours of actual field experience. 4. On-site management/supervisors required to receive same training as equipment operators/general laborers plus eight hours of specialized hazardous waste management training. 5. Managers/employees require eight hours of annual refresher training.
Facility Response Team personnel training	1. See recommended PREP Training Matrix
Training for casual laborers or volunteers	1. Epic will not use casual laborers/volunteers for operations requiring HAZWOPER training.
Wildlife	1. Only trained personnel approved by USFWS and appropriate state agency will be used to treat oiled wildlife.
Training documentation and record maintenance	1. Training activity records will be retained for five years for all personnel following completion of training. 2. Epic will retain training records indefinitely for individuals assigned specific duties in the Plan. 3. Training records will be maintained at the Corporate office.

Spill prevention and countermeasure training will be conducted at least annually for all appropriate personnel with informal briefings periodically through the year to update employees on charges in the regulations, laws, or in-house procedures. Additional refresher training is provided on an as needed basis if new equipment and control techniques become available, if necessitated by personnel changes, or whenever the Plan is revised or amended to ensure that personnel are well versed in operating and spill response protocols. At a minimum the training curriculum addresses spill prevention and response procedures and any recently developed precautionary measures. Spills larger than incidental spills are responded to by terminal personnel and/or Epic Midstream spill response contractor. The spill response contractor (First Environmental Nationwide, Inc.) is an OSRO. The PREP Training Program matrix is provided below.

Table D.2 - PREP Training Program Matrix

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	CORPORATE SUPPORT TEAM	FACILITY RESPONSE TEAM
Environmental Protection Agency (EPA) Region in which the facility is located	X	X	X
Notification procedures and requirements for facility owners or operators, internal response organizations, federal and state agencies, and contracted oil spill removal organizations (OSROs) and the information required for those organizations	X	X	X
Communication system used for the notifications	X	X	X
Information on the products stored, used, or transferred by the facility, including familiarity with the material safety data sheets (MSDS), special handling procedures, health and safety hazards, spill and fire-fighting procedures	X	X	X
Procedures the facility personnel may use to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from facility operational activities associated with internal or external cargo transfers, storage, or use	X		
Facility personnel responsibilities and procedures for use of facility equipment which may be available to mitigate or prevent an oil discharge	X	X	X
Operational capabilities of the contracted OSROs to respond to small, medium, and large discharges	X	X	X
Responsibilities and authority of the QI as described in the Spill Response Plan and Company response organization	X	X	X
The organization structure that will be used to manage the response action including: • Command and control • Public information • Safety • Liaison with government agencies • Spill response operations • Planning • Logistics support • Finance	X	X	X

Table D.2 - PREP Training Program Matrix			
TRAINING ELEMENT	**QUALIFIED INDIVIDUAL (QI)**	**CORPORATE SUPPORT TEAM**	**FACILITY RESPONSE TEAM**
The responsibilities and duties of each Emergency Management Team (EMT) within the organization structure	X	X	
The drill and exercise program to meet federal and state regulations as required under Oil Pollution Act of 1990 (OPA 90)	X	X	X
The role of the QI in the post discharge review of the Plan to evaluate and validate its effectiveness	X		
The Area Contingency Plan (ACP) for the area in which the facility is located	X	X	X
The National Contingency Plan (NCP)	X	X	X
Roles and responsibilities of federal and state agencies in pollution response	X	X	X
Available response resources identified in the Plan	X	X	
Contracting and ordering procedures to acquire OSRO resources identified in the Plan	X	X	
OSHA requirements for worker health and safety (29 CFR 1910.120)	X	X	X
Incident Command System / Unified Command System	X	X	
Public affairs	X	X	
Crisis management	X	X	
Procedures for obtaining approval for dispersant use or in-situ burning of the spill	X		
Oil spill trajectory analyses	X		
Sensitive biological areas	X	X	
This training procedure as described in the Plan for members of the corporate support team		X	
Procedures for the post discharge review of the Plan to evaluate and validate its effectiveness		X	
Basic information on spill operations and oil spill cleanup technology including: • Oil containment • Oil recovery methods and devices • Equipment limitations and uses • Shoreline cleanup and protection • Spill trajectory analysis • Use of dispersants, in-situ burning, bioremediation • Waste storage and disposal considerations		X	
Hazard recognition and evaluation		X	
Site safety and security procedures		X	
Personnel management, as applicable to designated job responsibilities		X	X
Specific procedures to shut down affected operations			X

Table D.2 - PREP Training Program Matrix			
TRAINING ELEMENT	**QUALIFIED INDIVIDUAL (QI)**	**CORPORATE SUPPORT TEAM**	**FACILITY RESPONSE TEAM**
Procedures to follow in the event of discharge, potential discharge, or emergency involving the following equipment or scenarios: • Tank overfill • Tank rupture • Piping or pipeline rupture • Piping or pipeline leak, both under pressure or not under pressure, if applicable • Explosion or fire • Equipment failure • Failure of secondary containment system			X
QI's name and how to contact him or her			X

In addition to the regular employee training, Epic will schedule annual briefings to assure that employees have current knowledge of spill prevention techniques and associated equipment. The record of these briefings will be documented using the forms included with this Plan. Employees are instructed in applicable pollution control laws, rules, and regulations.

D.2 National Incident Management System

The corporate support team will receive ICS training and may also receive supplemental training in other related general topics. Epic Midstream, LLC uses the National Incident Management System (IS-100 and IS-200 mandatory, IS-700 and IS 800 are mandatory for command and general staff).

All Epic Midstream, LLC site personnel and site visitors will receive an orientation on the applicable portions of the site EMP to apprise them of their expected actions and to ensure their safety in the event of an emergency.

Personnel assigned specific duties during an emergency will receive training appropriate to their respective assignments. Satisfactory completion of the training will be required prior to an individual assuming an Emergency Management (Oil Spill) Response Organization position assignment as detailed in Section 4.0 of this Plan.

D.3 Response Team Exercises

Facility Response Team members, government agencies, contractors, and other resources must participate in response exercises required by Federal, state, or local regulations and as detailed in the "National Preparedness for Response Exercise Program (PREP) Guidelines." Epic will conduct announced and unannounced drills to maintain compliance, and each plan-holder must participate in at least one exercise annually. The EHS Specialist or designee is responsible for the following aspects:

- Scheduling
- Maintaining records
- Implementing
- Evaluation of the Company's training and exercise program
- Post-drill evaluation improvements

The PREP Response Plan contains the following core components:

1. Notifications: Test the notifications procedures identified in the ACP and the Spill Response Plan.

2. Staff mobilization: Demonstrate the ability to assemble the spill response organization identified in the ACP and the Spill Response Plan.
3. Ability to operate within the response management system described in the Plan.
    - Unified Command: Demonstrate the ability of the spill response organization to work within a unified command.
    - Response management system: Demonstrate the ability of the response organization to operate within the framework of the response management system identified in their respective plans.
4. Source control: Demonstrate the ability of the spill response organization to control and stop the discharge at the source.
5. Assessment: Demonstrate the ability of the spill response organization to provide initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.
6. Containment: Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.
7. Recovery: Demonstrate the ability of the spill response organization to recover, mitigate, and remove the discharged product.
8. Protection: Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the ACP and the respective industry response plan.
9. Disposal: Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.
10. Communications: Demonstrate the ability to establish an effective communications system throughout the scope of the Plan for the spill response organization.
11. Transportation: Demonstrate the ability to establish effective multi-mode transportation both for execution of the discharge and support functions.
12. Personnel support: Demonstrate the ability to provide the necessary logistical support of all personnel associated with response.
13. Equipment maintenance and support: Demonstrate the ability to maintain and support all equipment associated with the response.
14. Procurement: Demonstrate the ability to establish an effective procurement system.
15. Documentation: Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.

A sample training exercise that addresses the core components of the PREP is provided as ICP Training and Table Top Exercise Form, in Section D.5.

The following table lists the triennial exercise cycle for facilities (see PREP Guidelines for full details).

Table D.3 - Response Team Exercises - Triennial Cycle

Total Number	Frequency	Exercise Type/Description
12	Quarterly	QI Notification Exercise
6	Semi-Annual	Equipment Deployment Exercise *(Facility-owned equipment)*

3	Annual	Response Team Tabletop Exercise
3	Annual	Equipment Deployment Exercise *(facilities with OSRO-owned equipment)*
3	Annual	Unannounced Exercise *(not a separate exercise)* Actual response can be considered as an unannounced exercise.
Note: All response plan components must be exercised at least once in the Cycle.		

The following are components of the Company's drill/exercise program conducted at the Macon Terminal:

D.3.1 Quarterly QI Notification Exercise

- **Scope:** Exercise communication between facility personnel and the QI(s) and/or designated alternate(s). At least once each year, one of the notification exercises should be conducted during non-business hours.
- **Objective:** Contact must be made with a QI or designated alternate, as identified in the Plan.
- **General:** All personnel receiving notification shall respond to the notification and verify their receipt of the notification. Personnel who do not respond should be contacted to determine whether or not they received the notification. A QI Notification Exercise Form is provided in Section D.6 and a QI Notification Drill Log is located in Section D.7.

D.3.2 Semi-Annual Equipment Deployment Exercise (for facilities with equipment)

- **Scope**: Deploy and operate facility response equipment identified in the response plan. The equipment to be deployed must include the following, at a minimum:
  - 1,000 feet of representative type of boom;
  - one of each type of skimming system; or
  - the equipment necessary to respond to the facility's Small/Average Most Probable Discharge (AMPD), whichever is less.
- **Objective**: Demonstrate personnel's ability to deploy and operate response equipment. Ensure that the response equipment is in proper working order.
- **General**: The Facility may take credit for actual equipment deployment to a spill, or for training sessions, as long as the activities are properly documented. An Equipment Deployment Exercise Form is provided in Appendix A, Section A.14.

D.3.3 Annual Equipment Deployment Exercise (OSRO-owned equipment)

- **Review**: The Facility should verify that the OSRO(s) has completed the equipment deployment exercise requirements and has maintained the necessary documentation. The OSRO may deploy equipment at any location, so long as it occurs within an operating environment similar to the Facility's.
- **Scope**: OSRO must deploy and operate response equipment identified in the response plan. The equipment to be deployed must include the following, at a minimum:
  - 1,000 feet of representative type of boom.
  - One of each type of skimming system.
- **Objective**: OSRO must demonstrate the ability of the personnel (OSRO) to deploy and operate response equipment (OSRO). Ensure that the response equipment (OSRO) is in proper working order.

D.3.4 Annual Response Team Tabletop Exercise

- **Scope**: Exercise the response team's organization, communication, and decision- making in managing a spill response. All Facility Response team members must participate in

the annual Response Team Tabletop Exercise.

- **Objective:** Exercise the response team in a review of the following:
  - Knowledge of the Plan.
  - Proper notifications.
  - Communications system.
  - Ability to access an OSRO.
  - Coordination of internal spill response personnel.
  - Review of the transition from a local team to a regional team.
  - Ability to effectively coordinate response activity with the National Response System (NRS) Infrastructure.
  - Ability to access information in the Area Contingency Plan.
- **General**: A minimum of one Response Team Tabletop Exercise in a triennial cycle will involve a Worst-Case Discharge scenario. An ICP Training and Table Top Exercise Form is provided in Section D.5

D.3.5 Government-Initiated Unannounced Exercise

- **Scope**: The Facility is required to participate in only one unannounced exercise every 36 months from the date of the last government-initiated unannounced exercise, if successfully completed (the facility may be required to participate in another exercise if not successfully completed, at the discretion of the regulatory agency).
  - Exercises are limited to approximately four hours in duration.
  - Exercises would involve response to a Small/Average Most Probable Discharge scenario.
  - Exercise would involve equipment deployment to respond to a spill scenario.
- **Objective**: Conduct proper notifications to respond to unannounced scenario of a Small/Average Most Provable Discharge.
  - Demonstrate that the response is timely, conducted with an adequate amount of equipment for the scenario, and properly conducted.
- **General:** This exercise is only applicable to those facilities which are randomly chosen.

D.3.6 Area Exercises

- **Objective**: The purpose of the area exercise is to exercise the entire response community in a particular area. An area is defined as “that geographic area for which a separate and distinct Area Contingency Plan has been prepared, as described in OPA 90.” The response community includes the federal, state, and local government and industry. The area exercises are designed to exercise the government and industry interface for spill response.
- **General**: The goal is to ensure that all areas of the country are exercised triennially. All of the area exercises will be developed by an exercise design team. The exercise design team is comprised of representatives from the federal, state, and local government and industry. A lead plan holder would lead each area exercise. The lead plan holder is the organization (government or industry) that holds the primary plan that is exercised in the area exercise. The lead plan holder would have the final word on designing the scope and scenario of the exercise.

D.3.7 Exercise Documentation

- All exercises should be documented and maintained at the facility; documentation should specify:
  - The type of exercise;
  - Date and time of the exercise;

- A description of the exercise;
- The objectives met in the exercise;
- The components of the response plan exercised; and
- Lessons learned.

- Exercise documentation should be kept on file at the Facility for the required length of time depending on the regulating agency (three (3) years for the PHMSA and five (5) years for the U.S. Environmental Protection Agency). A Spill/Exercise Documentation Form is provided in Section D.8. A Training Documentation Form is provided in Section D.9.

D.4 Personnel Response Training Log

Hazardous Waste/Emergency Response - Initial Training

Name

Social Security # _____

Shift _____

Supervisor _____

The individual named above has received the following training which is required to perform tasks in RCRA hazardous waste facilities and/or respond to emergencies in Superfund or RCRA areas per OSHA 29 CFR 1910.120 Hazardous Waste Emergency Response Operations Regulation.

Date	Training Received	Trainer	Hours

Based on my records, knowledge of the employee's work experience, and discussions with this individual, the above listed training and number of hours are a reasonable statement of this employee's ability to respond to emergencies.

Signature _____

Title _____

Date _____

The above training has been discussed with me, and I received the training as indicated.

Signature _____

Title _____

Date _____

D.5 ICP Training and Table Top Exercise Form

TRAINING AND TABLETOP EXERCISE

Fulfills Training and Exercise Requirements for:

EPA - 40 CFR §112.21

DOT - 49 CFR §194.107

Name (PRINTED): _____ Date: _____

Participant's Facility Location: _____

Location of Exercise: _____

Exercise Initiated By: _____

INTRODUCTION / OBJECTIVES / GROUND RULES

INTRODUCTION

You will be participating in a tabletop exercise that will allow you to consider Epic Midstream, LLC's, their response organizations', and Federal, State, and local government's abilities to prevent and respond to oil spills.

OBJECTIVES

Overall objectives of this exercise include:

- Enhance the ability to utilize the Integrated Contingency Plan (ICP) to respond and coordinate emergency management.
- Make timely internal and external notifications.
- Learn how to better respond to oil spills.

In addition to the overall objectives, some of the fifteen (15) core components listed in the PREP Guidelines will be addressed to some extent in this tabletop exercise.

The fifteen (15) core components, as listed in the PREP Guidelines, are as follows:

1. Notifications
2. Staff Mobilization
3. Ability to Operate Within the Response Management System Described in the Plan
4. Discharge Control
5. Assessment
6. Containment
7. Recovery
8. Protection
9. Disposal
10. Communications
11. Transportation
12. Personnel Support
13. Equipment Maintenance and Support
14. Procurement
15. Documentation

GROUND RULES AND TIPS FOR PARTICIPANTS

Treat these situations as real and participate. Asking questions and sharing thoughts is strongly encouraged. Issues and procedures arising will be thoroughly discussed.

SPILL SCENARIO

This is a hypothetical situation.

DATE: _____ **TIME:** _____

WEATHER CONDITIONS:

☐ Clear	☐ Snow	Wind Speed: _____
☐ Overcast	☐ Blizzard	Wind Direction: _____
☐ Light Rain	☐ Fog	Humidity: _____
☐ Heavy Rain		Air Temperature: _____
☐ Thunder Storm		

LOCATION:

_____

_____

PRODUCT AND QUANTITY:

☐ Gasoline	_____	gal./bbl.	☐ Motor Oil	_____	gal./bbl.
☐ Fuel Oil	_____	gal./bbl.	☐ Trans. Fluid	_____	gal./bbl.
☐ Lube Oil	_____	gal./bbl.	☐ Propane	_____	gal./bbl.
☐ Diesel	_____	gal./bbl.	☐ Ammonia	_____	gal./bbl.
☐ Additive	_____	gal./bbl.	☐ Other	_____	gal./bbl.

EVENT DESCRIPTION:

_____

_____

_____

_____

_____

_____

TABLETOP DRILL DISCUSSION QUESTIONS

1. NOTIFICATIONS

a. Who is responsible for making notifications?
b. What internal notifications should be made?
c. What external notifications should be made?
d. What information should you have to make external notifications?

2. INITIAL RESPONSE

a. Who is on scene first?
b. Who is the Incident Commander?
c. What initial actions should be taken and by who?
d. Who estimates the size of the spill? How?
e. Which facility employees are on duty?
f. What are your primary concerns and objectives?
g. Where do you log this information?
h. How will the facility work with the Incident Command?
i. How quickly can the Facility Response Team respond to the incident?
j. How quickly can other members of the Facility Response Team respond?

3. INCIDENT COMMAND SYSTEM

a. Where should the Incident Command Post be located?
b. Fill out the form ICS 201 and the organizational chart.
c. Who are the Federal and State On-Scene Coordinators?
d. What are the Facility Response Team's priorities and objectives? How will you meet your priorities and objectives? Develop ICS Form 202.
e. What is the facility's role in managing this incident? What roles do the federal, state, and local governments play?

4. ENVIRONMENTAL SENSITIVITIES

a. What environmentally sensitive areas will this spill affect?
b. How will these areas be protected?
c. Are there any threatened or endangered species in the area?
d. If the material flows into water, are there downstream water concerns?
e. Are there economic, cultural, or other resources in the path of the spill?

5. RESOURCES

a. Who is responsible for getting resources to the site?
b. Where can these resources be obtained?
c. How will the Facility Response Team track these resources?
d. How will responders be protected?
e. What are the telecommunications needs?

6. PLANNING

a. How will recovered product be stored, treated, and disposed? How will debris from the cleanup be handled?
b. What are the public relations and media concerns?
c. How should the SMT plan for an extended clean-up? Are 24-hour operations necessary?
d. How will claims be handled?

INCIDENT BRIEFING	1. Incident Name	2.Date Prepared	3.Time Prepared

4. MAP/SKETCH

(Could include maps showing the total Area of Operations, the Incident site, overflight results, trajectories, impacted shorelines, or other graphic depicting situation and response status.)

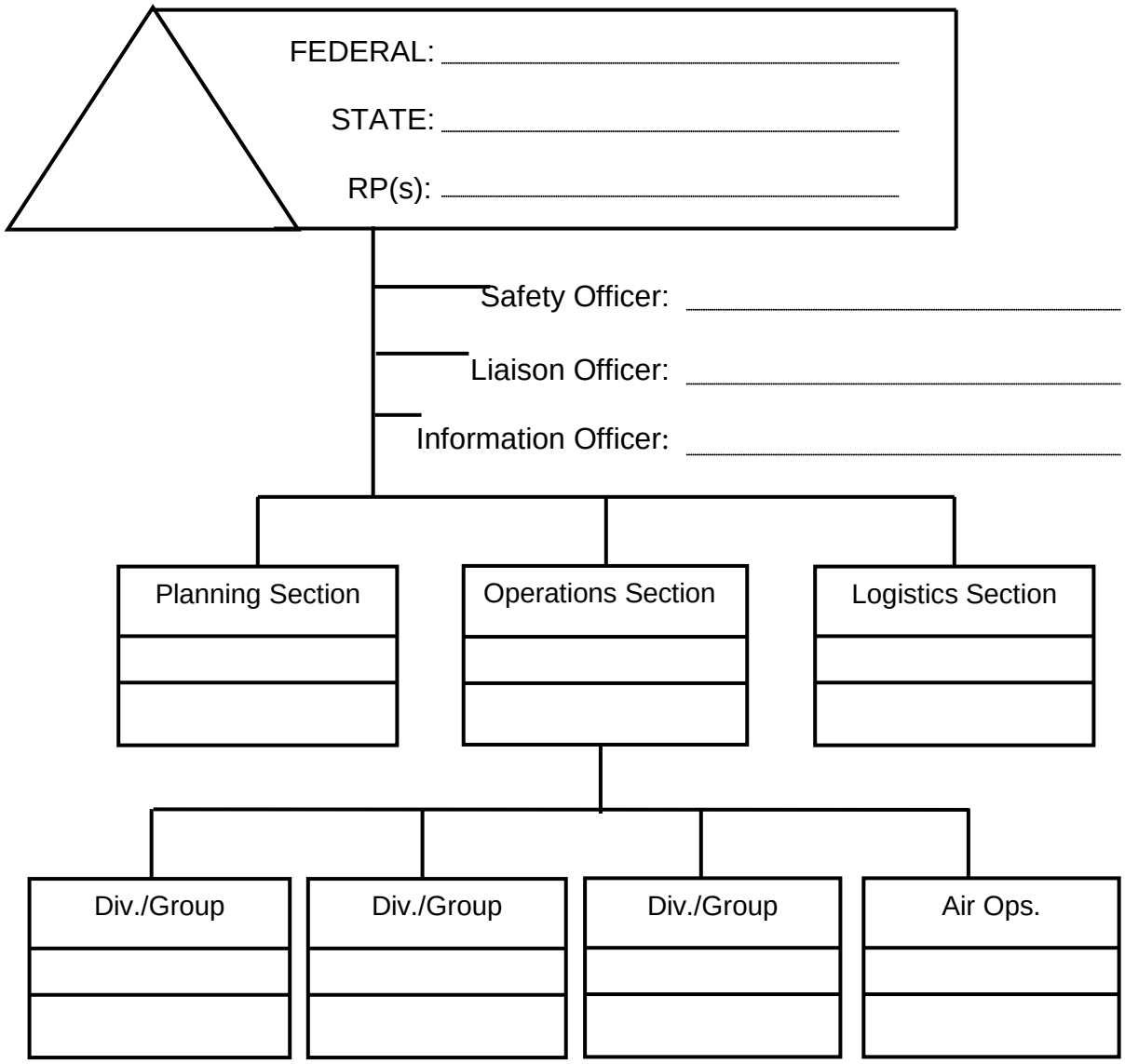
SEE ATTACHED MAP.

ICS FORM 201	**Page 1 of 4**	**5. Prepared By: (Name and Position)**

6. SUMMARY OF CURRENT ACTIONS

ICS FORM 201	Page 2 of 4

7. CURRENT ORGANIZATION



ICS FORM 201 **Page 3 of 4**

8. RESOURCES SUMMARY

Resource(s) / Identifier	Quantity	ETA	On Scene	Location / Assignment / Status

ICS FORM 201	Page 4 of 4

RESPONSE OBJECTIVES FORM				
1. Incident Name:	**2. Date Prepared**	**4. Operational Period**	**Date**	**Time**
	3. Time Prepared	**From:**		
		To:		
5. Overall Incident Strategic Objectives				
6. Tactical Objectives for Specified Operational Period				
7. Environmental considerations (See attached)				
8. Safety message for this operational period (See attached)				
9. Weather: (See attached)				
10. Tides / currents: (See attached)				
11. Sunrise:		**Sunset:**		
ICS FORM 202	**12. Approved by:**			

TABLETOP EXERCISE DEBRIEF FORM

Don't feel limited in your responses. If some area is handled particularly well, it's good to give your team credit! on the other hand, if something obviously could be improved upon, your team will benefit from the lessons learned.

LESSONS LEARNED

Step 1. List the Top three (3) Things That Went Well:

1) _____

_____

2) _____

_____

3) _____

_____

Step 2. List the Top THREE (3) Things That Need Improvement:

1) _____

_____

2) _____

_____

3) _____

_____

INTERNAL EXERCISE EVALUATION FORM

1. Date(s) performed: _____

2. Drill type: ☐ Exercise ☐ Actual response ☐ Announced ☐ Unannounced

3. Location of exercise: _____

4. Time started: _____ Time completed: _____

5. Response plan scenario used (check one):

☐ Average Most Probable Discharge ☐ Maximum Most Probable Discharge ☐ Worst Case Discharge

Size of (simulated) spill: _____ Bbls./gals.

6. Describe how the following objectives were exercised:

a) Response Team's knowledge of oil spill response plan:

_____

_____

b) Proper notifications:

_____

_____

c) Communications system:

_____

_____

d) Response Team's ability to access contracted OSRO:

_____

_____

e) Response Team's ability to coordinate spill response with OSC, state and applicable agencies:

_____

_____

f) Response Team's ability to access sensitive site information in Area Contingency Plan:

_____

_____

7. Identify which of the 15 core components of your response plan were exercised:

_____

_____

8. Attach description of lesson(s) learned.

Name (PRINTED): _____

Certifying Signature: _____ Date: _____

Instructor's Signature: _____ Date: _____

Retain this form for a minimum of 3 years (for PHMSA) or 5 years (for EPA).

D.6 QI Notification Exercise Form

QUALIFIED INDIVIDUAL (QI) QUARTERLY NOTIFICATION EXERCISE- INTERNAL USE

1. Q1 ☐ Q2 ☐ Q3 ☐ Q4 ☐
   FACILITY LOCATION: _____ DATE PERFORMED: _____

2. EXERCISE OR ACTUAL RESPONSE? Exercise

3. FACILITY AND OR PIPELINE EXERCISE: _____

4. NAME OF PERSON NOTIFIED: _____

   IS THIS PERSON IDENTIFIED IN YOUR RESPONSE PLAN AS THE QI OR DESIGNEE? Yes.
   DATE OF LAST UPDATE: _____

   PRIMARY QI: _____ PHONE: _____

   ALTERNATE QI: _____ PHONE: _____

5. TIME INITIATED: _____ TIME WHICH QI OR DESIGNEE RESPONDED: _____

   QI NOTIFICATION CONDUCTED DURING NON-BUSINESS HOURS: _____

6. METHOD USED TO CONTACT:

   ☐ TELEPHONE ☐ PAGER ☐ RADIO ☐ OTHER: _____

7. DESCRIPTION OF NOTIFICATION PROCEDURE:

8. IDENTIFY WHICH OF THE 15 CORE COMPONENTS OF YOUR RESPONSE PLAN WERE EXERCISED DURING THIS PARTICULAR EXERCISE:

9. AGENCY NOTIFICATIONS MADE:

Agency	Number	Date	Time	Contact
NRC				
Federal(EPA/USCG)				
State				
Local				
Other				
Other				

CERTIFYING SIGNATURE: _____

AECOM CERTIFYING SIGNATURE: _____

RETAIN THIS FORM FOR A MINIMUM OF 5 YEARS AS REQUIRED BY EPA.
IF ADDITIONAL SPACE REQUIRED, USE SEPARATE SHEET

40 CFR 112.21

QUARTERLY NOTIFICATION EXERCISE- INTERNAL USE
15 RESPONSE PLAN CORE COMPONENTS

QUARTERLY NOTIFICATION EXERCISE- INTERNAL USE **Page 2 of 2**

15 RESPONSE PLAN CORE COMPONENTS

During each triennial cycle, all components of a plan holder's response plan must be exercised at least once. The purpose of this requirement is to ensure that all plan components function adequately for response to an oil spill.

CHECK EACH CORE COMPONENT USED IN EXERCISE.

1._____ **Notifications**: Test the notifications procedures identified in the Facility Response Plan.

2._____ **Staff Mobilization:** Demonstrate the ability to assemble the spill response organization identified in the Facility Response Plan.

3._____ **Ability to operate within the Response Management System described in the plan: (INCIDENT COMMAND SYSTEM).**

4._____ **Discharge Control:** Demonstrate the ability of the spill response organization to control and stop the discharge at the source.

5._____ **Assessment:** Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.

6._____ **Containment:** Demonstrate the ability of the response organization to contain the discharge at the source or in various locations for recovery operations.

7._____ **Recovery:** Demonstrate the ability of the spill response organization to recover the discharged product.

8._____ **Protection:** Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the Area Contingency Plan and the respective industry response plan.

9._____ **Disposal:** Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.

10._____ **Communications:** Demonstrate the ability to establish an effective communications system for the spill response organization.

11._____ **Transportation:** Demonstrate the ability to provide effective multi-mode transportation both for execution of the discharge and support functions.

12._____ **Personnel Support:** Demonstrate the ability to provide the necessary support of all personnel associated with the response.

13._____ **Equipment Maintenance and Support:** Demonstrate the ability to maintain and support all equipment associated with the response.

14._____ **Procurement:** Demonstrate the ability to establish an effective procurement system.

15._____ **Documentation:** Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.

Date: _____ **Certifying Signature:** _____

D.7 QI Notification Drill Log

QI Notification Drill Log	
Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted:	
Evaluation:	
Changes to be Implemented:	
Time Table for Implementation:	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted:	
Evaluation:	
Changes to be Implemented:	
Time Table for Implementation:	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted:	
Evaluation:	
Changes to be Implemented:	
Time Table for Implementation:	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted:	
Evaluation:	
Changes to be Implemented:	
Time Table for Implementation:	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted:	
Evaluation:	
Changes to be Implemented:	
Time Table for Implementation:	

D.8 Spill/Exercise Documentation Form

Date(s) performed:					
☐ Exercise	☐ Actual spill				
If exercise:					
☐ Announced	☐ Unannounced	☐ Deployment	☐ Notification	☐ Tabletop	
If exercise, frequency					
☐ Quarter	☐ 1st	☐ 2nd	☐ 3rd	☐ 4th	☐ Annual
Location of exercise/spill:					
Time started:					
Description of scenario or spill including volume and content (crude oil, condensate, etc.):					
Describe how the following objectives were exercised:					
Team's knowledge of the Oil Spill Response Plan					
				Yes	**No**
Was briefing meeting conducted:					
Established field Command Post:					
Confirmed source was stopped:					
Developed Site Safety and Health Plan:					
Prepared ICS 201:					
Established work zones and perimeter security:					
Developed short range tactical plan:					
Developed long range tactical plan:					
Proper Notifications					
Qualified Individual (or designee):					
Terminal Manager:					
Release/Spill Report Form completed:					
Notification to agencies completed (attach log):					
Transportation/Communication System					
Established primary/secondary communication system:					
Primary:	☐ Cellular phone	☐ Two way radio	☐ Land telephone line		
Secondary:	☐ Cellular phone	☐ Two way radio	☐ Land telephone line		
☐ Other					
Motor vessel deployed:					
Provider name:					
Helicopter/Sea plane deployed:					
Call sign:					

Describe function (i.e., transportation, surveillance, dispersant application):		
Ability to access contracted Oil Spill Removal Organizations (OSROs)		
Who contacted – (name of individual and OSRO):		
When contacted:		
Response time projection for deployment:		
Type and amount of containment used:		
Spilled material recovered:		
Spilled material disposed:		
Where?		
Ability to coordinate spill response with on-scene coordinator, state, and applicable agencies		
Was regulatory on-scene coordinator(s) contacted:		
List person and agency represented:		
Ability to access sensitive site and resource information in the Area Contingency Plan (ACP)		
Was pre-impact assessment conducted:		
Were pre-impact samples taken:		
Were pre-impact photographs taken:		
Were NRDA specialists mobilized:		
Were deficiencies identified:		
If yes, changes implemented:		
If no, why were changes not implemented:		

LESSONS LEARNED	PERSON RESPONSIBLE FOR FOLLOW-UP OF CORRECTIVE MEASURES
	Name:
	Position:
	Certifying Signature:

D.9 Training Documentation Form

LOCATION: _____ DATE: _____
START TIME: _____ END TIME: _____ NUMBER OF HOURS: _____
NAME OF CLASS/SUBJECT: _____
INSTRUCTOR(s): _____ INSTRUCTOR (s) SIGNATURE: _____

I certify that the people listed below have received training in the subject(s) indicated.

METHOD OF TRAINING:
_____ CLASSROOM _____ DEMONSTRATION _____ SLIDE _____ VIDEO
_____ FIELD _____ MOCK EXERCISE _____ FILM CBT Taken ___
_____ OTHER: _____

NAME (please print)	WORK LOCATION	EMPLOYEE ID #	SIGNATURE
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			

D.10 PREP Certification Documentation Form

PREP Exercise Documentation

Date	Incident	Type[a]	Drill	Actual

[a] Q= QI Notification Exercise
ED-Facility= Equipment Deployment Exercise (Facility-Owned Equipment)
RT=Response Team Tabletop Exercise
ED-OSRO=Equipment Deployment Exercise (OSRO-Owned Equipment)
UA=Unannounced Exercise

Appendix E
Evacuation Plan

Appendix E
Evacuation Plan

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E.1 Evacuation Plan

Epic has prepared evacuation maps for the Macon Terminal (Figure E.1). This map illustrates the evacuation routes as well as evacuation regrouping area (muster point) locations within and outside the Terminal.

The Incident Commander, or designee, shall initiate facility-wide or location-specific emergency evacuation. The First Responder shall initiate evacuation for isolated emergencies when an immediate reason for evacuation exists (e.g., life-threatening condition). The Public Response Agency (Fire Department) will coordinate community evacuation activities if necessary and determine area of impact (normally ½ mile radius of site). **Special Note -If the Fire Department orders an evacuation, an evacuation must be initiated.**

E.1.1 Evacuation Tasks

The following tasks will be conducted when performing an evacuation:

- Request assistance from off-site response organizations; convey Command Post's location.
- Notify appropriate agencies (if appropriate).
- Assemble personnel at predetermined safe location: upwind/up-gradient of release (assembly area).
- Account for Company and contractor personnel.
- Assess casualties (number/type/location).
- Determine probable location of missing personnel.
- Secure site, establish re-entry point and check-in/check-out procedures.
- Develop list of known hazards (confined spaces, electrical hazards, physical hazards, vapors, oxygen deficiency, fire/explosion, etc.)
- Monitor situation (weather, vapors, product migration) for significant changes.
- Assist in developing a Rescue Plan, if necessary.

The following evacuation factors will be taken into consideration when executing an evacuation plan.

Table E.1 - Evacuation Factors

FACTOR	DESCRIPTION
Stored material location	• Located in oil storage area • Identified in facility Piping and Tank Content Map (Figure C.1)
Spilled material hazards	• Hazard is fire/explosion
Water currents, tides, or wave conditions	• Water currents are not applicable because the Facility is inland and the evacuation routes do not cross water
Evacuation routes	• Routes are summarized on Evacuation Map (Figure E.1) • Criteria for determining safest evacuation routes from facility may include: wind direction, potential exposure to toxins and carcinogens, intense heat, potential for explosion/fire, and blockage of planned route by fire, debris, or released liquid
Alternate evacuation routes	• Alternative routes may exist; refer to Evacuation Map (Figure E.1)
Injured personnel transportation	• Emergency vehicles can be mobilized to the facility
Alarm/Notification system location	• The facility does not have an evacuation alarm system. All employees will be notified of required evacuations and preferred routes via voice communications

Table E.1 - Evacuation Factors	
FACTOR	**DESCRIPTION**
Community evacuation plans	• Company may request local police, county sheriff, and/or state police assistance. Community evacuations are the responsibility of these agencies
Spill flow direction	• The predicted overall direction of a spill from the Facility is to the north, as indicated on the Terminal Drainage Map (Figure H.1). During an incident the person directing the evacuation will determine the actual direction of the spill and direct the use of alternate evacuation route if necessary.
Prevailing wind direction and speed	• The prevailing winds at the Facility are normally from the northwest. However, changes in weather condition require that the person directing any evacuation be cognizant of the wind direction and speed. A shift in the wind direction may expose personnel to smoke or fumes. An increase in wind speed may accelerate and spread a fire. • Because wind direction varies with weather conditions, consideration for evacuation routing will depend in part on wind direction
Emergency personnel/response equipment arrival route	• Response equipment will arrive via Hawkinsville Road. Response contractors are instructed to report to the qualified individual or designated field operation personnel from instruction on deployment. • Directions to nearest medical facility are provided below
Centralized check-in area	• Front entrance at the head count area. • Supervisor or designee is responsible for head count
Mitigation Command Center Location	• The initial mitigation control center will be established at the Terminal Office. • Mobile Command Posts may be established as necessary
Facility Shelter Location	• If the preferred evacuation procedure is to shelter in place all personnel will be directed to report to the Terminal Office. Once all personnel are accounted for the office windows and doors will be sealed and any outside air source eliminated (i.e. HVAC makeup air). • Not a safe harbor from fires, explosions, vapor clouds, or other significant emergencies; however, may be used for temporary shelter from inclement weather
Directions to nearest medical facility	Directions to the nearest hospital is the Medical Center of Central Georgia, approximately 7.3 miles away: • Go North on Hawkinsville Road / US-129 / Broadway. West on Hemlock Street to the Medical Center. 777 Hemlock Street Macon, GA 31201

E.1.2 Alarm Activation

Notification of an emergency evacuation will be carried out by the QI using hand-held two-way radios.

E.1.3 Community Evacuation

Community evacuation plans are in place. Local authorities will initiate and coordinate evacuation efforts for the community and surrounding areas as they deem it necessary.

E.1.4 Emergency Transportation

Emergency vehicles will arrive in the following manner:

From I-75 North
Exit 149 onto Highway 49 North (Industrial Highway)
Stay on Highway 49 for approximately 7.7 miles

Follow the overpass and turn north onto Hawkinsville Road (Highway 247N)
Travel north on Hawkinsville Road for approximately ½ mile
Turn left (west) onto Hangar Road
The terminal is at the end of Hangar Road, approximately 500 feet.

From I-75 South

Exit 160A onto Highway 41/247 South (Pio Nono Avenue)
Stay on Highway 247 (It will change names from Pio Nono Avenue to Houston Road, to Hawkinsville Road) for approximately 3.8 miles
Turn right (west) onto Hangar Road
The terminal is at the end of Hangar Road, approximately 500 feet.

Figure E.1 - Evacuation Diagram

(b) (7)(F)

Appendix F
Post Incident/Exercise Review and Evaluation

Appendix F
Post Incident/Exercise Review and Evaluation

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F.1 Purpose of Review and Evaluation

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

F.2 Outline of Review

Given below are items a team composed of outside people knowledgeable in spill response and key members of the response teams should examine. These questions are intended as guidelines only; many other questions are likely to be appropriate at each stage of a critique.

F.3 Detection

Was the spill detected promptly?

How was it detected?

By whom?

Could it have been detected earlier? How?

Are any instruments or procedures available to consider which might aid in spill detection?

F.4 Notification

Were proper procedures followed in notifying government agencies? Were notifications prompt?

Was management notified promptly?

Was management response appropriate?

Was the Facility/company notified promptly? If so, why, how, and who? If not, why not?

F.5 Assessment/Evaluation

Was the magnitude of the problem assessed correctly at the start?

What means were used for this assessment?

Are any guides or aids needed to assist spill evaluation?

What sources of information were available on winds and on water currents?

Is our information adequate?

Was this information useful (and used) for spill trajectory forecasts? Were such forecasts realistic?

Do we have adequate information on product properties?

Do we need additional information on changes of product properties with time, i.e., as a result of weathering and other processes?

F.6 Mobilization

What steps were taken to mobilize spill countermeasures?

What resources were used?

Was mobilization prompt?

Could it have been speeded up or should it have been?

What about mobilization of manpower resources?

Was the local spill cooperative used appropriately?

How could this be improved?

Was it appropriate to mobilize the Facility/company resources and was this promptly initiated?

What other corporate resources are available and have they been identified and used adequately?

F.7 Response – Strategy

Is there an adequate spill response plan for the location?

Is it flexible enough to cope with unexpected spill events?

Does the plan include clear understanding of local environmental sensitivities?

What was the initial strategy for response to this spill?

Is this strategy defined in the spill plan?

How did the strategy evolve and change during this spill and how were these changes implemented?

What caused such changes?

Are there improvements needed? More training?

F.8 Response - Resources Used

What resources were mobilized?

How were they mobilized?

How did resource utilization change with time? Why?

Were resources used effectively?

- Contractors
- Government agencies
- Company resources
- Cooperatives
- Volunteers
- Consultants
- Other (e.g., bird rescue centers)

What changes would have been useful?

Do we have adequate knowledge of resource availability?

Do we have adequate knowledge of waste disposal capabilities?

F.9 Response - Effectiveness

Was containment effective and prompt?

How could it have been improved?

Should the location or the local cooperative have additional resources for containment?

Was recovery effective and prompt?

How could it have been improved?

Should the location or the local cooperative have additional resources for recovery of spilled product?

Was contaminated equipment disposed of promptly and safely?

Was there adequate in-house product separation, recovery, and disposal?

How could it have been improved?

Was there adequate outside disposal resources available?

F.10 Command Structure

Who was initially in charge of spill response?

What sort of organization was initially set up?

How did this change with time? Why?

What changes would have been useful?

Was there adequate surveillance?

Should there be any changes?

Were communications adequate?

What improvements are needed? Hardware, procedures, etc.

Was support from financial services adequate? Prompt?

Should there be any changes?

Is more planning needed?

Should financial procedures be developed to handle such incidents?

F.11 Measurement

Was there adequate measurement or estimation of the volume of product spilled?

Was there adequate measurement or estimation of the volume of product recovered?

Was there adequate measurement or estimation of the volume of product disposed of?

Should better measurement procedures be developed for either phase of operations?

If so, what would be appropriate and acceptable?

F.12 Government Relations

What are the roles and effects of the various government agencies which were involved?

Was there a single focal point among the government agencies for contact?

Should there have been better focus of communications to the agencies?

Were government agencies adequately informed at all stages?

Were too many agencies involved?

Are any changes needed in procedures to manage government relations?

Examples of affected U.S. agencies (there may be others):

- U.S. Coast Guard
- Environmental Protection Agency
- National Oceanographic Atmospheric Administration
- Department of Fish and Wildlife

- State Parks
- Harbors and Marinas
- States
- Cities
- Counties

Was there adequate agreement with the government agencies on disposal methods?

Was there adequate agreement with the government agencies on criteria for cleanup?

How was this agreement developed?

Were we too agreeable with the agencies in accepting their requests for specific action items (e.g., degree of cleanup)?

Should there be advance planning of criteria for cleanup, aimed at specific local environmentally sensitive areas? (Such criteria should probably also be designed for different types of product.)

F.13 Public Relations

How were relations with the media handled?

What problems were encountered?

Are improvements needed?

How could public outcry have been reduced? Was it serious?

Would it be useful to undertake a public information effort to "educate" reporters about product and effects to it if spilled?

These areas should be investigated shortly after the incident to assure that actions taken are fresh in peoples' minds.

Appendix G
Disposal Plan

Appendix G
Disposal Plan

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G.1 Overview

A major oil spill response would generate significant quantities of waste materials, such as oily debris, sorbent materials, and wastewater. All generated wastes require characterization (i.e., oily, liquid, etc.), transportation from the site, and treatment and/or disposal at an approved disposal facility. Each of these activities demands that certain health and safety precautions be taken, which are strictly controlled by federal and state laws and regulations. This section provides an overview of the applicable state regulations governing waste disposal, and a discussion of various waste characterization, handling, transfer, storage, and disposal techniques. It is the responsibility of the EHS Specialist to manage waste disposal resulting from spill cleanup.

G.2 Waste Classification

G.7.1 Oily - Liquid Wastes

Oily liquid wastes (i.e., oily water and emulsions) that would be handled, stored, and disposed of during response operations are very similar to those handled during routine storage and transfer operations. The largest volume of oily liquid wastes would be produced by recovery operations (e.g., through the use of vacuum devices or skimmers). In addition, oily water and emulsions would be generated by vehicle operations (e.g., spent motor oils, lubricants, etc.), and equipment cleaning and decontamination operations.

G.7.2 Non-Oily - Liquid Wastes

Response operations would also produce considerable quantities of non-oily liquid wastes. Water and other non-oily liquid wastes would be generated by the storage area and stormwater collection systems, vessel and equipment cleaning and decontamination (i.e., water contaminated with cleaning agents), and office and field operations (i.e., sewage, construction activities).

G.7.3 Solid Wastes

A solid waste is defined as any discarded material provided that it is not specifically excluded under the regulations. These exclusions cover materials such as domestic sewage and mixtures of sewage discharged through a sewer system or industrial wastewater point source discharges.

A discarded material is any material which is abandoned (disposed of, burned or incinerated) or accumulated, stored or treated prior to being abandoned. A discarded material is also any material recycled or any material considered inherently waste-like. Recycled material is considered solid waste when used in a manner constituting disposal, placed on land or burned for energy recovery.

A solid waste may be considered a hazardous waste. A solid waste, as defined above, may be a hazardous waste if it is not excluded from regulation and is either a listed hazardous waste or exhibits the characteristics of a hazardous waste. A solid waste exhibits the characteristics of a hazardous waste if it exceeds the thresholds established in determining the following:

1. Ignitability(if Flash Point < 140 °F)
2. Corrosivity (hazardous if pH is less than 2.0 or greater than 12.5)
3. Reactivity (hazardous is the waste reacts spontaneously in air or water or releases noxious gases)
4. Toxicity (by the Toxicity Characteristic Leaching Procedure (TCLP) test)

A solid waste may also become a hazardous waste if it is mixed with a listed hazardous waste or, in the case of any other waste (including mixtures), when the waste exhibits any of the characteristics identified above.

G.7.4 Oily - Solid/Semi-Solid Wastes

Oily solid/semi-solid wastes that would be generated by decontamination of personnel and equipment, containment and recovery operations include damaged or worn-out booms, disposable/soiled equipment, used sorbent materials, saturated soils, contaminated beach sediments, driftwood, and other debris.

G.7.5 Non-Oily - Solid/Semi-Solid Wastes

Non-oily solid/semi-solid wastes would be generated by emergency construction operations (e.g., scrap, wood, pipe, and wiring) and office and field operations (i.e., refuse). Vessel, vehicle, and aircraft

operations also produce solid wastes.

G.3 Waste Handling

Initial oil handling and disposal needs may be overlooked in the emergency phase of a response, which could result in delays and interruptions of cleanup operations. Initially, waste management concerns should address:

- Equipment capacity,
- Periodic recovery of contained oil, and
- Adequate supply of temporary storage capacity and materials.

The following action items should be conducted during a spill response:

- Development of a Site Safety and Health Plan (See Section 5 and Appendix H) addressing the proper PPE and waste handling procedures.
- Development of a Disposal Plan in accordance with any federal, state, and/or local regulations. A sample Disposal Plan is provided in Section G.4.
- Continuous tracking of oil disposition in order to better estimate amount of waste that could be generated over the short and long-term.
- Organization of waste collection, segregation, storage, transportation, and proper disposal.
- Minimization of risk of any additional pollution.
- Regulatory review of applicable Federal, State, and Local laws and ensure compliance, and, if appropriate, obtain permits.
- Documentation of all waste handling and disposal activities.
- Disposal of all waste in a safe and approved manner.

Good hazardous waste management includes:

- Reusing materials when possible.
- Recycling or reclaiming waste.
- Treating waste to reduce hazards or reducing amount of waste generated.
- Proper disposal.
- Separating and properly handling incompatible wastes.
- Minimization of present and future environmental liability.

The management of the wastes generated in cleanup and recovery activities must be conducted with the overall objective of ensuring:

- Worker safety
- Waste minimization
- Cost effectiveness
- Minimization of environmental impacts

Solid wastes, such as sorbents, PPE, debris, and equipment will typically be transported from the collection site to a designated facility for:

- Storage
- Waste segregation
- Packaging
- Transportation

Once this process is complete, the waste will be shipped off-site to an approved facility for required disposal.

The Epic Macon Terminal has one potential area to treat recovered oil. For small spills product may be treated by the oil-water separator located at the tank truck rack. In other cases, and/or small spills, the product may be placed into one of the transmix tanks located at the loading rack. All handling of recovered product will be coordinated by the Terminal Manager, QI or designee.

For the purposes of secondary containment and drainage planning, the Epic Macon Terminal is divided into five impoundments, labeled 1-5, which comprise three containment areas (see Figure H.1). Additional discussion about drainage planning, and containment area calculations for each area is provided in Appendix H.

G.4 Sample Disposal Plan

	Disposal Plan - Page 1 of 2
Date:	Location:
Source of release:	
Amount of release:	
Incident name:	
State On-Scene Coordinator:	
Federal On-Scene Coordinator:	
Time required for temporary storage:	
Proposed storage method:	

Disposal priorities:

Sample Date:	Sample ID:
Analysis required (type):	
Laboratory performing analysis:	

Disposal options:

	Available	Likely	Possible	Unlikely
Landfill:				
In-situ/ bio-remediation:				
In-situ burn:				
Pit burning:				
Hydrocyclone:				
Off-site incineration:				
Reclaim:				
Recycle:				

Resources required for disposal options:

General information:

Generator name:	U.S. EPA ID#:
Waste properties:	Waste name:
U.S. EPA waste code:	State waste code:
EPA hazardous waste:	
Waste storage and transportation:	
Proposed storage method:	
Proposed transportation method:	
Permits required for storage:	
Permits required for transportation:	
Estimated storage capacity:	
Number and type of storage required:	
Local storage available for temporary storage of recovered oil:	

Disposal Plan - Page 2 of 2	
PPE required for waste handling:	
Waste coordinator:	Date:

Resources required for disposal options:

Incident name:	
Sample number:	Date sent:
Source of sample:	
Date sample data received:	
Waste hazardous:	Non-hazardous:
Permits/variances requested:	
Approval received on waste profile:	
Date disposal can begin:	
Disposal facilities:	
Profile number:	
Storage contractors:	
Waste transporters:	
PPE designated and agrees with Site Safety and Health Plan:	
Additional information:	
Waste coordinator:	

G.5 Waste Transfer

In most oil spill response operations, it would be necessary to transfer recovered oil and oil debris from one point to another several times before the oil and oily debris are ultimately disposed of at a state-approved disposal site. Depending on the location of response operations, any or all of the following transfer operations may occur:

- Directly into the storage tank of a vacuum device.
- Directly in to impermeable bags that, in turn, are placed in impermeable containers.
- From a vacuum device storage tank to a truck.
- From containers to trucks.
- From trucks to lined pits.
- From lined pits to incinerators and/or landfills.
- From a tank truck to a processing system (i.e., oil/water separator).
- From a processing system to a recovery system and/or incinerator.
- From a skimming vessel or flexible bladder to a barge.
- From a barge to a tank truck.
- Directly into the storage tank on a dredge.
- From portable or vessel mounted skimmers into flexible bladder tanks, the storage tanks of the skimming vessel itself, or a barge.

There are four general classes of transfer systems that could be employed to effect oily waste transfer operations. The following is a brief description of the four transfer systems:

Pumps
Rotary pumps, such as centrifugal pumps, may be used when transferring large volumes of oil, but they may not be appropriate for pumping mixtures of oil and water. The extreme shearing action of centrifugal pumps tends to emulsify oil and water, thereby increasing the viscosity of the mixture and causing low, inefficient transfer rates.

The resultant emulsion would also be more difficult to separate into oil and water fractions. Lobe or "positive displacement" pumps work well on heavy, viscous oils, and do not emulsify the oil/water mixture. Double-acting piston and double acting diaphragm pumps are reciprocating pumps that may also be used to pump oily wastes.

Vacuum Systems
Vacuum systems, such as air conveyors, vacuum trucks and portable vacuum units, may be used to transfer viscous oils and debris but they usually pick up a very high water/oil ratio.

Belt / Screw Conveyors
Conveyor may be used to transfer oily wastes containing a large amount of debris. These systems can transfer weathered debris laden oil either horizontally or vertically for short distances but are bulky and difficult to operate.

Wheeled Vehicles
Wheeled vehicles may be used to transfer liquid waste of oily debris to storage or disposal sites. These vehicles are readily available but have a limited capacity (i.e., 100 bbls) and require good site access.

G.6 Waste Storage

Interim storage of recovered oil, oily and non-oily waste would be considered to be an available means of holding the wastes until a final management method is selected. In addition, the segregation of wastes according to type would facilitate the appropriate method of disposal. The storage method used would depend upon:

- The type and volume of material to be stored.

- The duration of storage.
- Access.

During an oil spill incident, the volume of oil that can be recovered and dealt with effectively depends upon the available storage capacity.

The waste generated will be stored on site a maximum of 90 days until the appropriate arrangements can be made for hauling and disposal. Any hazardous waste stored at the Terminal will have to be properly manifested.

If storage containers such as bags or drums are used, the container must be clearly marked and/or color-coded to indicate the type of material/waste contained and/or the ultimate disposal option. Bladder or pillow tanks would be acceptable, if the available space can support the weight of both the container and the product.

Fuel barges may be the best option for temporary storage of oil recovered in open waters. Depending on size, these vessels may be able to hold up to 6,000 barrels of oil and water. The barge deck can be used as a platform for operating oil spill clean-up equipment and storing containment boom.

Empty barges have four to six feet draft which would increase when these barges are filled with oil or loaded with cargo. Consequently, they may not be able to enter shallow, nearshore waters.

It may be difficult to offload recovered oil stored inside barges. Due to natural forces which affect spilled oil, recovered oil may be very viscous or emulsified, rather than free-flowing. It may be necessary to use steam to heat viscous oil before pumping it from the barge.

Steel or rubber tanks can be used to store oil recovered near the shoreline. To facilitate offloading, demulsifiers may be used to break emulsions prior to placing the recovered substance into the barges or storage tanks.

Use of any site for storage is dependent on the approval of the local authorities. The following elements affect the choice of a potential storage site:

- Geology.
- Ground water.
- Soil.
- Flooding.
- Surface water.
- Slope.
- Covered material.
- Capacity.
- Climatic factors.
- Land use.
- Toxic air emissions.
- Security.
- Access.
- Public contact.

Temporary storage sites should use the best achievable technology to protect the environment and human health. They should be set up to prevent leakage, contact, and subsequent absorption of oil by the soil. The sites should be bermed (1 to 1.5 meters high) and double lined with plastic or visqueen

sheets 6-10 millimeters or greater in thickness, without joints, prior to receiving loose and bagged debris. The edges of the sheet should be weighted with stones or earth to prevent damage by wind, and the sheet should be placed on a sand layer or an underfelt thick enough to prevent piercing. A reinforced access area for vehicles at the edge of the site should be provided. In addition, the oily debris should be covered by secured visqueen or tarps and an adequate stormwater runoff collection system for the size and location of the site would be utilized. Additionally, the sites should be at least 3 meters above mean sea level.

Oily debris can be hauled to approved temporary storage sites in visqueen lined trucks or other vehicles. Burnable, non-burnable, treatable and re-usable materials can be placed in well-defined separate areas at temporary storage sites.

When the last of the oily debris leaves a temporary storage site, the ground protection would be removed and disposed of with the rest of the oily debris. Any surrounding soil which has become contaminated with oil would also be removed for disposal or treatment. If the soils were removed for treatment, they may be replaced if testing proves acceptable levels have been achieved. Treatment and remediation is encouraged when feasible. The temporary storage should be returned to its original condition.

G.7 Waste Disposal

G.7.1 Techniques for Disposal of Recovered Oil

The following is a brief description of some disposal techniques available for recovered oil and oily debris.

Recycling

Recycling involves processing discarded materials for another use.

Incineration

This technique entails the destruction of the recovered oil by high temperature thermal oxidation reactions. There are licensed incineration facilities as well as portable incinerators that may be brought to a spill site. Incineration may require the approval of the local Air Pollution Control Authority.

In-Situ Burning / Open Burning

Burning techniques entail igniting oil or oiled debris allowing it to burn under ambient conditions. These disposal techniques are subject to restrictions and permit requirements established by federal, state, and local laws. Permission for in-situ burning may be difficult to obtain when the burn takes place near populated areas. As a general rule, in-situ burning would be appropriate only when atmospheric conditions will allow the smoke to rise several hundred feet and rapidly dissipate. Smoke from burning oil will normally rise until its temperature drops to equal the ambient temperature. Afterwards, it will travel in a horizontal direction under the influence of prevailing winds.

Landfill Disposal

This technique entails burying the recovered oil in an approved landfill in accordance with regulatory procedures. Landfill disposal of free liquids is prohibited by federal law in the United States.
Recovery, reuse, and recycling are the best choices for remediation of a spill, thereby reducing the amount of oily debris to be bermed onsite or disposed of at a solid waste landfill. Treatment is the next best alternative, but incineration and burning for energy recovery have more options within the state. There are some limitations and considerations in incinerating for disposal. Environmental quality of incineration varies with the type and age of the facility. Therefore, when incineration becomes an option during an event, local air quality authorities would be contacted for advice about efficiency and emissions of facilities within their authority. Approval of the local air authorities is a requirement for any incineration option. Landfilling is the last option. Final disposal at a solid or dangerous waste landfill is the least environmentally sound method of dealing with a waste problem such as oily debris.

During an oil spill incident, Epic would consult with the federal and state On Scene Coordinator (OSC) to identify the acceptable disposal methods and sites appropriately authorized to receive such wastes. Epic

maintains a list of approved disposal sites that satisfy local, state, and federal regulations and company requirements. This identification of suitable waste treatment and disposal sites would be prepared by a designated Disposal Specialist of Epic's Facility Response Team in the form of an Incident Disposal Plan which must be authorized by the U.S. Coast Guard and/or the EPA. An Incident Disposal Plan would include pre-designated interim storage sites, segregation strategies, methods of treatment and disposal for various types of debris, and the locations/contacts of all treatment and disposal site selections. Onsite treatment/disposal will be preferred.

In order to obtain the best overall Incident Disposal Plan, a combination of methods should be used. There is no template or combination of methods that can be used in every spill situation. Each incident should be reviewed carefully to ensure an appropriate combination of disposal methods are employed.

The different types of wastes generated during response operations would require different disposal methods. To facilitate the disposal of wastes, they should be separated by type for temporary storage, transport and disposal.

Disposal Plans

Oil and oiled materials recovered from land and water spills require proper handling. Spill response cleanup procedures and decontamination of personnel and equipment often produce materials that become wastes and require proper management in accordance with the standards set forth in 40 CFR parts 261 and 265 as mandated by RCRA and other relevant state regulations. These materials may be residue, oiled soil, sorbents, PPE, etc. Waste handling procedures should proceed with an overall objective of worker safety, waste minimization, cost effectiveness, minimization of impact on unaffected areas or already cleaned areas, regulatory compliance and proper disposal.

Contractor resources, such as vacuum trucks, activated carbon treatment units, containment booms, fractionation tanks, and other specialized equipment and personnel would be utilized in the event that a large spill occurred. Such resources are on-call on a 24-hour basis on and nearby the terminal.

Recovered product will be temporarily stored in compatible containment and disposed of in accordance with Federal, State, and Local regulations by one of the following techniques:

- Recycled off-site,
- Disposed of by Emergency Contractor, and
- Disposed of by Epic's Hazardous Waste Contractor.

Materials used in the cleanup of the spill will be containerized and analyzed to determine appropriate disposal procedures. If the material is determined to be hazardous waste, it shall be properly labeled and stored on-site for no more than 90 days prior to disposal at a permitted treatment storage and/or disposal (TSD) facility.

All recovered material, contaminated soil, contaminated equipment, personnel protective equipment, decontamination solutions, and adsorbents and spent chemicals will be disposed through:

Liberty Environmental Solutions, Inc.
230 Canal Blvd, Suite 1
Ponte Vedra Beach, FL 32082
(904) 285-5333

G.7.2 Temporary Storage

In spill situations where relatively large quantities of oil and waste material are recovered, temporary storage may be required until an effective means of disposal can be determined. Through proper waste segregation and identification, the amounts of wastes requiring disposal are reduced and opportunities for recycling and treatment increased. Such prudent waste minimization practices can save substantial

amounts of money and reduce liabilities associated with disposal.

Temporary storage sites or transfer stations outside the facility will be located in areas with good access to cleanup operations and to nearby streets and highways. Good storage areas are paved flat areas such as parking lots.

Temporary storage sites will be selected and prepared to avoid contamination of surrounding areas, therefore, storage sites will not be located on or adjacent to streams drainage ditches or sensitive areas.

Once a site is located, a certain amount of site preparation is usually necessary to minimize contamination of the native soil. An earthen berm will be constructed around the perimeter of the storage site. Entrance and exit ramps will be constructed over the berms to allow cleanup equipment access to the site. If the substrate of the berm is permeable, several layers of plastic sheeting will be spread over the berm and across the floor of the storage site in order to contain liquid residue. A front end loader will be available to move the material around and load the trucks for final disposal.

G.8 Generator and Disposal Contractor Information

The Epic Macon Terminal is currently a registered Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste, and maintains a Resource Conservation and Recovery Act (RCRA) identification number (GAD980710495). In the event that hazardous wastes are generated, this RCRA ID number must be used during manifesting and disposal of the waste.

The Epic Macon Terminal also maintains a list of waste transportation and disposal contractors that are approved to handle special and hazardous wastes that might be generated during spill response activities. The following contractor is approved for these activities at the Epic Macon Terminal:

Liberty Environmental Solutions, Inc.
230 Canal Blvd, Suite 1
Ponte Vedra Beach, FL 32082
(904) 285-5333

All waste characterization and disposal activities shall be coordinated through the Epic Midstream, LLC's EHS Department

Appendix H
Discharge Detection Systems and Facility Self Inspections

Appendix H
Discharge Detection Systems and Facility Self-Inspections

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H.1. Discharge Detection

The Facility has a discharge detection program which consists of both manual (personnel) and automated detection systems. Detection of a discharge from the facility or pipeline may occur in a number of ways including:

- Local alarm notification.
- Visual detection by facility personnel.
- Visual detection by the public.

The following is a summary of the instructions and procedures used in normal operator rounds. Further response actions and Emergency Response Information is located in Section 3.

H.1.1 Detection by Personnel

The Facility is manned Monday-Friday from 8AM to 4PM. Terminal personnel are on-call and available 24 hours a day, 7 days a week. The entire Facility is adequately illuminated to provide security and safe operations at night. In accordance with 40 CFR 112.7 (e), the facility must conduct inspections and tests required by this part per written procedures that were developed for the facility. These include:

- Daily Visual Inspections (including tanks, truck rack, secondary containment, aboveground piping, etc.) during operating personnel rounds.
- Monthly Tank Inspection.
- Monthly Secondary Containment Inspection.

Inspection include tanks, secondary containment, and response equipment at the Facility. Facility self-inspection requires two steps:

- Checklist of items to inspect.
- Method of recording the actual inspection and its findings; records must be maintained for five years.

Facility-specific procedures for transfer and secondary containment inspections are provided in this Appendix, including a General Inspection Procedures (Section H.7), Secondary Containment Drainage Log (Section H.8), and a SPCC Monthly Inspection Checklist (Section H.9). Spill prevention meetings held at the facility are documented on the Discharge Prevention Meeting Log, in Section H.10. A Testing of Underground Sump-Tank Form in Section H.11 provides documentation of testing of all underground sumps and tanks at the Macon Terminal. Response equipment inspection information is provided in Section 3. The Emergency Equipment Inspection Form in Appendix A, Section A.13 may be used to record equipment inspection information.

Aerial patrol flights will be made on a regular basis for pipelines subject to 49 CFR 194 and 195. The intent of the patrol is to observe the area directly over the pipeline right-of-way for leaks, exposed pipes, washes, missing markers and other unusual conditions. Construction on either side of the pipeline right-of-way is also monitored.

Discharges to the land or surface waters may also be detected by facility personnel during regular operations and inspections. If a leak is detected, the appropriate actions are taken, including, but not limited to:

- Notifications as per Section 2.0.
- A preliminary assessment of the incident area.
- If appropriate, initiate initial response actions per Section 3.0, Figure 3.1.

(b) (7)(F)

[redacted]

H.1.3 Discharge Detection by the Public

Right-of-way marker signs are installed and maintained at road crossing and other noticeable points and provide an terminal 24-hour number for reporting emergency situations. Also, Facility signs are installed and maintained on perimeter fencing. Epic also participates in the "call before you dig" or "One Call" utility notification services which can be contacted to report a leak and determine the owner/operator of the pipeline. If the notification is made to a local office or pump station, the Epic representative receiving the call generally will implement the following actions:

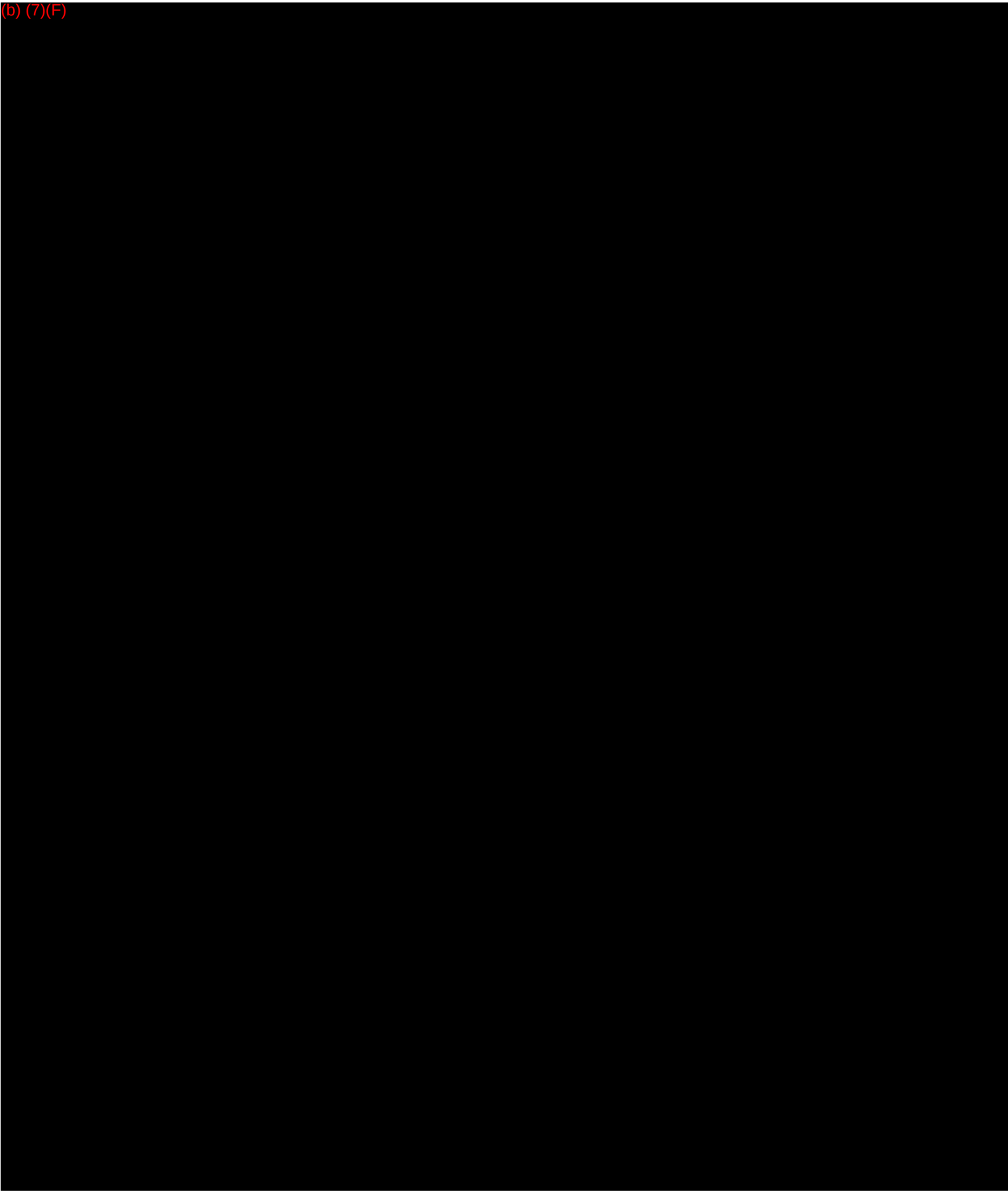
- Notify the Terminal Manager.
- Dispatch Epic personnel to the site to confirm discharge and conduct preliminary assessment.
- Notify their immediate area supervisor and provide assessment results.

(b) (7)(F)

[redacted]

(b) (7)(F)

(b) (7)(F)



H.3. Facility Inspections

H.3.1 General

The QI is responsible to ensure that knowledgeable personnel conduct inspections and quality control checks on a daily, weekly, monthly, quarterly, and annual basis, depending on the item being inspected. Any deficiencies noted during the inspections are immediately communicated to the facility supervisor for further action.

Monthly inspections are performed which include checklist items covering storage tanks, pumps, pipelines, valves, fittings, fence perimeter and general security. Product handling equipment is inspected for signs of leakage or potential leakage. Spill containment impoundments are inspected to verify for the presence of oil. Terminal personnel perform regular inspections of facility equipment, operations and spill containment areas. Inspections are performed in accordance with written procedures detailed on each inspection sheet. The facility manager or his designee will sign the inspections required by this SPCC Plan. An example Facility Self-Inspection form is provided Section H.14. An example Weekly Container Inspection and Material Form is provided in Section H.15. Spill prevention meetings held at the facility are documented on the Discharge Prevention Meeting Log, in Section H.10. Monthly inspection records are kept for five (5) years, while detailed inspection records are retained for the life of the structure.

H.3.2 Facility Tank and Piping Inspection

Facility equipment including storage tanks shall be inspected daily to verify the integrity of each item. Pipelines and supports are inspected monthly to determine conditions. Newly installed, modified, relocated, or replaced underground piping must be integrity and leak tested. Aboveground valve and pipeline inspections shall involve assessment of the general condition of items, including flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. In the event underground pipeline inspections identify excessive corrosion and/or actual leaks, the Epic will pressure test these pipelines to verify their integrity. If a pipeline fails the integrity testing, the Epic shall repair or replace the pipe prior to returning the pipeline to service.

Epic has developed a tank inspection program for all storage tanks in accordance with the API 653 Standard. As tanks become available, clean and gas free, Epic will contract with a certified API 653 inspector to perform a complete thorough inspection of the tank. An API 653 inspection includes performing non-destructive testing of the tank steel to verify corrosion conditions. The API 653 inspection reports are maintained at the office of the terminal manager. When measurements or tank conditions are found to be out of API 653 specifications, the necessary repair work will be completed prior to returning the tank to operational service. Inspection and testing records are made part of this plan, but kept at the office of the terminal manager. All inspection records associated with this SPCC plan will be maintained for a period of three years. Example inspection reports for Tank Seal Inspections are provided in Sections H.16 and H.17, and a SPCC Tank Inspection Form is provided in Section H.18.

Integrity testing will follow the guidelines listed above.

<u>Brittle Fracture Evaluation</u>

The storage containers at this Facility are currently in light liquid service, there have been no major tank repairs or modifications that might affect the structural integrity of the steel. Facility management is aware that in the event modifications are made to storage containers, an evaluation must occur to determine if the structural integrity of the container is sufficient to safely manage the material to be stored and prevent brittle fracture or catastrophic failure. The Facility follows a program to inspect all storage tanks according to API 653 standards. The API 653 inspections will include structural steel evaluation.

Internal Heating Coils

There are no internal heating coils at this Facility.

H.3.3 Response Equipment Inspections

The facility holds only incidental response equipment, which does not require extensive testing or deployment. Epic response equipment is tested and inspected as noted below. The Terminal Manager is responsible for ensuring that the following response equipment and testing procedures are implemented. These consist of:

Containment Boom: During semiannual boom deployment exercises, booms will be inspected for signs of structural deficiencies. If tears in fabric or rotting are observed, booms will be repaired or replaced. In addition, end connectors will be inspected for evidence of corrosion. If severe corrosion is detected, the equipment will be repaired or replaced. After use, these materials are properly disposed and replaced by new equipment.

Miscellaneous Equipment: Other response equipment identified in this Plan, comprising hand tools and fire extinguishers, will be inventoried and tested on a semiannual basis to ensure that the stated quantities are in inventory and in proper working order. After use during any emergency response, this equipment will be cleaned and rendered fit for its intended use before operations are resumed. The equipment inspection and deployment exercises are recorded and maintained at the facility and retained for a period of five years. Exercise requirements are listed in Section 1.13. A Spill/Exercise Documentation form, Emergency Response Equipment Inspection Form and Equipment Deployment Exercise Form are included in the ERAP and provided in Appendix A. A Spill Equipment Deployment Log is also included in Appendix A.

H.3.4 Secondary Containment Inspection

All containment dikes are inspected on a monthly basis and prior to actual discharging to prevent the release of oil into navigable waters. Operators will inspect the product transfer areas daily, and promptly correct any operations or facilities that show leakage. An example SPCC Monthly Checklist Form is provided in Section H.9. An example Daily Audio, Visual and Olfactory (AVO) Inspection Form is provided in Section H.19.

All records of inspection are signed by the appropriate supervisor and are kept on file for a minimum of 5 years.

H.4. Tank Inspection Items

Facility tanks are visually inspected daily and are thoroughly inspected monthly as detailed in this Plan. The tanks are inspected against the following items, at a minimum:

- Check tanks for leaks, specifically looking for:
  - Drip marks
  - Discoloration of tanks
  - Puddles containing spilled or leaked material
  - Corrosion
  - Cracks
  - Localized dead vegetation
- Check foundation for:
  - Cracks
  - Discoloration
  - Puddles containing spilled or leaked material

- Settling
- Gaps between tank and foundations
- Damage caused by vegetation roots

- Check piping for:
  - Droplets of stored material
  - Discoloration
  - Corrosion
  - Bowing of pipe between supports
  - Evidence of stored material seepage from valves or seals
  - Localized dead vegetation

Records of the monthly inspections are signed by the appropriate supervisor or inspector, and are retained at the Facility. The inspections are documented on the SPCC Tank Inspection Form in Section H.18.

H.5. Secondary Containment Inspection Items

Facility secondary containment systems are visually inspected daily. The secondary containment systems are inspected against the following items:

- Dike or berm system
  - Level of precipitation in dike/available capacity
  - Operational status of drainage valves
  - Dike or berm permeability
  - Debris
  - Erosion
  - Permeability of the earthen floor of diked area
  - Location/status of pipes, inlets, drainage beneath tanks, etc.

- Secondary containment
  - Cracks
  - Discoloration
  - Presence of spilled or leaked material (standing liquid)
  - Corrosion
  - Valve conditions

- Retention and drainage ponds (as applicable)
  - Erosion
  - Available capacity
  - Presence of spilled or leaked material
  - Debris
  - Stressed vegetation

Records of the monthly inspection are maintained in the Facility. The inspections are documented on the SPCC Monthly Checklist Form provided in Section H.9

H.6. Drainage Planning

Transfer Areas

There are Tank Truck Loading facilities at this terminal. All products are delivered to the facility by DOT pipeline. Additives are received by truck. The tank truck rack is a curbed concrete area which drains initially to an underground sand drain and gravity flows to the oil water separator. From the oil water separator, the oil portion flow travels to Tank #8 and the water portion goes to Tanks #1 and #2. The Truck Loading Racks are located on a concrete floor and curbed area that is covered to deflect rainfall. The dimensions of this quick drainage containment system are: (b) (7)(F) provides a secondary containment volume of approximately 8,441 gallons. This curbed area drains to a sand trap, and then to the oil/water separator. The oil/water separator has a capacity of 9,000 gallons. Approximately 75% of this volume can be relied upon to handle a product surge. (b) (7)(F) .

Warning signs are visible at the loading rack to remind drivers to unhook the hose prior to departure. Drivers do not receive permission to load until the overfill protection (Scully) system is connected to the truck and operating properly. Epic personnel are always present during the loading process. The lowermost drain and all outlets are inspected for discharges prior to filling and departure of all trucks and, if necessary, they are tightened, adjusted or replaced to prevent liquid discharges while in transit.

Regulated product transfer piping is generally contained within the existing storage tank containment dikes. These dikes are currently constructed to contain the volume of the largest tank plus the highest NOAA-listed 24-hour rainfall in the last 25 years. Please refer to containment calculations provided in Figure H-2.

Diked Areas

All bulk storage tanks are provided with secondary containment in the form of earthen dikes. All drain valves associated with containment systems will remain closed and securely locked except when discharging. Drainage of containment areas will be performed manually. Prior to discharge, terminal personnel will inspect accumulated stormwater, and verify that water is clear and free of oil sheen. If sheen is observed, proceed to treat water using sorbents and/or diverting to oil/water separator. Epic personnel are directed to not discharge stormwater if a sheen is observed.

For the purposes of secondary containment and drainage planning, the Epic Macon Terminal is divided into five impoundments, labeled 1-5, which comprise three containment areas (see Figure H.1). Impoundment 1 includes Tank 2001 and is connected by a dike drain valve to Impoundment 2, which provides containment for Tank 5501. Impoundment 2 is connected by a dike drain valve to Impoundment 3 which encompasses Tanks 1, 2, 5, 8, 3004 and 3005. Impoundment 4, the largest volume secondary containment structure, provides containment for Tanks 2201, 3001, 3002, 3003, 3006 and 3007. It is connected by a dike drain valve to Impoundment 3 and another dike drain valve allows water discharge to the surface (and outfall 1) near the northwest corner of this Impoundment. Impoundment 5 services the pipeline manifold and Tank 3. Containment Area 1 includes all of Impoundment 4, Containment Area 2 includes Impoundments 2 and 3, and Containment Area 3 encompasses Impoundment 1.

Rainwater Drainage

If stormwater is verified as uncontaminated, unlock and open discharge valve. Begin discharge of stormwater. Periodically monitor water quality of effluent as discharge continues. If water quality changes (such as if a sheen appears), discontinue the discharging. Close and lock the discharge valve, and proceed to treat the water to remove the contaminant. All drain valves will remain closed and securely locked except when discharging. The Secondary Containment Drainage Log (Section H-8), is used to record all dike draining events. Upon completion of the drainage, close and lock drain valve and record the securing of the drain valve on the Secondary Containment Drainage Log. Inspect accumulated stormwater. Verify that water is clear and free of oil sheen. If sheen is observed, proceed to treat water using sorbents and/or diverting to oil/water separator. Do not discharge stormwater if it is contaminated. Stormwater is collected within the secondary containment dikes. Epic maintains a permit from the state of

Georgia, to discharge uncontaminated stormwater

Undiked Areas

All storage of oil at this Facility is addressed with secondary containment. All product transfer operations from one mode of transportation to another are addressed with containment by curbing, drains, diversions to pits, sumps, oil/water separators, etc.

Diversion System

All oil storage containers are addressed by secondary containment as are transfers between modes of transportation. Providing all Facility outfall ditches with a system that would retain oil at the Facility is impractical for potential leaks from the pipeline (and appurtenances) outside containment and the tanker trucks outside of the rack areas due to the topography of the Terminal and the numerous and varied areas of potential release from these types of facilities. Much of the runoff at this site is sheet flow which would not be captured by the design listed in 40 CFR 112.8 (b)(4). Additionally, underground piping releases would certainly not be captured by such design either. Equivalent or better environmental protection is achieved by additional training of operations personnel in recognizing and properly reacting to potential release scenarios, primarily in the use of ESD systems to minimize release volumes. For the type of facilities addressed here, facility operations personnel and OSRO personnel's enhanced training and drills in association with the FRP provides equivalent environmental protection.

Facility Effluents

To treat stormwater, Epic will use sorbent pads to remove oil, or direct the flow of stormwater through one of the facility oil/water separators. Prior to the discharge of stormwater from the dike field areas, Epic personnel visually inspect the effluent. Stormwater is not discharged if there is a visible sheen. Epic will treat the stormwater to remove the oil sheen before discharging.

H.7. General Inspection Procedures

GENERAL INSPECTION PROCEDURES – Macon Terminal	DATE
A. ROUTINE VISUAL INSPECTION	
• Check tank connections for leaks and localized dead vegetation	
• Inspect drains for accumulation of oil	
• Check tanks for gaps between tank and foundation and damage caused by vegetation roots	
• Check valves and packing for leaks	
• Check drains and sumps for accumulation of oil and proper operation of level controls and pumps	
• Check tank seams for leaks, including drips, puddles, discolored area or localized dead vegetation	
• Check all tank and piping surfaces for signs of external corrosion	
• Check base of tanks for evidence of settling, leaks, including drips, puddles or discolored areas	
• Check piping for bowing between supports, leaks, including drips, puddles, discolored area, or localized dead vegetation	
• Check vent system outlets to ensure that they are not obstructed	
• Check secondary containment for discoloration and cracks or holes. Special attention should be given to seams and locations where piping goes through the deck, curbing or dikes. Ensure dike valves are closed and sealed	
• Check secondary containment for permeability, debris, erosion, location/status of pipes, • inlets, drainage beneath tanks, and level of precipitation in dike vs. available capacity	
• Check secondary containment for presence of water in diked area. Follow appropriate Company procedures after visual inspection of the water to determine if sheen is present on the water	
• Check all gates to ensure that only the entrances/exits currently in use by authorized personnel are open and unlocked	
B. ANNUAL INSPECTIONS	
• Check facility lighting to ensure all are functioning	
• Check facility fencing for damages that would allow unauthorized entry	
• Inspect sumps for the accumulation of oil	
• Inspect diked/curbed areas for the accumulation of oil	
• Inspect drip pans on lift stations for the accumulation of oil	
• Inspect all tanks for proper operation including gauges, sight glasses, level controls and pressure controls	
• Inspect valves and valve glands for proper operation and ensure complete valve closure (leak proof)	
• Inspect sump for proper operation. Manually gauge sump and pump out if level is high	
• Examine the outside of the tank for signs of corrosion, damaged paint surfaces and signs of leaking	
• Inspect pipelines for signs of leaking or damage	
• Inspect flanges for signs of leaking or damage	
• Inspect joints for signs of leaking or damage	
C. RECORD KEEPING	
• All inspections, except routine, are to be documented on the forms provided in the Appendix and retained at the Facility. Records shall be maintained for a period of five (5) years. The following is a list of documentation forms available in the Appendix:	
• Annual Inspection Record	

H.8. Secondary Containment Drainage Log

Facility: Macon Terminal					
DATE	**TIME STARTED**	**TIME ENDED**	**OPERATOR NAME**	**SIGNATURE**	**COMMENTS**
SECONDARY CONTAINMENT DRAINAGE PROCEDURES					
1. Inspect water inside containment for sheen. Indicate sheen/no sheen in comments. 2. Open valve or start pump. 3. Monitor drainage. 4. Close valve and secure with seal or lock/secure pump. 5. Fill out drainage log and sign.					

H.9. SPCC Monthly Checklist Form

Facility :	Macon Terminal	Date:	
Inspectors Signature:			
Instructions: In the column titled "Results", answer Yes, No, or N/A (not applicable). **Any result with a "No" answer must be accompanied with a comment detailing the expected corrective actions or repairs and the date of those repairs.** This form must be kept on file at the facility for 5 years. The term container is synonymous with terms of tank and drum.			
Inspection Point	**Results**	**Comments: (Required when answer is "No")**	
Do the container dikes appear to be large enough to contain the capacity of the largest container in the dike plus sufficient freeboard to allow for precipitation? (See note 1) 40CFR 112.7(e)(2)(ii)			
Does the earthen secondary containment look stable and in good condition (no erosion, settling, etc.)? 40 CFR 112.7(e)(2)(ii)			
Are dike drain valves closed and locked? (See note 2 and note 3) 40CFR 112.7(e)(2)(iii)(A)			
Are aboveground containers subject to periodic integrity testing? Are aboveground containers, their supports and foundations inspected for deterioration? 40CFR 112.7(e)(2)(vi)			
Are the high liquid level container alarms functioning properly, or are there procedures in place to prevent container overfill? 40CFR 112.7(e)(2)(viii)(A)			
Is the container level (gauge) system functioning properly? If no automatic gauge system is installed, how often are the containers hand gauged? (See note 4) 40CFR 112.7(e)(2)(viii)(D)			
Has the container level (gauge) system been calibrated for accuracy? Enter the frequency that those calibrations are done in the comments column. 40CFR112.7(e)(2)(viii)(E)			
Are mobile or portable oil storage containers provided with secondary containment? 40CFR 112.7(e)(2)(xi)			
If there is any partially exposed buried piping, is it free of external corrosion? 40CFR 112.7(e)(3)(i)			
Are pipe supports functioning properly? (See note 5) 40CFR 112.7(e)(3)(iii)			
Are containers (tanks and drums), piping, valves, fittings, and other apertures free of leaks? 40CFR 112.7(e)(3)(iv)			
In the areas where above ground piping exists, are signs in place warning vehicular traffic of the existence of the piping? 40CFR 112.7(e)(3)(v)			
In truck and rail loading/offloading areas, is the spill containment system functioning properly? (See Note 6) 40CFR 112.7(e)(4)(ii)			
Is the perimeter of the property completely fenced, and are the gates locked or guarded when the facility is unattended? (See note 7) 40CFR 112.7(e)(9)(i)			

Note 1: Where containers are routinely "banked" together, the capacity of the largest tank in a dike shall be considered to be the sum of the capacity of those containers.
Note 2: Dike drain valves are only allowed to be opened during discharge events, and then only when the applicable testing/monitoring of the discharged waters have been conducted. All such discharge events must be recorded in a Water Discharge Log or similar record.
Note 3: Where dike drain valves are located inside of lockable valve boxes, it is acceptable to lock the valve box instead of the valve itself.
Note 4: The tank gauge "system" includes any and all of the following where installed; Sight gauges at the container, Digital or computer readouts at the container and/or in the facility's office, and computer readouts.
Note 5: Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.
Note 6: The spill containment system should be designed to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or offloaded at the facility. Drains should be free and clear of debris.
Note 7: When a facility is not attended, all gates must be locked or guarded. Gates that allow entry by means of a drivers card, or other similar key systems would meet this requirement as long as they will automatically close after access and egress is granted.

SPCC 40CFR 112.7(e)(1-10)

H.10. Discharge Prevention Meeting Log

Spill Prevention Briefing

- Personnel are kept knowledgeable of equipment, safety factors, and operating conditions.
- Annual training sessions are conducted by the EHS Department to assure oil handling personnel understand the SPCC requirements for the facility. These documented sessions keep personnel informed of their obligation to prevent pollution incidents and to improve spill control and response techniques.

Note: This form is a sample.

DATE	ATTENDEES	
Subject/Issue Identified	**Required Action**	**Implementation Date**

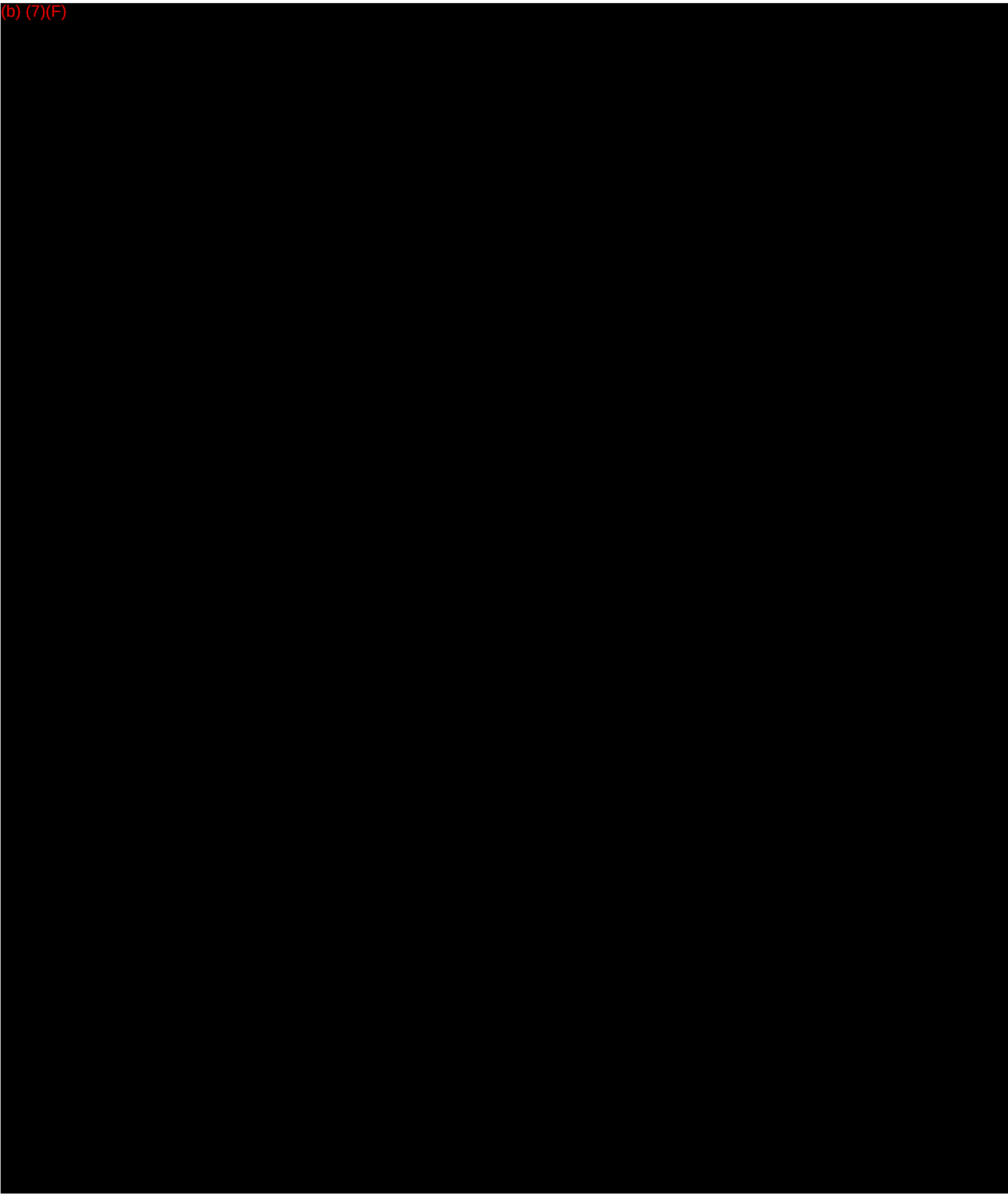
H.11. Testing of Underground Sump-Tank Form

	Facility	Macon Terminal	

Test Procedure:
1. Adjust the liquid level in the sump/tank to a reasonably high “normal operating level”.
2. Isolate the sump/tank from all in-flows and out-flows.
3. Measure the liquid level in the sump/tank and record the time and the level.
4. After 4 hours, re-measure the liquid level in the sump/tank and record the time and level.
5. The person performing the test should sign the test data as certification.
6. Any significant deviations should be reported to the Terminal Manager, EHS Specialist, and Operations Manager immediately.
7. Documentation of the test should be maintained on Form 34 and filed on-site with a copy sent to the EHS Specialist.
8. Test is to be repeated every 3 years at all facilities.
9. Retain this record for 5 years.

Date	**Tank Name or Number**	**Start Time**	**Starting Level**	**Ending Time**	**Ending Level**	**Inspectors Signature**	**Remarks**

(b) (7)(F)



H.13. Facility Self-Inspection Form

PIPELINES AND TERMINALS
ENVIRONMENTAL INSPECTION PROCEDURE AND FORM

Page 1 of 3
Of Self-Inspection Form

The overall purpose for environmental inspections is to strengthen compliance with local, state and federal regulations, and to provide a precedent for good housekeeping practices and ensure environmental awareness for pipelines and terminals operations.

After Inspection Action:

1. Completed inspection report form submitted to Terminal Manager for work orders development and action on items identified. The Terminal Manager has one week in which to take action, assign responsibility, etc.
2. Once form is completed, copy retained by Facility, original returned to Regional EHS Specialist.
3. If no action taken within one week, form is forwarded to Regional Operations Manager for action on identified items. The Regional Operations Manager will then take appropriate actions to insure addressing of action items. Once completed, original form is sent to the EHS Specialist.
4. Follow up completed by Environmental, Operations, or both.

The following items are to be inspected at Pipeline and Terminal Facilities						**Page 2 of 3 Of Self-Inspection Form**
	ITEMS	**Good**	**Fair**	**Poor**	**N/A**	**Comments**
(1)	General environmental appearance.					
(2)	Waste Drums – Labeling – Spill Containment – Weekly Inspections – Lids closed					
(3)	Waste disposal documents (manifests & characterizations) in order.					
(4)	Waste segregation. (no solid material mixed in with debris, metal, or liquid).					
(5)	Signage – (Above ground piping – Instructions to drivers @ loading rack, etc.)					
(6)	Secondary containment correctness and adequacy.					
(7)	AVO Forms – leaks recorded and repair dates noted					
(8)	MSDS Sheets available for required chemicals					
(9)	Leaking equipment – Stains on the ground					
(10)	Unlabeled containers in units (i.e., bottles, barrels, spray bottles).					
(11)	Open containers.					
(12)	Emergency containment traps and sumps emptied within 24 hours.					
(13)	Dike drain valves closed and locked					
(14)	Air Permit on file at the facility (or nearest field office as appropriate)					
(15)	ICP on hand at the facility					
(16)	Tank drawings on hand at the facility					
(17)	Tank history forms in use?					
(18)	VCU Maintenance / Downtime log in use?					

Other items:	**Comments / Concerns**
Ask field personnel if they have any suggestions regarding training.	

PLANNED INSPECTION SUMMARY		Page 3 of 3 Of Self-Inspection Form
Date:		
Facility:		
Inspectors:		

COMMENT	ASSIGNED TO	PRIORITY	W/O or AFE	DUE DATE	COMPLETION DATE

H.14. Weekly Container Inspection and Material Form

Weekly Container Inspection and Material Form

Facility Name: _____

Record Retention: **5 years**

For the Month of: _____

(Month) (Year)

Weekly Container Inspection

Instructions: In the area below, record the inspection results relative to **all** drums, roll-offs, or other containers that are on site at the time of the inspection. All containers should be inspected regardless of the amount currently inside them. Start a new form at the beginning of each month. Note any exceptions, deficiencies, and/or corrective actions in the space provided.

Date of inspection:					
Number of containers on site, (including stockpiles).					
Are all containers in good condition?					
Are all containers closed securely?					
Are all containers greater than 50' from the property line?					
Are all containers labeled properly?					
Are all containers free of leaks and deterioration?					
Inspector's initials:					

Date	Corrective Actions and Other Notes

Materials On-Site Weekly Container Inspection and Material Form Page 2 of 2

Instructions: Complete the information requested below using a different line for each container or stockpile. Consult EHS's Policy on Waste Management Practices as needed. Start a new form at the beginning of each month. Fax or e-mail this form to the EHS Specialist at the end of each month. **Always notify the EHS Department when waste containers are started and as soon as waste containers are full.**

Tracking Number* (Required for all containers and stockpiles on site)	**Description of Contents**	**Size & Type of Container** (Drum, roll-off, stockpile, frac. tank or other)	**Classification** (Hazardous, Non-hazardous, recyclable, or unknown)	**Accumulation Start Date** (Date container was full)	**Lab Report No.** (If using Generator Knowledge, enter "GK")	**Disposal Date** (Date container was removed from site. Leave blank if material is still on site.)	**Date Original Manifest Received** (Enter "N/A" for recyclable materials)
(Example) AMA-020614-01	(Example) Soil Contaminated with Gasoline	(Example) 35 gal. Drum	(Example) Hazardous	(Example) 6/15/2002	(Example) SPL-00120218	(Example) 8/31/2002	(Example) 9/12/2002

*Tracking Number Format: Facility Code-YYMMDD-Count

H.15. Tank Seal Inspection Report

Tank Seal Inspection Report (Annual and Semi-Annual) Page 1 of 3

Distribution:

Original on file at the facility
E-mail Copy to EHS Specialist

Record Information

Record Retention : 5 years
Report Frequency : 12 months

Facility : _____

Date Inspected: _____

Inspected By : _____

Tank gauge during inspection: _____ **Ft.** _____ **In.**

Tank No. _____

Diameter _____ Ft. _____ In.

Product Service _____

Date of Construction _____

Ka time frame is 5/18/78 - 6/23/84. Kb time frame is after 6/23/84.

Directions: From the manway of an Internal Floating Roof Tank, or from the floating roof deck of an External floating roof tank, visually inspect the condition of the roof seals, gaskets, sleeves and other roof fittings for any rips, tears, abrasions, missing parts, or other defects that would allow vapors to escape into the atmosphere. Denote condition below.

Condition of :	Good	Fair	Poor
Seals			
Gaskets			
Sleeves			
Roof fittings			

Internal Floating Roof

Semi-Annual Visual From Manway ☐

Annual Visual From Manway ☐

Other ☐

Describe "Other" _____

External Floating Roof

Primary Seal ☐

Secondary Seal ☐

Tank Seal Inspection Report (Annual and Semi-Annual) Page 2 of 3

Comment/Notes on any abnormal conditions:

This form is intended to satisfy the requirements of:
40CFR 60.112a, 40CFR 60.112b, 40CFR 60.113a, and 40CFR 60.113b

Is the Primary Seal liquid mounted or vapor mounted?

Has any liquid accumulated on the floating roof?

Indicate length and width of any seal gaps in sections below.

Primary Seal Gap Locations: In the space below, indicate the location of each of the Primary seal gaps. Give their locations in reference to the ladder or other stationary devices. If no gaps are observed then type the phrase "No gaps observed" in the space below.	**Primary seal Gap Measurements**				
	Gap width in Inches (max allowed = 1.5")	Gap length		Gap surface area (in sq. in.)	Total Seal Gap (sq.in. / ft. of tank diameter)
		Ft.	In.		
				In2	
				In2	
				In2	
				In2	
				In2	
				In2	
Note: Limits stated on maximum allowable Gap Width for any one gap, and limits on Total Primary Seal Gap apply only to tanks built in the Subpart Ka or Subpart Kb timeframe. (Tanks built after May 18, 1978 and prior to July 23, 1984 are subject to Subpart Ka, and tanks built after July 23, 1984 are subject to Subpart Kb.)	* *Total Primary Seal Gap (Max allowed for vapor mounted primary is 1 sq. in. per ft. of tank diam.. Max allowed for liquid mounted primary is 10 sq. in. per ft. of tank diam.)				

Tank Seal Inspection Report (Annual and Semi-Annual) Page 3 of 3					
Secondary Seal Gap Locations: In the space below, indicate the location of each of the Secondary seal gaps. Give their locations in reference to the ladder or other stationary devices. If no gaps are observed then type the phrase "No gaps observed" in the space below.	**Secondary seal Gap Measurements**				
	Gap width in Inches (max allowed = 1/2")	Gap length		Gap surface area (in sq. in.)	Total Seal Gap (sq.in. / ft. of tank diameter)
		Ft.	In.		
				In2	
				In2	
				In2	
				In2	
				In2	
				In2	
Note: Limits stated on maximum allowable Gap Width for any one gap, and limits on Total Primary Seal Gap apply only to tanks built in the Subpart Ka or Subpart Kb timeframe. (Tanks built after May 18, 1978 and prior to July 23, 1984 are subject to Subpart Ka, and tanks built after July 23, 1984 are subject to Subpart Kb.)	* *Total Secondary Seal Gap Max allowed for secondary seals is one sq. in per ft. of tank diameter.				

Maximum seal gap for liquid mounted primary seals is 10 sq. inches per foot of tank diam. (212 cm2 / m)
Maximum seal gap for vapor mounted primary seals is 1 sq. inch per foot of tank diam. (21.2 cm2 / m)
Maximum seal gap for secondary seals is 1 sq. inch per foot of tank diam. (21.2 cm2 / m)
Maximum seal gap width for primary seals is 1.5 inches (3.81 cm.)
Maximum seal gap width for secondary seals is 1/2 inch (1.27 cm.)

Reviewed By: _____
Facility Manager (Signature Required)

Date: _____

* * Total Seal gaps are calculated by multiplying the seal gap width in inches by the seal gap length in inches. Then that number is divided by the tank diameter in feet. The result gives you a ratio of gap per foot of tank diameter.

H.16. Kb Tank Seal Inspection Report

Kb Tank Seal Inspection Report Page 1 of 3
Use this form for all "10-year" and "Initial Fill" Inspections

Distribution:

Original on file at the facility	
E-mail Copies to:	Supervisor, Regional EHS Specialist

Record Information

Record Retention : Permanent
Report Frequency : Initial Fill and no more than once each 10 years thereafter. Also required each time the vessel is emptied and degassed.

Facility : _____

Date Inspected: _____

Inspected By : _____

Tank gauge during inspection: _____ Ft. _____ In.

Tank No. _____

Diameter _____ Ft. _____ In.

Product Service _____

Date of Construction _____

Is this an Initial Tank Seal Inspection? _____

Inventory and condition of Floating roof Fittings:

Fitting	Quantity	Gasketed	Bolted	Condition	Comments (required if condition is other than "Good")

Is this tank equipped with a slotted guide pole?				
If there is a slotted guide pole, answer yes or no in the appropriate boxes to the right to indicate which controls have been installed.	Wiper		Is the lid on the automatic gauge float well bolted down?	
	Float			
	Gasket		Is the lid on the access hatch(es) bolted down?	
	Sleeve			

Kb Tank Seal Inspection Report Page 2 of 3

Primary Seal Type	
Is the primary Vapor, or Liquid Mounted?	
Secondary Seal Type	
Roof Type	
Has any liquid accumulated on the floating roof?	

Notes or Comments on any needed corrective actions:

Indicate length and width of any seal gaps in sections below.

Primary Seal Gap Locations: In the space below, indicate the location of each of the Primary seal gaps. Give their locations in reference to the ladder or the previous seal gap.	**Primary seal Gap Measurements**				
	Gap width in Inches (max allowed = 1.5")	Gap length		Gap surface area (in sq. in.)	Total Seal Gap (sq.in. / ft. of tank diameter)
		Ft.	In.		
				In2	
				In2	
				In2	
				In2	
				In2	
				In2	
	* *Total Primary Seal Gap (Max allowed for vapor mounted primary is 1 sq. in. per ft. of tank diam.. Max allowed for liquid mounted primary is 10 sq. in. per ft. of tank diam.)				

Kb Tank Seal Inspection Report Page 3 of 3					
Secondary Seal Gap Locations: In the space below, indicate the location of each of the Secondary seal gaps. Give their locations in reference to the ladder or the previous seal gap.	**Secondary seal Gap Measurements**				
	Gap width in Inches (max allowed = 1/2")	Gap length		Gap surface area (in sq. in.)	Total Seal Gap (sq.in. / ft. of tank diameter)
		Ft.	In.		
				In2	
				In2	
				In2	
				In2	
				In2	
				In2	
	* *Total Secondary Seal Gap Max allowed for secondary seals is one sq. in per ft. of tank diameter.				
Maximum seal gap for liquid mounted primary seals is 10 sq. inches per foot of tank diam. (212 cm2 / m) **Maximum seal gap for vapor mounted primary seals is 1 sq. inch per foot of tank diam. (21.2 cm2 / m)** **Maximum seal gap for secondary seals is 1 sq. inch per foot of tank diam. (21.2 cm2 / m)** **Maximum seal gap width for primary seals is 1.5 inches (3.81 cm.). Maximum seal gap width for secondary seals is 1/2 inch (1.27 cm.)**					

* * Total Seal gaps are calculated by multiplying the seal gap width in inches by the seal gap length in inches. Then that number is divided by the tank diameter in feet. The result gives you a ratio of gap per foot of tank diameter.

H.17. SPCC Tank Inspection Form

SPCC Tank Inspection Form **(For Vertical aboveground storage tanks)**

Date of Inspection (Day/month/year) _____

Facility Name _____

Tank or vessel number _____

Name of Individual Performing the Inspection _____

For instructions on performing this inspection, refer to "*Pipelines and Terminals Departmental Procedure on Integrity Testing of Containers*".

Show the horizontal location on the tank as a clock position with 12 o'clock at compass north and show the vertical location on the tank in feet above the chime. (Chime is the bottom of the tank wall.)

Route the original of this report to Epic Midstream, LLC's Engineering Department. After his or his designees' review and comments, he/she will distribute copies to the facility and to the Regional EHS Department.

Ultrasonic Thickness Readings				
Vertical Readings	O'clock Position	Distance above the chime	Readings (include the units of measurement)	Comments
Point 1				
Point 2				
Point 3				
Point 4				
Point 5				
Point 6				
Point 7				
Point 8				
Point 9				
Point 10				
Point 11				
Point 12				

Horizontal Readings	Feet above the chime	Readings (include the units of measurement)	Comments
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			
7:00			
8:00			
9:00			
10:00			
11:00			
12:00			

General Condition of associated supports and foundations:	

The following information is to be completed only by the Engineer assigned to review the data:

Review by:		**Date:**	

(Engineer's Signature)

Comments:	

SPCC Tank Inspection Form (For Horizontal aboveground storage tanks)

Date of Inspection (Day/month/year) _____
Facility Name _____
Tank or vessel number _____
Name of Individual Performing the Inspection _____
Orientation of tank (Example: East/West) _____
Diameter of tank _____

Name of Individual Performing the Inspection _____

Vertical measurements were taken from the _____ **of the tank.**

Horizontal measurement were taken from the _____ **end of the tank.**

Ultrasonic Thickness Readings				
Vertical Readings	Side or end of tank (East or West, etc.)	Height above bottom belly of tank	Readings (include the units of measurement)	Comments
Point 1				
Point 2				
Point 3				
Point 4				
Point 5				
Point 6				
Point 7				
Point 8				
Point 9				
Point 10				
Horizontal Readings	Distance from end of tank.	Readings (include the units of measurement)	Comments	
Point 11				
Point 12				
Point 13				
Point 14				
Point 15				
Point 16				
Point 17				
Point 18				
Point 19				
Point 20				
Point 21				
Point 22				
Point 23				
Point 24				
General Condition of associated supports and foundations:				

The following information is to be completed only by the Epic Midstream Engineer assigned to review the data:

Review by:		**Date:**	

(Engineer's Signature)

Comments:	

SPCC Tank Inspection Form (For 55-gallon or larger Drums)

Date of Inspection (Day/month/year) _____

Facility Name _____

Name of Individual Performing the Inspection _____

Directions: Tap on all sides, top, and bottom of the drum, and record the results of the inspection below. If tapping was not performed, explain why.

Drum Identification (drum number)	**Results of Inspection**				
	Visual Inspection	Tapping Inspection			Condition of supports or foundation
		Top	Sides	Bottom	

The following information is to be completed only by the Epic Midstream Engineer assigned to review the data:

Review by:		**Date:**	
	(Engineer's Signature)		
Comments:			

H.18. Daily AVO Inspection Form

DAILY AUDIO, VISUAL AND OLFACTORY (AVO) LEAK INSPECTION AND FLARE/COMBUSTOR OBSERVATION FORM FOR PRODUCT TERMINALS

Facility _____

Inspection Frequency: Daily

Original on file at the facility (No copies disseminated) Retain this form for 5 years	***Leak repairs must be completed within 5 days or reasons for repair delays must be documented below.***

Date	Time	Inspectors Signature	K. O. pot empty? Y/N	Flare/VCU Smoking? Y/N	Identify the leaking device. (Device name and/or ID number)	Location of the leaking device	Is the leak vapor or liquid?	Severity of the leak	Method of leak detection (sound sight or smell (A,V,O)?)	Date and description of attempted repairs (or reason for delaying repairs)	Date repairs were completed

Figure H.1 - Macon Terminal Drainage Map

(b) (7)(F)

Figure H.2 - Macon Terminal Containment Calculations

January 6, 2010

ARSEAL TECHNOLOGIES
Engineering the Future

Mr. Nick Palma
Gulf Coast Region Engineer
NuStar Energy, LP
3033 Marina Bay Drive
Suite 310
League City, TX 77573

RE: NuStar Macon Dike Containment Revision 1

Mr. Palma:

Per your request, below is our analysis of the modifications made to the dike walls at the NuStar Macon Terminal. According to these calculations and the information contained in the survey, this tank farm is in compliance with SPCC requirements for secondary containment of bulk storage facilities.

DATA

The NuStar Macon Terminal tank farm, located at 6225 Hawkinsville Road, Macon, GA 31216, is comprised of three interconnected Dike Areas. According to survey of the tank farm performed by our Georgia licensed surveyor, dated 12/10/2009, and our calculations of dike volumes:

- The available containment of (b) (7)(F) [redacted]. The amount required for (b) (7)(F) [redacted]. The reason for the large discrepancy between the required containment and available containment is that all the Dike Areas are connected by overflow pipes, allowing the smaller Dike Areas to take advantage of the containment in the larger Dike Areas. Please refer to the section "Supplementary Information" below for details on how each of the quantities below was calculated.

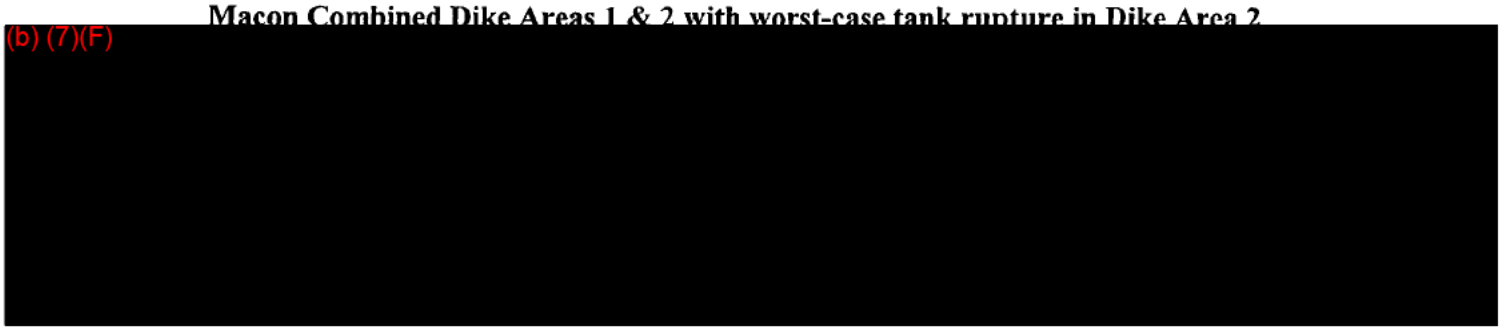
(b) (7)(F) [redacted]

Arseal Technologies
5900 Windward Parkway Suite 100
Alpharetta, Georgia 30005
678-387-1200

- The available containment of Dike Area 2 is (b) (7)(F). The amount required for this area is (b) (7)(F). Please refer to the section "Supplementary Information" below for details on how each of the quantities below was calculated.

Macon Combined Dike Areas 1 & 2 with worst-case tank rupture in Dike Area 2

(b) (7)(F)



- The available containment of Dike Area 3 (b) (7)(F). The amount required for this area is (b) (7)(F). The reason for the large discrepancy between the required containment and available containment is that all the Dike Areas are connected by overflow pipes, allowing the smaller Dike Areas to take advantage of the containment in the larger Dike Areas. Please refer to the section "Supplementary Information" below for details on how each of the quantities below was calculated.

Macon Combined Dike Areas 1, 2 & 3 with worst-case tank rupture in Dike Area 3

(b) (7)(F)

- The connected dike areas are cascading: if storm water or spilled product fills a dike area to the level of the overflow pipe, it will spill over to the next dike area and take advantage of the containment of that larger dike area: Dike Area 3 will overflow to Dike Area 2 which will then overflow to Dike Area 1. Dike Area 1 is self-containing—it will not overflow to any dike area.

SUPPLEMENTARY INFORMATION

The SPCC requires that secondary containment of bulk storage facilities provide for the capacity of the largest tank plus sufficient freeboard for precipitation. Per SPCC recommendations, the 25YR-24HR rain event was used as 'sufficient freeboard' to contain precipitation. The amount of rain for a 25YR-24HR event for this area is 6.9". The terms used above are defined as follows:

Arseal Technologies
5900 Windward Parkway Suite 100
Alpharetta, Georgia 30005
678-387-1200

- **Containment** refers to the total usable volume of the dike before it overflows. It includes the volume of any other dike area that it can overflow into. It was calculated from the survey data using the average dike floor elevation and the low spot on the dike wall.
- **Available containment** was calculated by subtracting the footprint of all the tanks (except the largest tank in the dike) and the freeboard capacity from the total volume of the dike.
- **Required containment** is the volume of the largest tank in the dike area.
- **Excess containment** was found by subtracting the required containment from the available containment.

REFERENCES

- *US Soil Conservation Service Technical Release 55: Urban Hydrology for Small Watersheds, June 1986*
- *SPCC Guidance for Regional Inspectors, November 2005, Section 4.2.4*

ASSESSMENT

According to these calculations and the information contained in the survey, this tank farm is in compliance with SPCC requirements for secondary containment of bulk storage facilities.

Please contact us if you have any questions regarding this matter.

Sincerely,

Romulo C. Lakip, Jr. PE

Romulo C. Lakip, Jr. PE
GA License No: PE#030147
Arseal Technologies, LLC

cc: Amanda Joyce—Jacksonville HSE via email
John King—League City, TX PM via email

Arseal Technologies
5900 Windward Parkway Suite 100
Alpharetta, Georgia 30005
678-387-1200

(b) (7)(F)

[redacted]

(b) (7)(F)

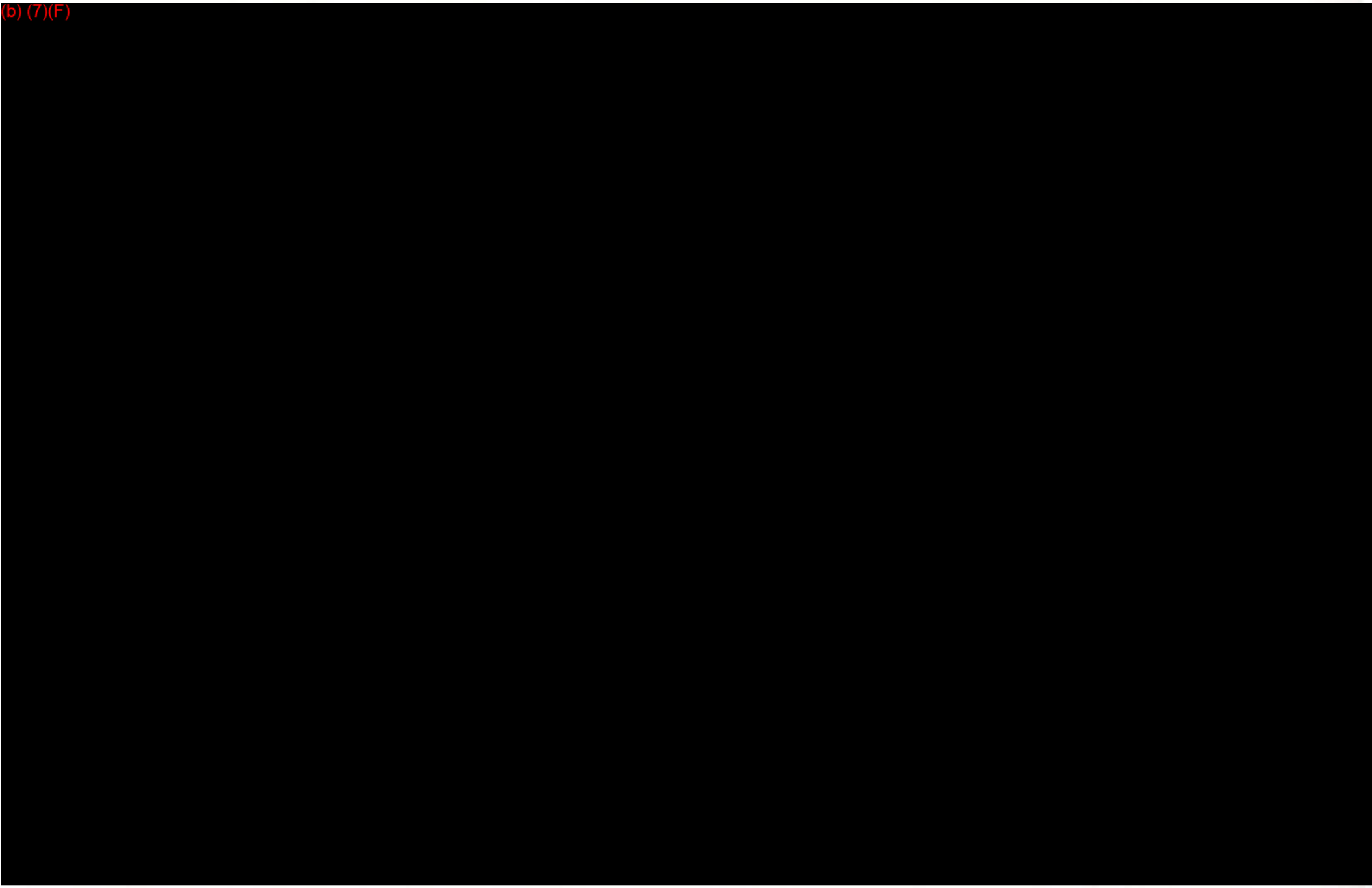
[redacted]

(b) (7)(F)

Square Footage Calculations																		
Containment Area Name or Number	Macon Berm 5																	
Tank Number																		
Tank Height (in dec. ft)																		
Diameter (in dec. ft)																		
Radius (in dec. ft)	0 0	0.0	0.0	0.0	0 0	0.0	0.0	0.0	0 0	0.0	0.0	0 0	0.0	0.0	0.0	0.0	0.0	0.0
Square Footage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tank Capacity (In Gals)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total square footage of tanks displacement (Line 6 Totals)																		0
Square Footage of Area (Avg inclusion area)	**Area from survey or calculation Enter square feet of area.**																	2,550
Total Square Footage of Displacement Tanks	**Derived from above calculation (Line 9)**																	0
Net Square Footage	**Area minus tank displacement (Line 10 minus line 11)**																	2,550
Average Fill Depth	**Based on lowest wall height. Enter in decimal feet.**																	1.10
Net Cubic Footage of Area	**Square footage X wall height (Line 12 X line 13)**																	2,805
Volume of Area (Gallons)	**Net Cubic footage X 7.48. This number represents the secondary containment capacity for the tank table Enter this number on the tank table.**																	(b)
Rainfall adjustments and capacity adequacy																		
Average Fill Depth	**From line 13 above**																	1.10
Enter 25 yr / 24 Hr rainfall (in decimal feet)	**From Precipitation chart. Enter in inches.**																	6.5
Rainfall equivalent in decimal feet	**Converted to decimal feet**																	0.54
Adjusted Fill Depth	**Wall height minus precipitation (Line 17 minus line 19)**																	0.56
Seconday Containment Volume (With Rainfall Allowance) In Cu. Ft.	**Cubic footage of area (Line 14) X adjusted fill depth (Line 20)**																	(b)
Secondary Containment Volume (With Rainfall Allowance) in Gallons	**Adjusted cubic footage X 7.48 (Line 21 X 7.48)**																	(b)
Largest Tank Number In Area	**From tank data. Enter the tank identifier (number) of the largest tank in the area.**																	3
Volume of Largest Tank (Gallons)	**Tank volume in gallons (Enter in gallons)**																	(b)
Volume Factor of Largest Tank	**Adjusted (for rainfall) secondary containment volume (Line 22) divided by largest tank capacity (Line 24). Results must be greater than 1.00**																	1.57

Notes

Note: Although this berm area is oversized, there are a lot of small pipes within the containment area that would offer some displacement of product.


(b) (7)(F)

Appendix I
Federal and State Requirements

Appendix I
Federal/State Requirements

The development, maintenance, and utilization of this Plan implements company policy and addresses the following regulatory requirements and guidelines:

Federal Oil Pollution Act of 1990: U.S. EPA Final Rule for Non-Transportation Related On-shore Facilities as published in 40 CFR Part 112.20.

Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation requirements for an OPA 90 Plan as published in 49 CFR 194.

U.S. EPA Spill Prevention, Control, and Countermeasure (SPCC) regulations as published in 40 CFR Part 112.1 - 112.7.

U.S. EPA Resource Conservation and Recovery Act (RCRA) regulations as published in 40 CFR Part 265.50 - 265.56.

OSHA's Emergency Action Plan Regulation as published in 29 CFR 1910.38(a).

OSHA's HAZWOPER Regulation as published in 29 CFR 1910.120.

This Plan is consistent with the most recent version of the applicable Area Contingency Plan (ACP). The applicable ACP for the Facility is:

- U.S. Environmental Protection Agency - Region IV, Region 4 Oil and Hazardous Substances Pollution Contingency Plan

This Plan is consistent with the most recent version of the National Contingency Plan (NCP).

The NCP for the Facility is:

U.S. Environmental Protection Agency; National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule.