PDHonline Course G324 (4 PDH)

US Environmental Protection Agency
Facility Response Plan

Instructor: Tim Laughlin, PE

2020

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U S EPA Environmental Regulations and Codes

For Facility Response Plans (FRP)

Timothy Laughlin, P.E.

Course Content

Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). The Oil Pollution Prevention regulation includes two methods by which a facility may be identified as posing substantial harm:

- **Through a self-selection process; or**
- **By a determination of the EPA Regional Administrator.**

The EPA Regional Administrator may consider factors similar to the self-selection criteria, as well as other factors, including:

- **Type of transfer operations**
- **Oil storage capacity**
- **Lack of secondary containment**
- **Proximity to fish, wildlife, and sensitive environments or drinking-water intakes**
- **Spill history**

In addition, the EPA Regional Administrator may determine that a facility poses significant and substantial harm.

Facility Response Plans (FRPs) must:

- **Be consistent with the National Contingency Plan and applicable Area Contingency Plans**
- **Identify a qualified individual having full authority to implement removal actions, and require immediate communication between that person and the appropriate federal authorities and responders**
- **Identify and ensure availability of resources to remove, to the maximum extent practicable, a worst-case discharge**
- **Describe training, testing, unannounced drills, and response actions of persons on the vessel or at the facility**
- **Be updated periodically**
- **Be resubmitted for approval of each significant change**

Key elements include:

- **Emergency Response Action Plan, which serves as both a planning and action document and should be maintained as an easily accessible, stand-alone section of the overall plan**
- **Facility information, including its name, type, location, owner, operator information**
- **Emergency notification, equipment, personnel, and evacuation information**
- **Identification and analysis of potential spill hazards and previous spills**
- **Discussion of small, medium, and worst-case discharge scenarios and response actions**
- **Description of discharge detection procedures and equipment**
- **Detailed implementation plan for response, containment, and disposal**
- **Description and records of self-inspections, drills and exercises, and response training**
- **Diagrams of facility site plan, drainage, and evacuation plan**
- **Security (e.g., fences, lighting, alarms, guards, emergency cut-off valves and locks, etc.)**
- **Response plan coversheet**

EXAMPLE US EPA FRP (US EPA Regulatory Language in Blue Verbiage)

FEBRUARY 14, 2018

FACILITY RESPONSE PLAN COVER SHEET (EMERGENCY RESPONSE ACTION PLAN-NEXT PAGE)

GENERAL INFORMATION

Owner/Operator of Facility: Mayberry Oil Services, Inc.
Facility Address: 5617 Aunt Bee Road
Mayberry, North Carolina 27330

Facility Telephone Number: (919) XXX-XXXC

Latitude: 35 degrees, XX minutes, XX seconds.
Longitude: -79 degrees, XX minutes, XX seconds.

Dun and Bradstreet Number: XXXXXXXXXX

North American Industrial Classification System (NAICS): 421930

- This industry comprises establishments primarily engaged in wholesaling scrap from automotive, industrial, and other recyclable materials. Included in this industry are auto wreckers primarily engaged in dismantling motor vehicles for the purpose of wholesaling scrap. Oil, waste, wholesaling; Old SIC 5093

Largest Aboveground Oil Storage Tank Capacity: 1,000,000 gallons

Maximum Oil Storage Capacity: 4,161,300.00 gallons

Number of Aboveground Storage Tanks: 34

Worst-Case Discharge Amount: 1,000,000 Gallons

Facility Distance to Navigable Water: 1,375 feet

Qualified Individual
Mark Giaquinto, Facility Manager
Business Hours Phone Number: *919-XXX-XXXX extension 102*
Mobile Phone Number: *919-XXX-XXXX*
Digital Pager Number: *Not Available*
Home Phone Number:

ATTACHMENT C-II
CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION FORM

FACILITY NAME: Mayberry Oil Services, Inc.
FACILITY ADDRESS: 5617 Aunt Bee Road, Mayberry, NC 27330

1. Does the facility have a maximum storage capacity greater than or equal to 42,000 gallons and do the operations include over water transfers of oil to or from vessels?
YES_____ NO___X_____

2. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) gallons and is the facility without secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within the storage area?
YES_____ NO___X_____ ____

3. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) gallons and is the facility located at a distance as calculated using the appropriate formula in Attachment C-III or an *alternative formula 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" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan.
YES__X___ NO_____

4. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) 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, such that a discharge from the facility would shut down a public drinking water intake?
YES__X__ NO_____

5. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) gallons and within the past 5 years, has the facility experienced a reportable spill in an amount greater than or equal to 10,000 gallons?
YES_____ NO___X_____

***If an alternative formula is used, documentation of the reliability and analytical soundness of the alternative formula must be attached to this form.**

CERTIFICATION
I certify 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.

Signature: _____ Title: President

Name: Mr. James Mayberry Date: _____
(Please type or print)

Regulatory Reference: Federal Regulation US EPA 40 CFR Part 112, Dated July 1, 2003
Type of Facility: Petroleum Oil Processing Plant / 10-Day Hazardous Waste Transfer Facility
The facility was operational in the early 1990's, and the SPCC Plan has been implemented since June 1990.

Management Approval and Designated Person (40 CFR 112.7)

This facility is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This SPCC Plan has the full approval of this facility's management. This facility has committed the necessary resources to implement the measures described in this Plan.

The Facility Manager is the Designated Person Accountable for Oil Spill Prevention at the facility and has the authority to commit the necessary resources to implement this Plan.

Authorized Facility Representative (facility response coordinator):

Name: Mr. James Mayberry Title: President

Signature: _____

Date: _____

ENGINEERING CERTIFICATION

The undersigned certifies and attests that: (1) he is familiar with this regulation, (2) that he or his agent has visited and examined this facility, (3) that the plan has been prepared in accordance with good engineering practice and with the requirements of this regulation and industry standards, (4) that procedures for required inspections and testing have been established, and (5) that the plan is adequate for the above-named facility. Engineering Certification does not relieve owner/operator of their responsibility of implementing the requirements of this regulation.

Neither this engineer nor his agent tested for proper operation of any electrical/mechanical/safety equipment, overfill devices, vents, emergency venting, valves, corrosion control systems, or any other equipment systems not specifically mentioned.

Name: Gomer M. Pyle, PE#; STI AST Level II Certification #
Wallies Engineering Services, 7300 Barney Ave., Raleigh, NC 27622: 919-XXX-XXXX

Signature: _____ (SEAL)

Date: February 14, 2018

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Appendix A: Mutual Aid Agreement(s)
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ACRONYMS:
ACP: Area Contingency Plan
ASTM: American Society of Testing Materials
bbls: Barrels
bpd: Barrels per Day
bph: Barrels per Hour
CHRIS: Chemical Hazards Response Information System
CWA: Clean Water Act
DESR: Designated Employee Spill Response Team
DOI: Department of Interior
DOC: Department of Commerce
DOT: Department of Transportation
EPA: Environmental Protection Agency
FEMA: Federal Emergency Management Agency
FR: Federal Register
gal: Gallons
gpm: Gallons per Minute
HAZMAT: Hazardous Materials
LEPC: Local Emergency Planning Committee
MMS: Minerals Management Service (part of DOI)
NAICS: North American Industrial Classification System
NCP: National Oil and Hazardous Substances Pollution Contingency Plan
NOAA: National Oceanic and Atmospheric Administration (part of DOC)
NRC: National Response Center
NRT: National Response Team
OPA: Oil Pollution Act of 1990
OSC: On-Scene Coordinator
POL: Petroleum Oil & Lubricants
PREP: National Preparedness for Response Exercise Program
RA: Regional Administrator
RCRA: Resource Conservation and Recovery Act
RRC: Regional Response Centers
RRT: Regional Response Team
RSPA: Research and Special Programs Administration
SARA: Superfund Amendments and Reauthorization Act
SERC: State Emergency Response Commission
SDWA: Safe Drinking Water Act of 1986
SI: Surface Impoundment
SPCC: Spill Prevention, Control, and Countermeasures Plan USCG: United States Coast Guard

1.0 FRP INTRODUCTION

0.1 PURPOSE AND SCOPE

This Facility Response Plan (FRP) is designed to minimize hazards to human health and the environment created by spills involving petroleum, oils, and lubricants (POL) or hazardous substances. The Plan designates responsibilities and procedures for a proper response to spill events. Implementation of the Plan will be required whenever there is a spill of POL or hazardous substances (including waste materials) which could:

- **Threaten human health or welfare**
- **Cause or threaten to cause pollution of the environment**
- **Cause a visible sheen upon, or discoloration of, surface waters**
- **Result in public concern**

The FRP is designed to complement the Mayberry Oil Service Company Spill Prevention Control and Countermeasure Plan (SPCC). The purpose of the SPCC Plan is to minimize the potential for a POL or hazardous substance spill, to prevent any spill from reaching navigable waterways, and to ensure that the cause of any spill is corrected. The purpose of the FRP is to plan and prepare for the response and impact of a potential spill. Together, these plans provide Mayberry Oil Service Co. with a comprehensive approach from spill prevention to spill response.

0.2 REGULATORY REQUIREMENTS

The Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act (CWA) in 1977 and the Oil Pollution Act (OPA) in 1990, required the United States Environmental Protection Agency (U.S. EPA) to promulgate regulations to protect the surface waters of the United States. Consequently, on December 11, 1973, the U.S. EPA published regulations for the prevention of the pollution of waters of the United States by oil from non-transportation-related onshore and offshore facilities. The regulations are codified as Title 40, Code of Federal Regulations, Part 112 (40 CFR 112), Oil Pollution Prevention, effective January 10, 1974. These regulations were subsequently revised July 17, 2002, effective August 16, 2002. 40 CFR 112.20 provides a detailed description of facilities that must submit an FRP. The "Certification of Applicability of the Substantial Harm Criteria," provided as Appendix C in 40 CFR 112, gives a checklist for facilities to use in determining if they need to submit an FRP. If the facility answers "yes" to any question on this checklist, an FRP must be submitted. The "Certification of Applicability of Substantial Harm" checklist for Mayberry Oil Service Co. is included in the cover sheet section of this document.

0.3 FRP FORMAT

The FRP must include the following elements:

- **Emergency Response Action Plan (an easily accessible stand-alone section of the overall plan) including the identity of a qualified individual with the authority to implement removal actions**
- **Facility name, type, location, owner, and operator information**
- **Emergency notification, equipment, personnel, evidence that equipment and personnel are available (by *contract or other approved means*), and evacuation information**
- **Identification and evaluation of potential discharge hazards and previous discharges**
- **Identification of small, medium, and worst case discharge scenarios and response actions**
- **Description of discharge detection procedures and equipment**
- **Detailed implementation plans for containment and disposal**
- **Facility and response self-inspection; training, exercises, and drills; and meeting logs**
- **Diagrams of facility and surrounding layout, topography, evacuation paths, and drainage flow paths**
- **Security measures, including fences, lighting alarms, guards, emergency cutoff valves,**
- **and locks**
- **Response Plan cover sheet (form with basic information concerning the facility)**

This FRP will be presented in the following format:

Section	Content
1	Emergency Response Action Plan (ERAP) - A condensed version of the FRP that provides the response Team with valuable information needed when responding to a release. (Standalone Plan)
2 2	Facility Information - An overview of Mayberry Oil Service Co. and a description of past activities at the facility.
3	Emergency Response Information - Telephone numbers, equipment lists, personnel lists, evacuation plans, and the Emergency Response Coordinator's duties.
4	Hazard Evaluation - Possible hazards that exist, the possibility of a release occurring, the damage a spill would cause to the environment, and a history of previous spills that occurred at Mayberry Oil Service Co.
5	Discharge Scenarios - Small, medium, and worst-case discharge scenarios; the steps taken to report, respond to, contain, and clean up a release; and calculations for response time and worst-case discharge amounts.
6	Discharge Detection Systems - Details on how a release is detected.
7	Plan Implementation - Methods and procedures taken to ensure the FRP is followed.
8	Self Inspection, Drills/Exercises, and Response Training – Inspection guidelines and training conducted to ensure personnel are familiar with spill response procedures.
9	Site Security - Security measures taken to prevent accidental discharge.
10	Diagrams - Maps and drawings of the facility.
11	Copy of US EPA 40 CFR Parts 112.20 & 112.21
12	Engineering Calculations with US EPA Appendices C, D, & E.
Appendices	Mutual Aid Agreement Mayberry Oil Service Evacuation Plan Plot Drawing of Facility
ATTACHED ERAP	EMERGENCY RESPONSE ACTION PLAN-(ERAP-STAND ALONE DOCUMENT)

2.0 FACILITY INFORMATION

This section of the FRP provides an overview of Mayberry Oil Service Co., and a description of past activities at the facility. The Facility Information Form is provided as Table 2-1.

2.1 NAME OF INSTALLATION

The name of the installation for which this plan has been developed is Mayberry Oil Service, Inc.

2.2 FUNCTION OF INSTALLATION

Mayberry Oil Service, Inc. provides re-refining/recycling of used oils. Mayberry's current 100,000-gallon per day (2,300 bbls) production capacity permits the company to market its products to major refineries for the manufacturing of gasoline and No.2 fuels. The Company's refinery operates around the clock seven days a week and has full laboratory capabilities and certified scales.

Mayberry Oil Services, Inc., has 25 years in business, and is an industry leader in the re-refining and collection of used oil. Its operations include collection and recycling of used oil filters, antifreeze, parts cleaners, and industrial services.

Service Areas:

Alabama, District of Columbia, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, West Virginia

Services Provided:

- **Used Oil – Collection, Transporting, Processing, Marketing**
- **Parts Cleaning – Petroleum, Aqueous**
- **Wastewater Treatment – Collection, Processing, Transporting**
- **Oil Filter – Collection, Processing, Transporting**
- **Antifreeze – Collection, Transporting, Recycling**
- **Hazardous Waste - Transporting**
- **Universal Waste – Collection, Transporting**

Products Provided:

Antifreeze Products, Equipment, Industrial Fuel Oils, Parts Washers, Sorbents, Tanks, Used Oil Fuels

Other Products & Services:

Soil remediation, Tank Cleaning, Emergency Spill Response, Industrial Vacuum Services

Nobile Oil Service has a National Pollution Discharge Elimination System Permit (NPDES) from NC Department of Water Quality (NC DWQ)dated October 2013. The Stormwater permit number is NCG080920.

2.3 LOCATION OF INSTALLATION

A supplemental drawing is appended which shows property boundaries, access drainage patterns, on-site buildings, access roads, petroleum storage facilities and general configuration of the bulk plant. This facility is located at the intersection of Aunt Bee Road and Phife Drive, Mayberry, NC, Bass County Industrial Park, off of Old US1 (Ernest T. Bass Road).

Table 2-1
Facility Information Form

GENERAL INFORMATION
FACILITY: NAME: Mayberry Oil Service, Inc.
LOCATION: 5617 Aunt Bee Road
CITY: Mayberry STATE: North Carolina ZIP: 27330
COUNTY: BASS
MAIN OFFICE PHONE NUMBER: 919-774-8180 or 1-800-662-5364
WEB SITE: www.Mayberryoil.com
LATITUDE & LONGITUDE
LATITUDE: 035 degrees, xx minutes, xx seconds.
LONGITUDE: 079 degrees, xx minutes, xx seconds.
WELLHEAD PROTECTION AREA
WELLHEAD PROTECTION AREA: Nearest WHP Plan is in the Town of Broadway, NC
OWNER OPERATOR INFORMATION
OWNER: James Mayberry
SAME AS GENERAL INFORMATION
QUALIFIED INDIVIDUAL
NAME: *Opie Taylor*
POSITION: *Facility Manager*
WORK ADDRESS: 5617 Aunt Bee Road, Mayberry, North Carolina 27330
HOME PHONE NUMBER:
EMERGENCY PHONE NUMBER: 919 *919-774-8180 extension 102*
CELL:
TRAINING:
POL STORAGE INFORMATION
DATE OF OIL STORAGE START UP: 1990
CURRENT OPERATION: 24 tanks with aggregate storage capacity of 3,089,300 gallons
NORTH AMERICAN INDUSTRIAL CLASSIFICATION SYSTEM (NAICS): 421930
DATES & TYPES OF MAJOR EXPANSION: **May 2009 –Additional Storage Tanks** **December 2009- Redesign Stormwater Retention Ponds**

3.0 EMERGENCY RESPONSE INFORMATION

This section of the FRP provides the information needed to respond to a POL and/or hazardous substance release that are beyond the capability of the Nobel Oil Service to control. The information provided in this emergency response section assists Mayberry Oil Service in responding to all spills, including a worst-case discharge. All figures referenced within this section are found elsewhere in this FRP.

3.1 NOTIFICATION

The information provided in the subsections below will assist Nobel Oil Service in meeting spill notification requirements.

3.1.1 EMERGENCY NOTIFICATION TELEPHONE LIST (See Sections 1.2 & 1.3)

The emergency notification telephone list provides the telephone numbers of individuals or organizations that may need to be contacted in the event of an oil and/or hazardous substance spill. The contact list is accessible to all facility employees to ensure that, in the case of a release, any employee on site can immediately notify the appropriate parties. The emergency notification telephone list is provided in Section 1.2

3.1.2 SPILL RESPONSE NOTIFICATION FORM (see section 1.3)

The spill response notification form is a checklist of information that should be provided to the National Response Center (NRC) and other response personnel in the event of a reportable spill. The spill response notification form should be prepared by Mayberry Oil Service designated employee with information provided by the spiller. All information on this form must be known or be in the process of being collected at the time of notification; however, spill notification should not be delayed to collect information. The spill response notification form is provided in Section 1.3

3.2 RESPONSE EQUIPMENT LIST (see Section 1.4)

The facility response equipment list provides an inventory of Nobel Oil Service response equipment, a description of the equipment and its capabilities, and the quantity and location of the stored equipment. The facility response equipment list is provided in section 1.4

3.3 RESPONSE EQUIPMENT TESTING/DEPLOYMENT (see section 1.4)

This section provides information regarding response equipment tests and deployment drills. Response equipment deployment exercises are conducted to ensure that response equipment is operational and that the personnel who operate the equipment in a spill response are capable of deploying and operating it. Representative samples of each type of response equipment are deployed and operated, while the remainder is properly maintained. If appropriate, testing of response equipment is conducted while it is being deployed. A response equipment testing and deployment drill log is provided as section 1.4 pages 16.

The County Fire Department & Mayberry Oil Service tests response equipment during each spill response activity on this facility or at least twice annually. Response equipment is deployed at least annually. Deployment of equipment during a spill response serves as a deployment exercise, if appropriate.

3.4 FACILITY RESPONSE PERSONNEL (see Section 1.6.3)

This section lists all emergency response personnel whose duties involve responding to an emergency, their response times, and their duties during a response action, and their response training.

3.4.1 INSTALLATION FIRE DEPARTMENT EMERGENCY RESPONSE Team

The Installation Fire Department Emergency Response Team is listed in Section 1.6.1. The Fire Department is available and on-call 24/7/365. Mayberry Oil Services Spill Response Team is listed in Section 1.6.3. These lists provide the names and telephone numbers of spill response Team members, their response times, their duties during a response action, and their response training.

3.4.2 INSTALLATION FIRE DEPARTMENT EMERGENCY RESPONSE Team COMMANDER DUTIES

The Installation Fire Department Spill Response Team Commander is responsible for the following duties during an oil and/or hazardous substance emergency:

- **Activate internal alarms and hazard communication systems to notify facility personnel, as needed**

- **Notify response personnel, as needed**
- **Identify the character, exact source, amount, and extent of the release, as well as other items needed for notification**
- **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 the results 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**
- **Use authority to immediately access funding to initiate cleanup activities**
- **Direct cleanup activities until properly relieved of this responsibility**

3.4.3 EMERGENCY RESPONSE CONTRACTORS (SEE 1 SECTION 1.6.2)

Nobel Oil Service does anticipate a need for outside emergency response contractors for spill response and, therefore, does contract emergency response contractors. Clean up support contractors are provided for in section 1.6.2 and Appendix A. Mayberry Oil Service has negotiated a mutual aid agreement with the Bass County and/or City of Mayberry to provide mutual emergency response assistance in the event of a release that exceeds either entity's individual response capabilities. Copies of the mutual aid agreements are included in Appendix A.

3.5 EVACUATION PLANS (Also see EARP)

Evacuation Plan- factors to consider:
Weather; Location of spill or fire; Spill flow direction; Hazard imposed by spill material; Alarm notification system, location; Location of personnel; Impacts to neighboring residences or industry; Useable routes; Safety issues; Emergency response ingress/egress; Transportation route of injured personnel; Alternative command post location.

If it should become necessary to evacuate the Mayberry Oil Service facility, then the following procedures should be taken:

1. **Shut off all equipment and utilities such as gas, electric, and water, if it can be done safely. This will also apply to the used oil process and the thermal treatment unit. The Emergency Shut-Off is located on the main switchgear inside the Motor Control Center (MCC). Follow shutdown procedures.**
2. **Proceed out the designated exits in an orderly fashion and congregate in the chosen assembly areas. The primary assembly area is at the main office parking lot. The secondary assembly area is at head of the rail spur on the north end of the facility.**
3. **All managers should account for all personnel and report this to the Emergency Coordinator. Immediately notify the Emergency Coordinator and/ or Emergency Response Personnel if personnel are missing. All personnel are to report to the designated assembly areas unless accounted for and released. No personnel should leave the facility during an emergency.**
4. **Office employees should close and lock any fireproof file drawers, if time permits.**
5. **Depending on the emergency, take all back-up tapes and records that time and ability to remove will permit and provide for their safekeeping.**
6. **See the facility evacuation maps for the location of emergency exits, alarms, and fire extinguishers.**

In the unlikely event that evacuation is necessary, the Manager of Environmental, Health and Safety or designated employee will contact the Police/Fire to initiate evacuation activities.

Communications and Alarms

Once an Emergency Coordinator has been contacted, that Emergency Coordinator will make the decision to contact external emergency response services, or to evacuate the facility. This decision will be based on an evaluation of the release.

The Mayberry Oil Service telephone system has an intercom system that allows for complete coverage of the facility in an emergency. In the event of an emergency, call the Emergency Coordinator and give the location and details. The Emergency Coordinator will then sound the telephone alarm, if needed.

If the Emergency Coordinator cannot be reached and there is a need to evacuate the facility, press

Page 2 (Facility Exterior) on the telephone. After the tone state the following in a slow, clear voice:

THERE IS AN EMERGENCY AT THE FACILITY. PLEASE EVACUATE THE AREA IN AN ORDERLY MANNER. ALL PERSONNEL MEET AT THE DESIGNATED ASSEMBLY AREAS.

Repeat this for Page 1 (Offices) on the telephone.

Telephones are located in the offices and in the warehouse. To access an outside line, press lines 1 through 8, and then dial the number. To access an extension, press Intercom then the extension number. Again, Emergency Coordinators will make the call to outside emergency response agencies.

Certain facility personnel also maintain 2-way FM radios that can also relay additional information on the emergency. Minimize unnecessary radio traffic during an emergency situation and allow Emergency Coordinators priority on radio communications. This is expected to be the primary form of notification for most oil releases.

Alarm stations containing an air horn have been placed in designated areas throughout the facility to ensure quick notification in case of an emergency situation. In the event of a fire or emergency, simply pull the handle to the alarm station box until the box is open and you can retrieve the air horn device. To operate the air horn, hold the canister in your hand and depress the trigger device extending from the air horn. Hold the air horn trigger continuously until all personnel have identified the signal and started to evacuate the area or building.

There is also alarm systems associated with the process systems. These alarms will be addressed by the facility operating procedures. If these alarms will affect the facility as a whole then the general alarm system (air horn system) will be activated.

3.6 EMERGENCY MANAGERS DUTIES (QUALIFIED INDIVIDUAL)

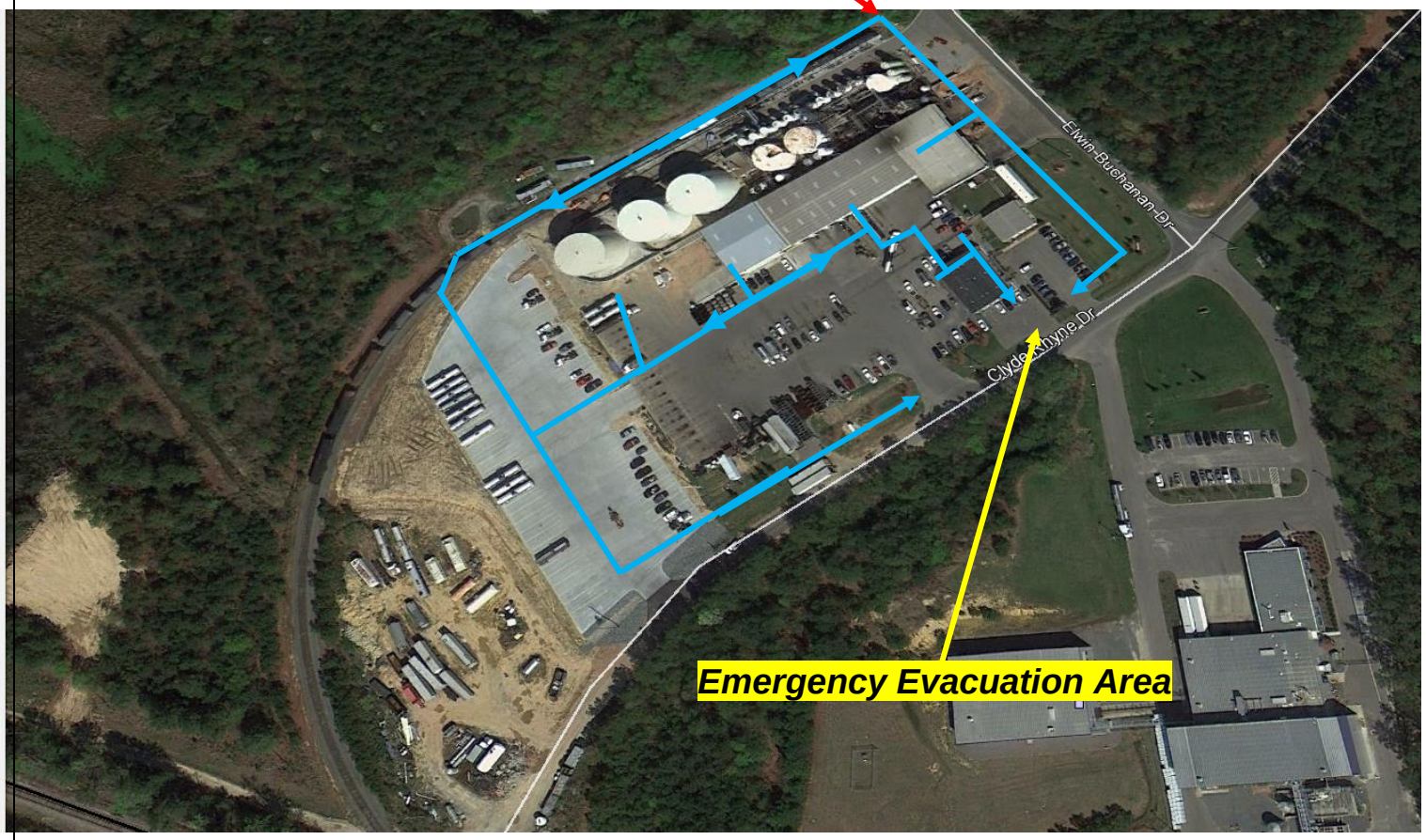
The emergency managers' duties during a spill response action include:

- **Provide technical assistance to the Installation Fire Department Spill Response Team Commander;**
- **Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee, as needed.**
- **In the event of any major spill, notify the All Mayberry Oil Service Managers & Operation Center.**

Emergency Evacuation Diagram

EVACUATION ROUTES ⟷

SECONDARY RALLY POINT



In an unsafe situation, contact the Primary Emergency Coordinator or a Manager immediately.

Employees response upon hearing the fire alarm, please evacuate to the area of Aunt Bee Road between STI Polymer and Mayberry Oil Services, Inc. which serves as the plant assembly area. If the Emergency Coordinator changes the assembly area then you will be directed to the backup location. Secondary rally point is at railroad tracks on Elwin Buchanan Rd.

Designated employees are to collect the Contractor Sign In Logs (from the Control Room and the Pad Building) and the Front Desk Visitor Log and bring them to the assembly area to ensure accurate head count of visitor and contractors. When walking along Elwin Buchanan Road, please exercise caution due to vehicle traffic.

Once in the assembly area, please group by division and let your manager, or designated alternate, know that you are safely evacuated. That manager or designated alternate will, in turn, notify the Office Coordinator of the division headcount.

Wait for further instructions and please keep conversations to a minimum and do not use your cell phones. This ensures that everyone will hear any instructions that are given. Additional responsibilities may be assigned to personnel by the Emergency Coordinators as the emergency situation develops.

Do not leave unless directed by management.

4.0 HAZARD EVALUATION

Hazard evaluation is an industry practice that allows facility owners or operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. Hazard identification and evaluation will assist facility owners or operators in planning for potential discharges, thereby reducing the severity of discharge impacts that may occur in the future. The evaluation also may help the operator identify and correct potential sources of discharges. In addition, special hazards to workers and emergency response personnel safety will be evaluated, as well as the facility's oil spill history.

4.1 HAZARD IDENTIFICATION

To properly plan for a release, two things must be considered: 1) the location of a possible release, and 2) the facility operations that may result in a release. This section lists the aboveground and underground storage tanks at Mayberry Oil Service and identifies the various operations conducted at the facility that could result in a significant release. Only storage containers with a capacity greater than 100 gallons have been included. Thus small, flammable storage lockers containing 5-gallon containers of POL or lubricants are not specifically identified, although their building location is identified on the individual unit maps included in Section 10.

4.1.1 UNDERGROUND STORAGE TANKS

Currently, Mayberry Oil Service has no regulated underground storage tanks (USTs).

4.1.2 ABOVEGROUND STORAGE TANKS

Currently, Mayberry Oil Service has 34 aboveground storage tanks (ASTs) storing a total of 4,161,300.00 gallons, gallons of POL. Of the 34 tanks, 6 (six) are API certified field erected tanks, the remaining 28 having been shop fabricated to Underwriters Laboratories (UL)-142 standards. There are no records of any aboveground tank failures at Mayberry Oil Service. (See Table 4.1; Figures 4.1 & 4.2)

4.1.3 SURFACE IMPOUNDMENTS

There are surface impoundments (*Stormwater Retention Ponds #1 & #2)* at Mayberry Oil Service (See Figure 4.2. Installation of two earthen & rock rip rap ponds (remote impounding) with a storage capacity of approximately ±34,450 gallons. The stormwater retention ponds are at the NE corner of the property for Rail Road Tanker Car drainage areas and property (parking lot) stormwater runoff. Retention ponds are designed with spillways, therefore any pollution runoff or spills are detained for cleanup by company personnel/contractors.

4.1.4 MOBILE STORAGE FACILITIES

To prepare for national security obligations and train for military readiness, mobile fuel tankers are often sited for a short duration during training exercises. At these times, spill mitigation devices will be kept in the vehicles and all personnel operating the vehicles will be trained in spill mitigation procedures. When the mobile fuel tankers return to the home facility, the volume of fuel stored in the tankers will be minimized to the greatest extent practicable. If these mobile fuel tankers are regularly parked with significant amounts of fuel, secondary containment will be provided. A list of facilities at Mayberry Oil Service where mobile units are temporarily parked is provided in Table 4-2. The location of the temporary vehicles is shown on the individual prints #1, #2 & #3 per the print legend.

Table 4-1
Hazard Identification - Inventory of Mayberry Oil Service Aboveground Storage Tanks
Aboveground Tanks (Also see site print #2)

TANK#	VERT. (V) HORIZ. (H)	TANK SIZE (gallons)	PRODUCT STORE	MATERIAL
1	V	22,000	Raw Used Oil	Carbon Steel
2	V	22,800	Raw Used Oil	Carbon Steel
3	V	20,000	Dehydration Condensate	Carbon Steel
4	V	150,000 (Field)	Raw Used Oil	Carbon Steel
5	V	300,000 (Field)	Processed Used Oil	Carbon Steel
6	V	300,000 (Field)	Raw Used Oil	Carbon Steel
18	V	20,000	Processed Used Oil	Carbon Steel
20	V	20,000	Processed Used Oil	Carbon Steel
21	V	20,000	Processed Used Oil	Carbon Steel
22	V	20,000	Unprocessed Oily Water	Carbon Steel
23	V	20,000	Unprocessed Oily Water	Carbon Steel
38	V	2,000	nMP	Carbon Steel
39	V	1,000	Glycerine (Process Vessels	Carbon Steel
40	V	1,000	Water (Process Vessels)	Carbon Steel
M-1	V	1,000,000 (Field)	Raw Used Oil	Carbon Steel
M-2	V	1,000,000 (Field)	Processed Used Oil	Carbon Steel
M-3	V	1,000,000 (Field)	Raw Used Oil	Carbon Steel

Dikes are impervious to spilled POL. The steel shell is isolated from the concrete encasement to ensure corrosion protection. A powder coating on all external steel inhibits rusting. The horizontal tanks rest a minimum of 4 inches above ground level on concrete support or steel legs, permitting complete visual inspection. Seals, valves, and piping outside the tank containment area are in plain view of facility employees. A detection alarm sounds if a leak occurs and a manual safety valve prevents overfill.

A remote spill impoundment basin (Stormwater Retention Ponds #1 & #2) provides added protection against accidental spills from loading unloading operations.

The concrete dike area are continuous and have no discharge drain valves or exposed dikes that present the potential for storm water contamination. In addition, the concrete dikes have sump drainage pits designed to be pumped to holding tanks to be treated off site of secondary containment stormwater. Because of its construction and built-in secondary containment, it is highly unlikely that this tank would create a spill situation.

4.1.5 LOADING/UNLOADING OF TRANSPORTATION VEHICLES

Because Mayberry Oil Service receives bulk fuel shipments by tank truck and /or rail road cars, specific unloading procedures for tank trucks/rail cars have been implemented as required by 40 CFR 112.7(e)(4). These procedures meet the regulations and requirements established by the U.S. Department of Transportation.

Table 4-2
Hazard Identification - Inventory of Mayberry Oil Service Mobile Storage/Transfer Units

Building/Location	No. Facility Mobile Units	Size (gallons)	Substance

The delivery vendor must employ practices for preventing transfer spills or accidental discharges, and must verify that sufficient capacity is available in the tank prior to filling. He shall be in attendance during all filling operations and monitor all aspects of the delivery, taking immediate action to stop the flow of petroleum in the event of an overfill, equipment failure, or an emergency. Trucks must not move until appropriate valves have been closed, connections have been removed, and all valves, lines, etc., have been secured. Trucks should be examined for leaks prior to departure from the unloading area.

In addition to the unloading of bulk fuels from transportation vehicles, described above, daily operations also include refueling of motor vehicles. Fleet motor fuel dispensing is available for refueling private/fleet vehicles owned by Mayberry Oil Service. These facilities have been upgraded to reduce/eliminate spills during refueling operations. The underground tanks have high-level

4.1.6 DAY-TO-DAY TRANSPORT VEHICLE OPERATIONS

Daily operations conducted at Mayberry Oil Service primarily involve vehicle maintenance for vehicles.

4.1.7 SECONDARY CONTAINMENT

All of the ASTs are UL-142 or API 653 certified tanks with secondary containment systems in accordance with US EPA regulation 40 CFR parts 112. The average 24-hour rainfall recorded in the last 25 years at this location is 6.48 inches.

Calculation of Secondary Containment Capacity Engineering. (See Print #2)

Bulk Storage Dike(s) (Treat as one Dike)

Dike #1 dimensions are approximately 242ft x 84ft x 6ft (less 40ft. x 40ft x6ft area).
Dike #2 dimensions are approximately 143.5ft x 84ft x 6ft.
New Dike Addition for Tank M-3 is approximately (semi-circle shape 85ft. x 87.25ft. x 7.29ft.
Dike connector between dike #1 and dike #2 measures approximately 20.0ft x 6.0ft. x 4.0ft.
Total Dike Storage Volume = (242ft x 84ft x 6ft (less 40ft. x 40ft x6ft area)) + (143.5ft x 84ft x 6ft.) + (20.0ft x 6.0ft. x 4.0ft.) + (40.5ft x 87.25ft x 7.29ft.) + (π x 25^2 x 7.29ft. x 0.5) = 218,085ft^3 = (218,085ft^3 x 7.48 gals/ft^3) = 1,631,278 gallons
Dike must hold one million gallons (Tank M-3) plus sufficient freeboard.

Displacement Volume of Tanks/Structures

Tank #M-1 & #M-2 = *π x (30^2) x 6.0ft. X 1.0 x 7.48 = 126,831 gals. x 2 = 253,662 gals.*
Tanks #5 & #6 = *π x (20^2) x 6.0ft. X 2.0 x 7.48 = 112,738 gals.*
Tank #4 = *π x (10^2) x 6.0ft. X 1.0 x 7.48 = 14,092 gals.*
Tanks #1-3, #12-24 & #30-32, #35 & 36 = *π x (5.25^2) x 6.0ft. X 21.0 x 7.48 = 81,568 gals.*
Tanks #8 (Horizontal) = *approximate 30% of tank = 3,000 gals.*
Vacuum Tower = *π x (3.5^2) x 2.0ft. X 1.0 x 7.48 = 575 gals.*
Small Tanks #33-34 & #37 = approximately 2900 gals.
Total Displacement Volume = 468,535 gals.

Available Freeboard for Precipitation:

1,631,278 gallons - (1,000,000gals. + 468,535gals. + 100,000gals.) = 62,743 gallons
(62,743 gallons / 7.48 gallons/ft^3) / ((242ft x 84 ft) – (40ft. x 40ft.) + (143.5ft. x 84ft.) + (20ft. x 6ft.) + 40.5ft. x 87.25ft.) + (π x 25^2 x 0.5) = 0.24 ft = 2.84 inches

The dike therefore provides sufficient storage capacity for the largest bulk storage container within the diked area plus 10%, tank displacement, and precipitation up to 2.84 inches.

Loading-Unloading Areas: (no change form March 2010 SPCC Plan)

***Capacity of Largest Tank Truck Compartment* = 3,000 gallons**
***Capacity of Largest Rail Car Tanker Compartment* = *27*,000 gallons**

1. **Loading Rack & Truck Transport Unloading areas are installed above a 10ft. x 70ft. x 4 ft. containment pit under a covered canopy. This pit will contain approximately 20,945 gallons**
2. **Rail Car loading/unloading areas have railroad containment trays piped to two (2) concrete pits that are approximately 10ft. x 20ft. x 4ft. These two pits will contain approximately 11,969 gallons.**
3. **The contact water and stormwater are collected in storage tanks for later disposal at an approved Certified Wastewater Treatment facility (i.e. Shamrock Environmental).**

Any spills outside containment areas will follow slope of property and discharge into a stormwater retention ponds. Stormwater Retention Pond #1 circular sector dimensions of R15ft. x S30ft. x 3ft. deep & Stormwater Retention Pond #2 quadrilateral dimensions of A47ft. X B36ft. x C30ft. x D25ft. x 3.0ft. deep, with rip rap sloped banks. The retention pond is designed to discharge stormwater.

Approximate Volume of Retention Ponds:

Approximate depth = 3.00 feet:
#1 Pond Area = ½ x 15ft x 30ft = 225ft^2: Gross Volume = 3.0 ft x225ft^2 = 675ft^3 = 5049 gals.
#2 Pond Area = ½ x 47ft x 36ft + ½ x 30 x 25 = 1221ft^2: Gross Volume = 3.0 ft x1221 ft^2 = 3663ft^3 = 27,401 gals.
Bank Slope Area = (inside dimensions): Bank Slope Volume = (inside dimensions)
Net Volume of Ponds #1 & #2 = 32,450 gals.
***Available Freeboard for Precipitation*: 32,450 gallons – 27,000 gallons = 5,450 gallons**

4.1.8 NORMAL DAILY THROUGHPUT

The average POL throughput is approximately 9.6 million gallons per year. The total normal daily throughput for Mayberry Oil Service is estimated to 26,426 gallons of POL related material based on the following:
Motor Fuel Dispensing— NA
Maintenance/training: 5 gallons per year
Heating Oil: 360,000 gallons per year
Re-Refinering, Vacuum gas oil (VGO), Asphalt flux products = 9,285,5587 gallons per year.
Total Consumption 9,645,587 gallons per year ÷365 days = 26,426 gallons/day

Any negative or positive change in this quantity will have a negligible effect on potential discharge volumes.

4.2 VULNERABILITY ANALYSIS & PLANNING DISTANCE

The vulnerability analysis shall address the potential effects (i.e., to human health, property, or the environment) of an oil discharge. Attachment C-III of US EPA Appendix C provides a method that owners or operators shall use to determine appropriate distances from the facility to fish and wildlife and sensitive environments. Please see Tables 4.2 and 4.3 in this section.

This vulnerability analysis addresses the potential effects of an oil or hazardous substance release at Mayberry Oil Service to human health, property, or the environment. To analyze potential effects of a release to the environment, information from 40 CFR 112, Appendix C, was used to determine an appropriate planning distance--the distance that spilled oil could travel before it's contained. Oil and hazardous substance storage at this facility consists of a 5 large field erected tanks and approximately 24 of relatively small-volume storage tanks.

Therefore, the likelihood of a major spill (greater than 36,000 gallons), or even a medium spill (between 2,100 and 36,000 gallons), is extremely unlikely and could occur only if several tanks simultaneously began leaking or if a single large field erected tank ruptured completely with concurrent secondary containment failure. The probability of a large release is further minimized by Mayberry Oil Service aggressive storage tank upgrade program, which has resulted in the replacement of the majority of older ASTs with built-in concrete secondary containment systems. The secondary containment systems at this facility have sufficient secondary containment (the entire contents of the largest tank, plus ten percent).

The greatest risk of release is from mobile storage tanks, tanker trucks and rail road cars. Tank trucks, used for refueling of vehicles, accompany personnel and equipment during loading/unloading operations. These tanks do have built-in remote impounding secondary containment systems in place (see site plan and SPCC plan). Under US DOT, a Mobile Storage/Transfer spill plan is required to be in all transport tankers and is carried with each tank truck while it is in the field, as well as spill response equipment adequate for controlling a spill.
Potential effects to the environment resulting from a Mayberry Oil Service oil or hazardous substance spill are difficult to assess. As shown in Figures 4.1 thru 4.6, industrial facilities, residential areas, schools, and medical facilities near this facility are generally located in the northeastern portion of the area, down gradient of oil and hazardous substance storage areas. Most of the vehicle maintenance facilities are in the central portion of this facility at the shop building.

All of the oil storage tanks in this area are installed within secondary containment areas minimizing the potential for a release, or have redundancy secondary containment.

There are water intakes or drinking water wells on this facility that could be impacted by a release, as water supply is provided from down gradient sources by Bass County and City of Mayberry. The City of Mayberry-Bass County draws water from the Cape Fear River and operates both the water and wastewater treatment systems for all of Bass County. Bass County in turn supplies water to smaller local municipalities. Although a spill could result in human health effects to workers in the immediate vicinity of a release, the effects would-be minimized due to the expected small size of any spill and the limited potential exposure. Adverse environmental effects will also be minimized by the rapid response provided by properly trained response personnel, as described in Sections 3 and 8 of this document. The highly trained Mayberry Oil Service Spill Response Team will oversee health and safety efforts in the event of a spill.

If impacted, the Harnett County Department of Public Utilities is a regional water and wastewater utility that provides service to approximately 125,000 people in Harnett County and the surrounding region. It is possible that this facility may be impacted by a worst case spill. They supply water to the municipalities of Lillington, Angier, Erwin and Coats in Harnett County, Fort Bragg, Linden and Spring Lake in Cumberland County, and Holly Springs and Fuquay-Varina in Wake County. Harnett County also supplies water to Johnston and Moore County. Harnett County utilizes the Cape Fear River as the source for the system's drinking water

Mayberry Oil Service encompasses 20.20 acres. The entire facility is shown in Figure 4.1. The majority

of the facility is used for re-refining of petroleum waste oils. Streams in down gradient range areas are typically flowing 365 days per year. Little Buffalo Creek is approximately 1000 feet to the west of this facility. Little Buffalo Creek discharges into the Deep River approximately 2 miles north of this facility. When parked, refueling vehicles are instructed to stay away from any stream areas. As previously described, each tanker has spill response materials and the mobile-specific portion of the SPCC Plan for guidance when transporting fuel. In addition, drivers receive training for spill prevention and response. The proper training of personnel and the availability of spill response equipment will minimize any adverse environmental effects.

Any effect on private property as a result of an oil or hazardous substance spill at this facility is likely to be relatively minor, as all storage areas are located within the confines of Mayberry Oil Service property. There is some potential for drainage to private property, however, if a spill were to enter a waterway and be transported offsite. All of the small streams and creeks near oil and hazardous substance storage areas drain northwest to Little Buffalo Creek. Little Buffalo Creek is approximately 1000 feet to the west of this facility. Little Buffalo Creek discharges into the Deep River approximately 2 miles north of this facility.

The planning distance was calculated from the formulas provided in Appendix C of 40 CFR 112 (See Section 12.0). The following information and assumptions were used to calculate the planning distance:

- **It was assumed that an oil or hazardous substance release from this facility would empty directly into tributaries of Little Buffalo Creek. This was assumed as the most conservative approach, because tributaries to Little Buffalo Creek are mostly dry or intermittent. Little Buffalo Creek is a perennial stream.**
- **The slopes of Little Buffalo Creek, Deep River & Cape Fear River were determined from DeLorme 3-D TopoQuads Mapping Software & Google Earth.**
- **Average mid-channel depth of Little Buffalo Creek is 1 foot (field investigation). There are no surface water intakes on Little Buffalo Creek.**

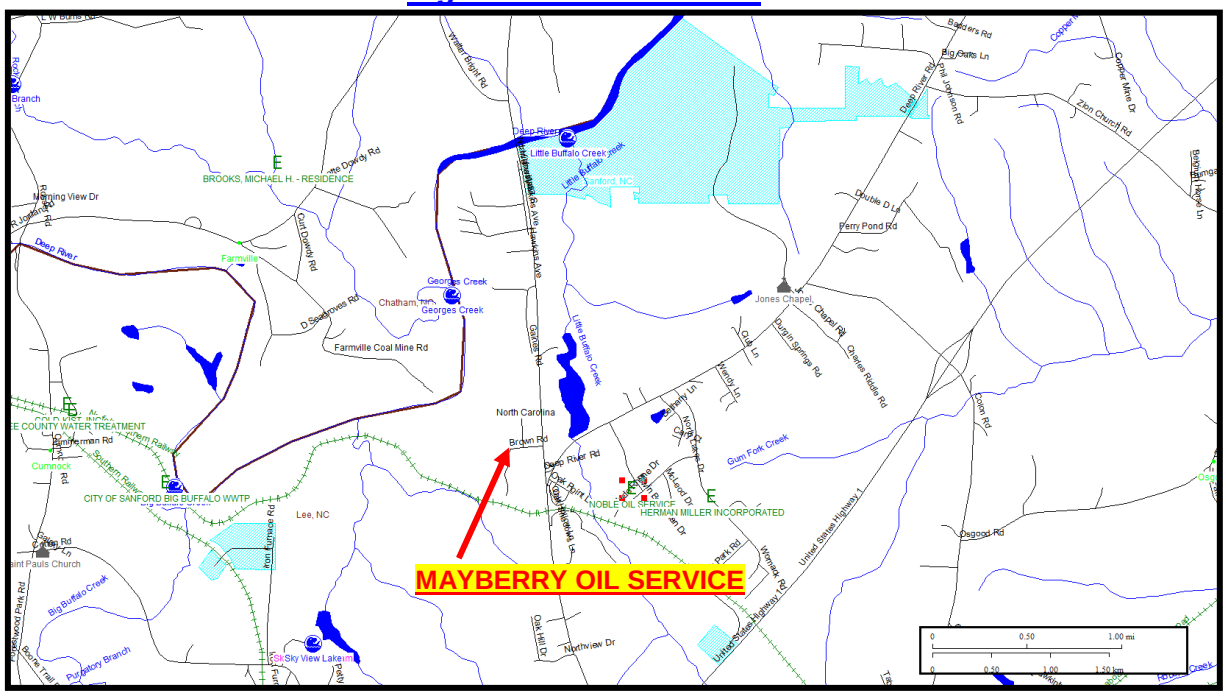
TABLE 4.2 VULNERABILITY ANALYSIS
(See figures 4.1 thru 4.6)

Human health, property, or the environment	Major Spill (≤36,000 gals.)	Medium spill (2,100 to 36,000 gals.)	Minor spill (≥ 2,100 gals.)
Water intakes (drinking, cooling, or other)	Water Intakes for Bass Country & Possible Harnett Country	Water Intakes for Bass Country & Possible Harnett Country	Water Intake for Bass Country
Schools	NA	NA	NA
Medical facilities	Moncure Comm Health	Moncure Comm. Health	NA
Residential areas;	Homes on Little Buffalo Creek & Deep River	Homes on Little Buffalo Creek & Deep River	Homes on Little Buffalo Creek
Businesses	Ramsey Mill Pond	NA	NA
Wetlands or other sensitive environments	Little Buffalo Creek, Deep River & Cape Fear River	Little Buffalo Creek, Deep River & Cape Fear River	Little Buffalo Creek, Deep River & Cape Fear River
Lakes and streams	Little Buffalo Creek, Deep River & Cape Fear River	Little Buffalo Creek, Deep River & Cape Fear River	Little Buffalo Creek, Deep River & Cape Fear River
Endangered flora and fauna	UNKNOWN	UNKNOWN	UNKNOWN
Recreational areas	Fishing & Recreational Camps, Canoeing and Boat Access, State Parks & Dams	Fishing & Recreational Camps, Canoeing and Boat Access, State Parks & Dams	Fishing Pond on Little Buffalo Creek
Transportation routes (air, land, and water)	Cape Fear River	Cape Fear River	NA

Utilities-Hydro-Electric on Deep River & Cape Fear River.	**Lockwood Dam Hydro Power on Deep River & Cape Fear Steam Plant**	**Lockwood Dam Hydro Power on Deep River & Cape Fear Steam Plant**	**NA**
Human health, property, or the environment	**Major Spill (≤36,000 gals.)**	**Medium spill (2,100 to 36,000 gals.)**	**Minor spill (≥ 2,100 gals.)**
Other areas of economic importance (e.g., beaches, marinas) including terrestrially sensitive environments, aquatic environments, and unique habitats	**Marinas on Cape Fear River, Little Buffalo Creek, Deep River & Cape Fear River, Buckhorn Lake & Dam on the Cape Fear River, & Raven Rock State Park**	**Marinas on Cape Fear River, Little Buffalo Creek, Deep River & Cape Fear River, Buckhorn Lake & Dam on the Cape Fear River, & Raven Rock State Park**	**Little Buffalo Creek Pond**
Sensitivity of Coastal Environments and Wildlife to Spilled Oil: NORTH CAROLINA, APRIL 2011-Atlas	**NA**	**NA**	**NA**

All vulnerable areas in the planning distance must have specific response strategies Oil flow paths current/flow concerns; Access to anchor points; Disposal Booming strategy testing plan; Procedures for evaluating and revising booming plans; Type of boom (size, length, skirt size, angle, overlap, hard/containment or soft/sorbent); Type of booming (deflection boom, protection boom); Deployment locations; Collection points (skimmers and skimming capacity, vacuum truck positioning and vacuum truck capacity

Figure 4.1 Land View 6



LANDVIEW MAPS FROM: U.S. Census Bureau, Geography Division, LandView® 6 & US EPA'S MARPLOT (Mapping Application for Response, Planning, and Local Operational Tasks) mapping program.

Figure 4.2 Land View 6

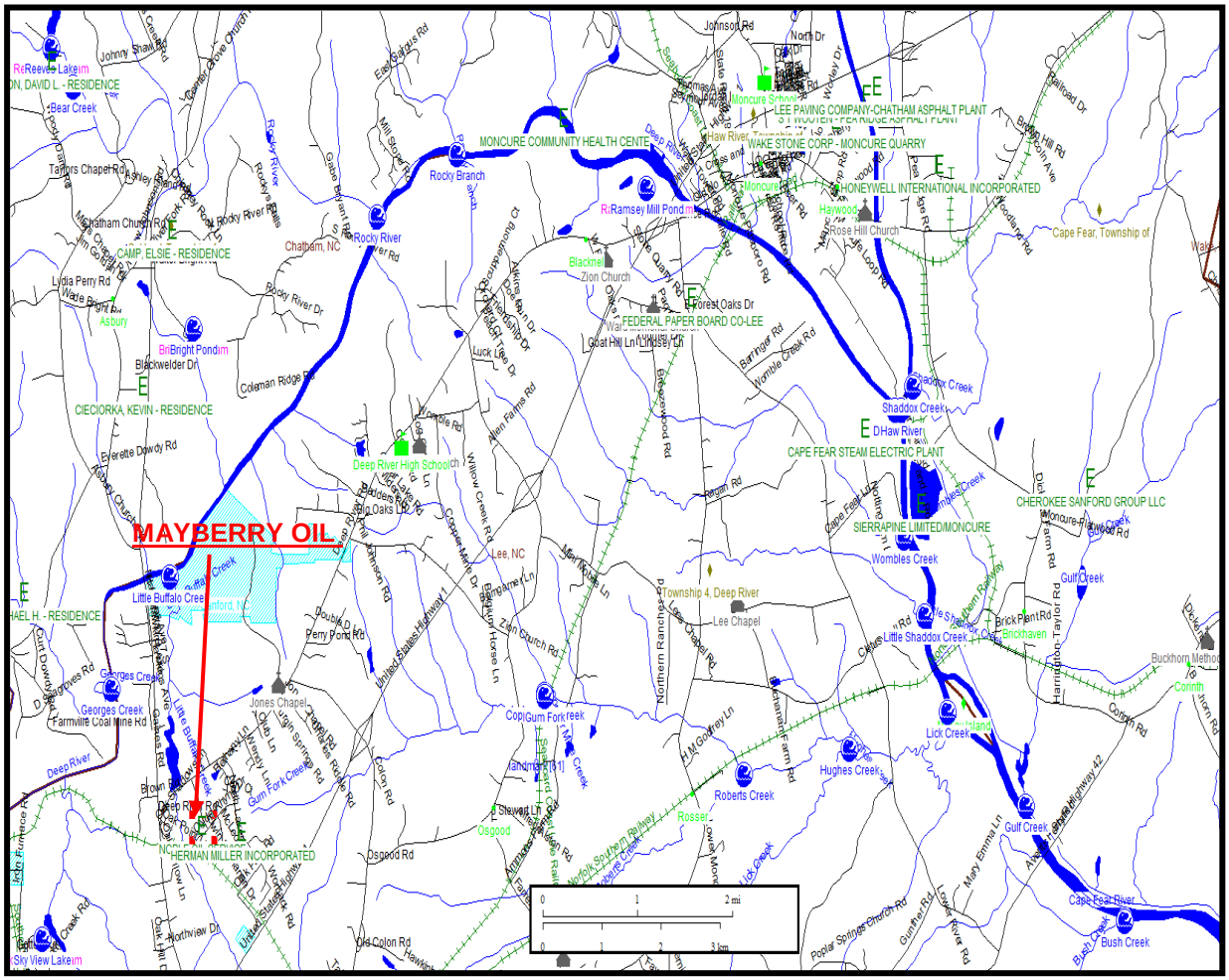


Figure 4.3 Landview 6

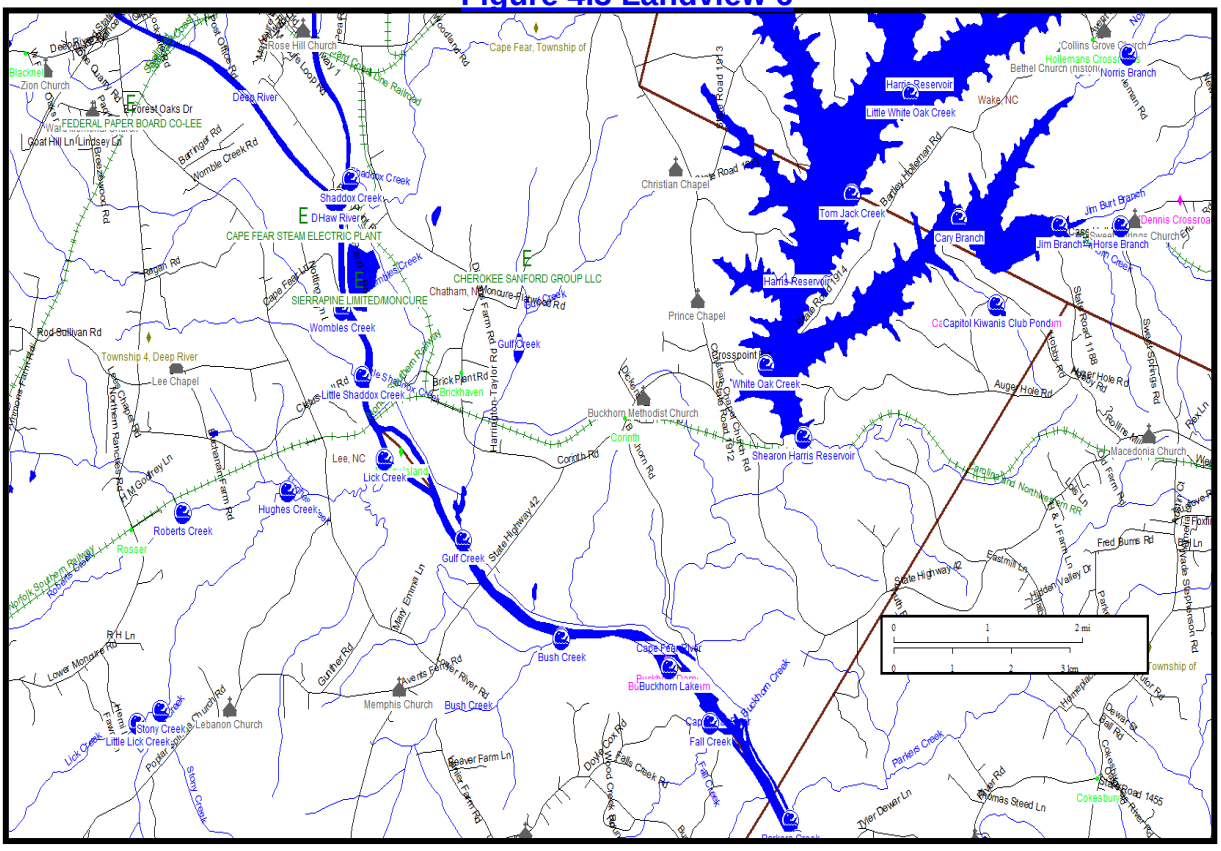


Figure 4.4 Land View 6

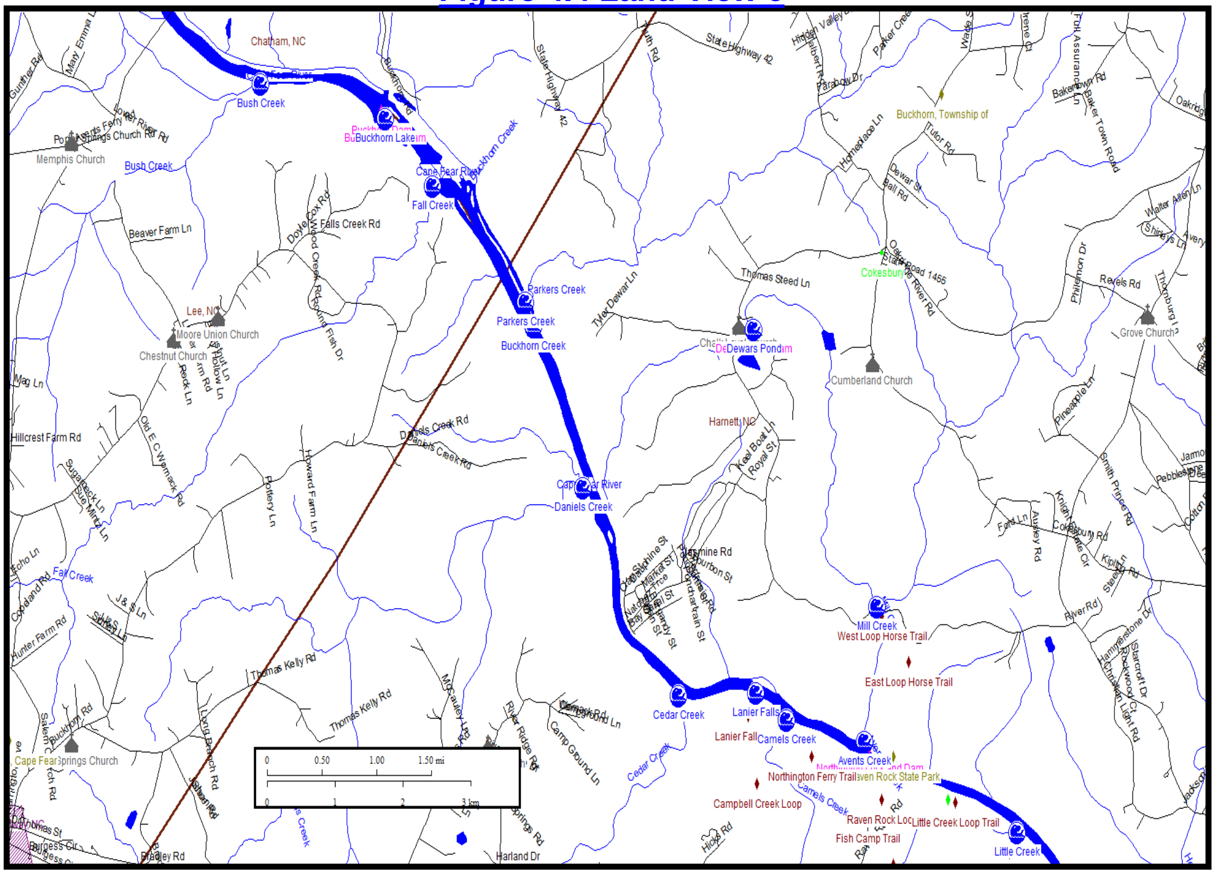
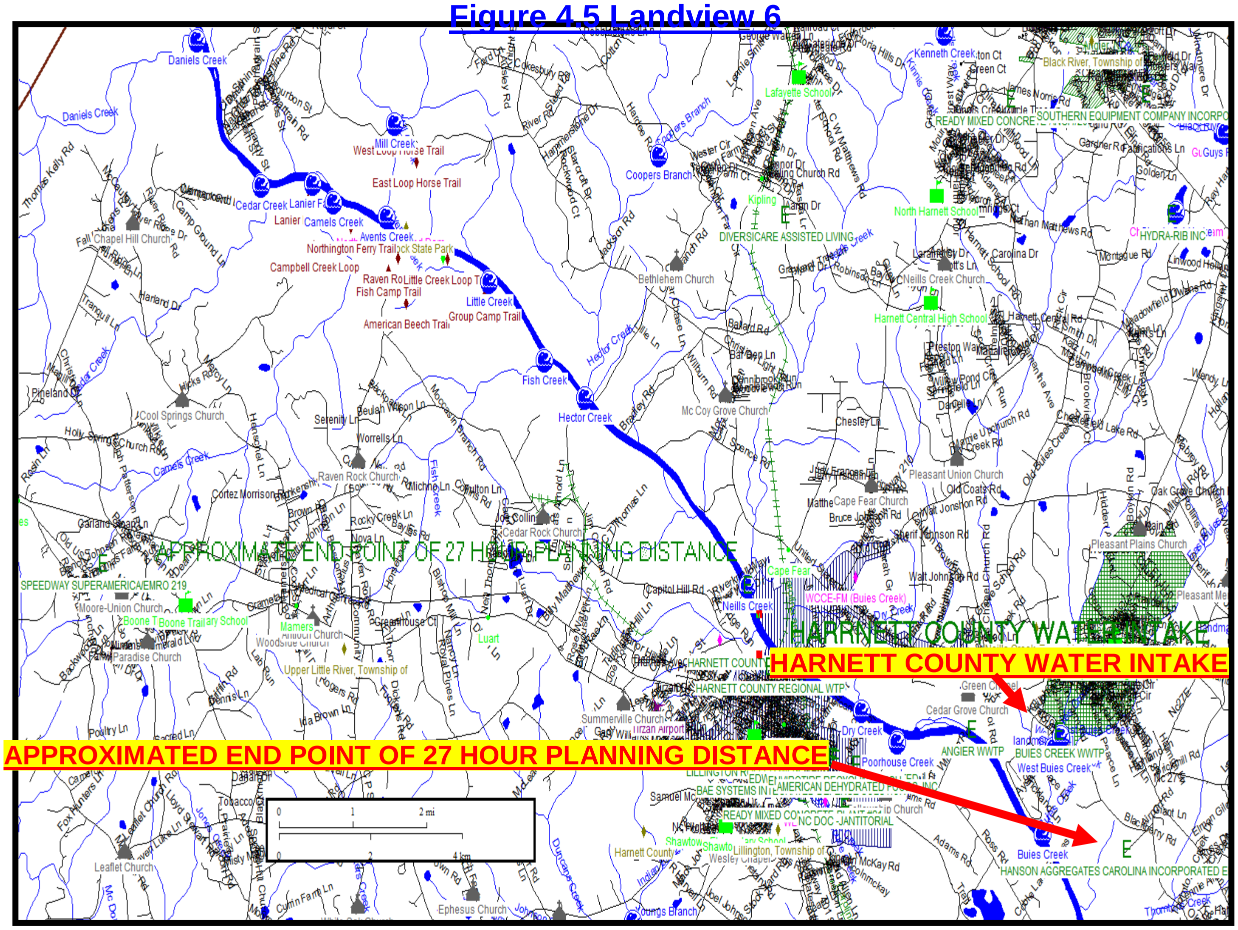


Figure 4.5 Landview 6



APPROXIMATED END POINT OF 27 HOUR PLANNING DISTANCE IS 18 MILES DOWNSTREAM OF THE HEAD WATERS OF THE CAPE FEAR RIVER (CONVERGENCE OF DEEP & HAW RIVERS) AND APPROXIMATELY 2.25 MILES UPSTREAM OF THE US HIGHWAY 401 BRIDGE OVER THE CAPE FEAR RIVER AT LILLINGTON, NC.

TABLE 4.3 PLANNING DISTANCES BASED ON 27 HOUR RESPONSE TIME

	UPPER LITTLE BUFFALO CREEK	LITTLE BUFFALO CREEK POND	LOWER LITTLE BUFFALO CREEK	DEEP RIVER	CAPE FEAR RIVER
Estimated Stream/Pond Velocity	0.3452 FPS (1,242.72 FPH)	1.012 FPS (3643.2 FPH)	0.9989 FPS (3,596.0 FPH)	1.091 FPS (5,760 FPH)	2.035 FPS (7,326 FPH)
D1	250ft. @ 1.0FPS				
D2	NA				
D3 (Cumulative-Planning Distance from Mayberry Oil Service)	1,123ft.	0.5525 miles	1.77 miles	12 miles	30 miles
D4	250ft. @ 1.0FPS				
Length of Stream/River from spill impact point to Next Discharge/End Point	2,200ft. (0.4167 miles)	2,917ft. (0.5525 miles)	6441.8ft. (1.22 miles)	54,009ft. (10.23 miles)	95,040ft. (18.0 miles)
D1 TIME IN HOURS	0.0694 HRS.				
D2 TIME IN HOURS	NA				
D3 TIME IN HOURS	0.3329 HRS.	2.17 + 82 = 2.99 HRS.	2.99 + 1.79 = 4.78HRS.	4.78 + 9.37= 14.16HRS.	14.16 + 12.97 = 27.13 HRS.
D4 TIME IN HOURS	0.0694 HRS.				
Spill impact time to navigable stream	.3329 + .0694 = 0.4023				
Spill Travel Time to Next Discharge Point in Hours	(2,200ft./1,242.72 FPH) +0.4023HRS. = 2.17HRS.	(2,917ft./3,643.2 FPH) = 0.8200HRS	6441.8ft./3,596.0 FPH = 1.79HRS.	(54,009ft./ (5,760 FPH) = 9.37 HRS.	95,040ft./7,326 FPH = 12.97 HRS.

Navigable Waters: Little Buffalo Creek, Deep River & Cape Fear River

Planning Distance using stream flow rates: (0.5525 miles) + (1.22 miles) + (10.23 miles) + (18.0 miles) = 30.00 miles

A planning distance of 30.00 miles was calculated and potential effects of oil or hazardous substance release

within that planning distance was evaluated. The calculation for the planning distance is found in Section 12.0 under Appendix C information.

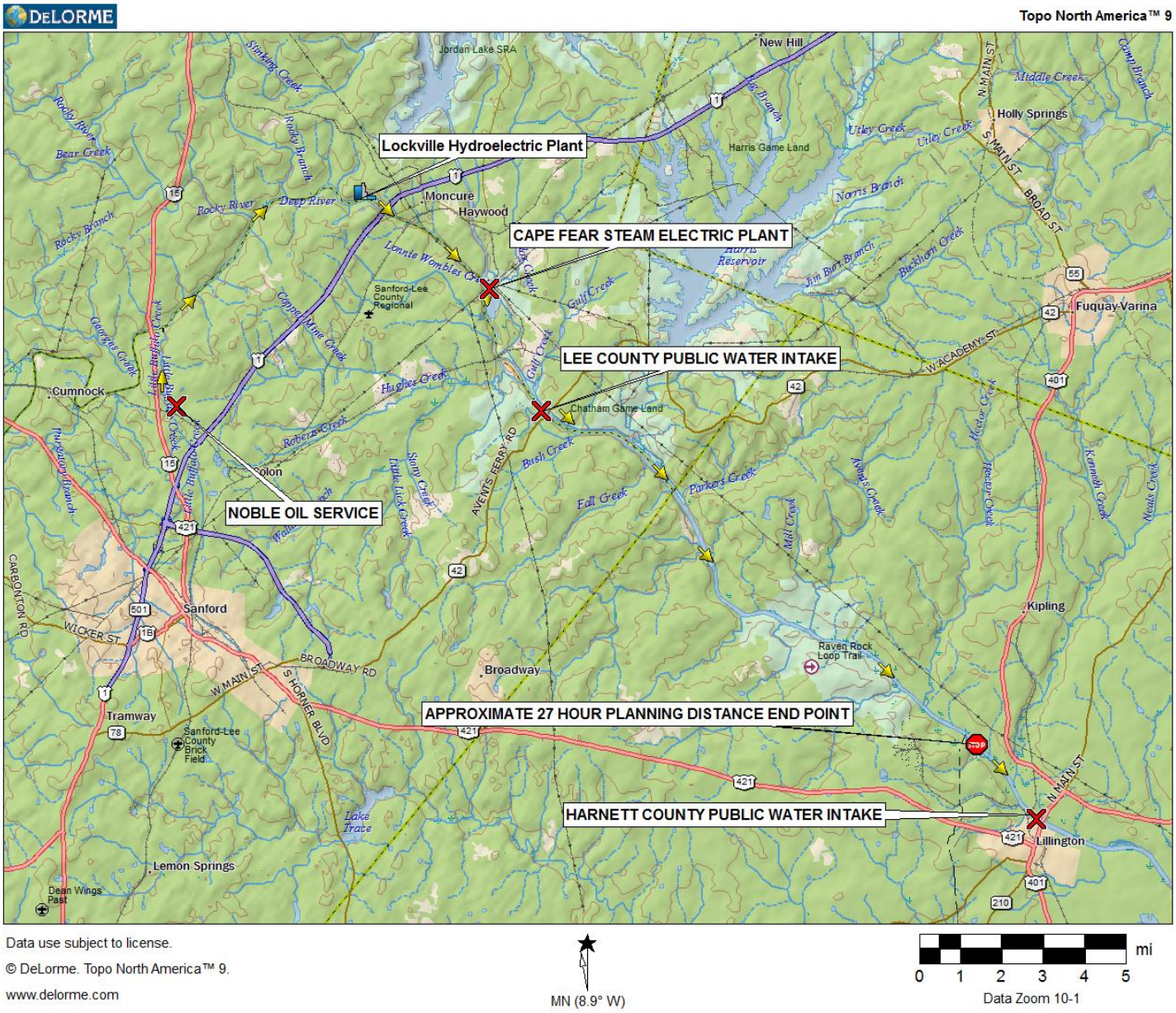
D1=Distance from the nearest opportunity for discharge, X_1, to a storm drain or an open concrete channel leading to navigable water.

D2=Distance through the storm drain or open concrete channel to navigable water.

D3=Distance downstream from the outfall within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down as determined by the planning distance formula.

D4=Distance from the nearest opportunity for discharge, X_2, to fish and wildlife and sensitive environments not bordering navigable water.

Figure 4.6
PLANNING DISTANCE 30 MILE MAP



4.3 ANALYSIS OF THE POTENTIAL FOR AN OIL SPILL

The potential for an oil or hazardous substance spill at Mayberry Oil Service is relatively high due to the large volume of five tanks and the number of people with access to the storage areas. The potential for either large or medium spills, however, is relatively minor due to this facilities aggressive tank replacement projects, secondary containment for storage tanks, and the spill training provided to Mayberry Oil Service personnel.

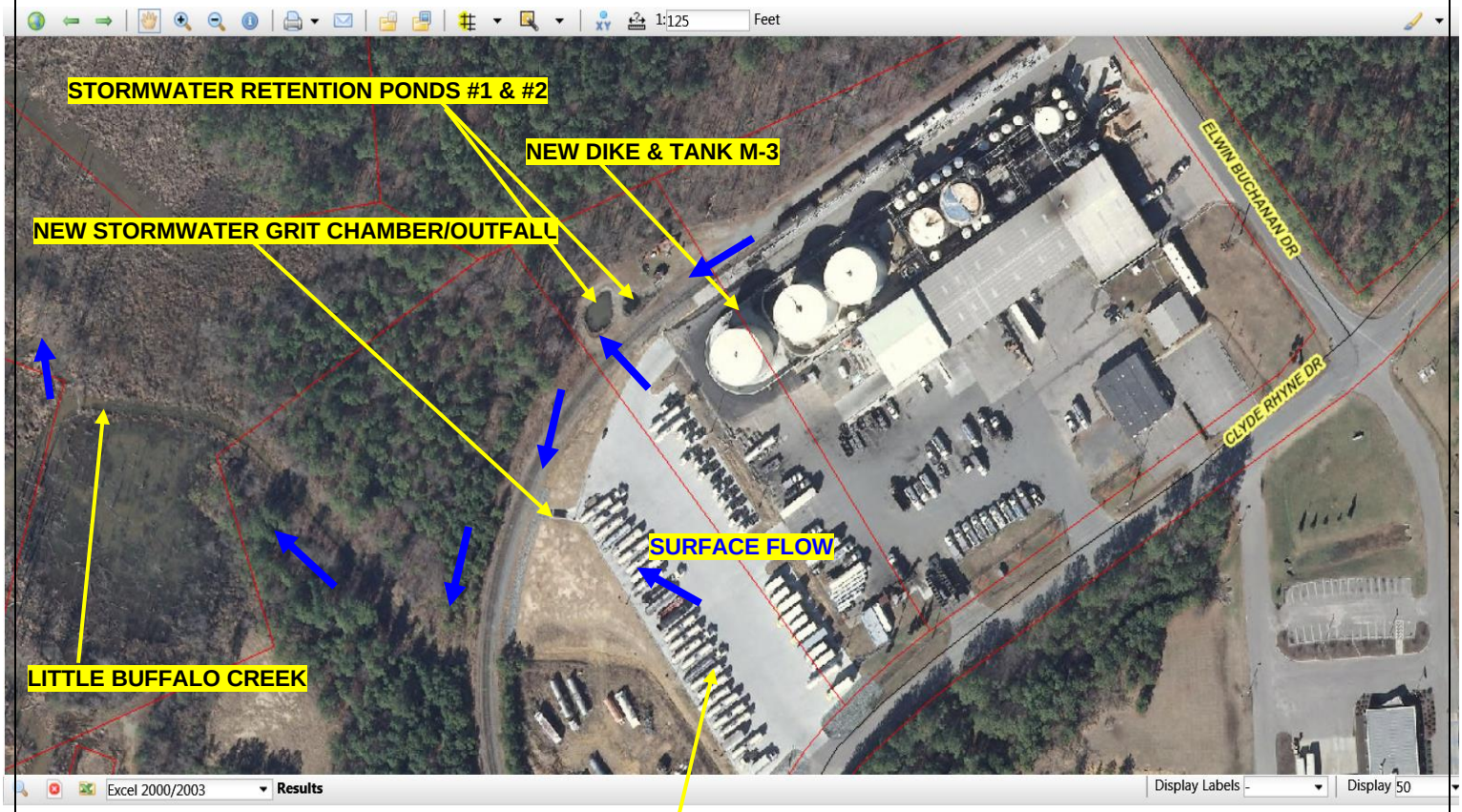
The vulnerability of Mayberry Oil Service to a natural disaster is negligible. Based on the International Building Code National Seismic Map, the facility is in a very-low to low-risk area for an earthquake. It is also in a low-risk area for tornados. Flash floods are possible, but have previously been controlled through adequate drainage channels. The only likely natural disaster is Wind and Flood Damage from Hurricanes. Additionally, because of the visibility of the tanks, the number of personnel in the vicinity of the tanks, and the diligence of security personnel, the possibility of a leak extending beyond a few feet is highly unlikely. Because much of the facility is extremely flat, leaks would not travel any great distance without assistance from stormwater.

Figure 4.7 Facility Layout Property Boundaries/Lines (With dimensions)

Property Boundaries/Lines

Figure 4.8 Facility Layout W/ New Tank M-3

(With New Stormwater Grit Containment, Dike, & Tank M-3) Updated February 14, 2014



4.4 FACILITY REPORTABLE OIL SPILL HISTORY

No reportable spills have occurred at Mayberry Oil Service since 1990. All of the spills were less than 25 gallons and therefore are classified as minor spills. None of the spills reached surface water.

Table 4-4 Reported Spill History Since 1998.
Oil Discharge History

Description of Discharge	Corrective Actions Taken	Plan for Preventing Recurrence

5.0 DISCHARGE SCENARIOS

In this section, the owner or operator is required to provide a description of the facility's worst case discharge, as well as a small and medium discharge, as appropriate. A multi-level planning approach has been chosen because the response actions to a discharge (*i.e.*, necessary response equipment, products, and personnel) are dependent on the magnitude of the discharge. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge. The facility owner or operator shall discuss the potential direction of the discharge pathway.

- **Small discharge - Any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst-case discharge.**
- **Medium discharge - Any discharge volume greater than 2,100 gallons and less than or equal to 36,000 gallons, or 10 percent of the worst-case discharge, whichever is less, provided that this amount is less than the worst-case discharge amount.**
- **Worst-case discharge - For an onshore, non-transportation-related facility, the largest foreseeable discharge in adverse weather conditions as determined using the worksheets provided in 40 CFR 112 Appendix D. The worst-case discharge could be up to 1,000,000 gallons**

5.1 SMALL AND MEDIUM DISCHARGES

This section provides a discussion of the potential for a small or medium discharge of oil or hazardous

substances at this facility, as well as the factors that could potentially delay response to a discharge of this type.

5.1.1 FACILITY-SPECIFIC SPILL SCENARIOS

Facility-specific spill scenarios that could result in a small or medium discharge of oil or hazardous substances at Mayberry Oil Service include:

- **Discharge during oil or hazardous substance resupply**
- **Discharge during maintenance of oil or hazardous substance storage tanks and piping**
- **Discharge during vehicle refueling**
- **Discharge due to fire/explosion of refinery equipment near oil or hazardous substance storage equipment**
- **Discharge due to age and condition of storage equipment**
- **Discharge due to vehicle collision with oil or hazardous substance storage equipment.**

The first four scenarios are situations most likely to occur at Mayberry Oil Service, and would generally be a result of inattentive operators or faulty equipment. The last two scenarios are less likely to occur Mayberry Oil Service provides aggressive maintenance and vehicle collision protection.

TABLE 5.1 SMALL AND MEDIUM DISCHARGES

Spill Scenarios	Small Spills-POLs	Medium Spills-POLs
Loading and unloading of surface transportation; 32% of Spills, Spill on Concrete/Asphalt	Stay On Site; West to Stormwater Retention Ponds;	Possible Travel Off-Site during Rain Event, West to Stormwater Retention Ponds, Impact Little Buffalo Creek & Deep River;
Facility maintenance; Spill on Concrete/Asphalt	Stay On Site; West to Stormwater Retention Ponds;	Possible Travel Off-Site during Rain Event, West to Stormwater Retention Ponds, Impact Little Buffalo Creek & Deep River;
Spill Scenarios	**Small Spills-POLs**	**Medium Spills-POLs**
Facility piping; 35% of Spills Spill on Concrete/Asphalt	Stay On Site; West to Stormwater Retention Ponds;	Possible Travel Off-Site during Rain Event, West to Stormwater Retention Ponds, Impact Little Buffalo Creek & Deep River;
Pumping stations and sumps; Spill on Concrete/Asphalt	Stay On Site; West to Stormwater Retention Ponds;	Possible Travel Off-Site during Rain Event, West to Stormwater Retention Ponds, Impact Little Buffalo Creek & Deep River;
Oil Storage Tanks; 5% of Spills Spill on Concrete/Asphalt	Stay On Site; West to Stormwater Retention Ponds;	Possible Travel Off-Site during Rain Event, West to Stormwater Retention Ponds, Impact Little Buffalo Creek & Deep River;
Vehicle Refueling; 12% of Spills	NA	NA
Age and Condition of Facility and Components. Spill on Concrete/Asphalt	Stay On Site; West to Stormwater Retention Ponds;	Possible Travel Off-Site during Rain Event, West to Stormwater Retention Ponds, Impact Little Buffalo Creek & Deep River;

5.1.2 FACTORS THAT AFFECT RESPONSE EFFORTS FOR SMALL & MEDIUM SPILLS

Response to small or medium discharges of oil or hazardous substances at Mayberry Oil Service could be affected by:

TABLE 5.2 FACTORS THAT AFFECT THE RESPONSE EFFORTS

FACTOR	SMALL SPILLS	MEDIUM SPILLS
Size of the discharge;	**Mayberry Oil Service maintains sufficient spill response personnel and equipment to respond to small and medium discharges of oil or hazardous substances. In accordance with the regulations presented in 40 CFR 112 Appendix E, Mayberry Oil Service maintains at least 1,000 feet of absorbent boom, a recovery pumping capacity of at least 2,100 gallons per day, and a temporary storage capacity of 4,200 gallons per day. In addition, this facility has two 600-gallon storage tanks immediately available and has access to additional tankage using facility tankers.**	**Mayberry Oil will began spill control operations ASAP. For large medium spills, professional spill cleanup contractors shall be notified/deployed.**
Proximity to down gradient wells, waterways, and drinking water intakes;	**No drinking water supplies (wells or surface intakes) will be affected by a small discharge because there are no known down gradient wells or drinking water intakes in the vicinity of Mayberry Oil Service.**	**No drinking water supplies (wells or surface intakes) will be affected by a medium discharge because there are no known down gradient wells or drinking water intakes in the vicinity of Mayberry Oil Service. Little Buffalo Creek and Deep River will be impacted by medium spills.**
FACTOR	**SMALL SPILLS**	**MEDIUM SPILLS**
Proximity to fish and wildlife and sensitive environments;	**There is a chance that response could be affected by proximity to a waterway, as there are numerous small waterways in the vicinity of oil and hazardous substances storage areas. However, training of spill response personnel focuses on measures that prevent a discharge from entering surface waterways. There may be several proposed endangered species areas within the installation; however, the proximity of these areas to the oil storage areas is such that a small release is not expected to affect them.**	**Medium spills during a rain event will impact Little Buffalo Creek and Deep River**
Likelihood that the discharge will travel offsite (*i.e.*, topography, drainage);	**There is little likelihood that a small spill/discharge from this facility would travel offsite, as Mayberry Oil Service storage areas are generally located a good distance from site boundaries.**	**There is better chance that a medium spill/discharge from this facility would travel offsite.**
Location of the material discharged (*i.e.*, on a concrete pad or directly on the soil);	**Spill locations will always be on concrete/asphalt/railroad liners which makes spill response easier. Spills in the operational area will allow quicker response and be more accessible to response equipment. Response will be more difficult to a release that may occur during a major storm event; however, access is not expected to be a significant problem.**	**Spill locations will always be on concrete/asphalt/railroad liners which makes spill response easier. Spills in the operational area will allow quicker response and be more accessible to response equipment. Response will be more difficult to a release that may occur during a major storm event; however, access is not expected to be a significant problem.**

Material discharged;	**The type of material discharged is not likely to delay response, as Mayberry Oil Service generally stores only common fuels in large quantities.**	**The type of material discharged is not likely to delay response, as Mayberry Oil Service generally stores only common fuels in large quantities.**
Weather or aquatic conditions (*i.e.,* river flow);	**Weather conditions are not likely to cause delays in response to oil or hazardous substance discharges, as all Mayberry Oil Service personnel train in adverse weather conditions to minimize weather impacts. Major Rain Event will cause spill to go off site.**	**Weather conditions are not likely to cause delays in response to oil or hazardous substance discharges, as all Mayberry Oil Service personnel train in adverse weather conditions to minimize weather impacts. Minor Rain Event will cause spill to go off site.**
Available remediation equipment;	**Remediation equipment is readily available and spill response personnel are trained in the deployment of the equipment. Equipment availability and proper training will enhance the response and limit the adverse effect on the environment.**	**Remediation equipment is readily available and spill response personnel are trained in the deployment of the equipment. Equipment availability and proper training will enhance the response and limit the adverse effect on the environment. Medium Spills will require the services of professional clean up contractors.**

FACTOR	SMALL SPILLS	MEDIUM SPILLS
Probability of a chain reaction of failures	**A chain reaction of failure is not believed to have a significant probability of occurring. This conclusion is based on the type of storage and regular maintenance practices implemented by Mayberry Oil Service personnel.**	**A chain reaction of failure is not believed to have a significant probability of occurring. This conclusion is based on the type of storage and regular maintenance practices implemented by Mayberry Oil Service personnel.**
Direction of discharge pathway.	**The direction of the spill pathway will have little effect on the response. The facility and environments are accessible for response equipment.**	**The direction of the spill pathway will have little effect on the response. The facility and environments are accessible for response equipment. Off site professional clean-up contractors will be called in.**

5.2 WORST-CASE DISCHARGE

1.5.2.1 In this section, the owner or operator must identify the worst case discharge volume at the facility. Worksheets for production and non-production facility owners or operators to use when calculating worst case discharge are presented in Section 12. When planning for the worst case discharge response, all of the aforementioned factors listed in the small and medium discharge section of the response plan shall be addressed.

1.5.2.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In this section of the response plan, owners or operators must provide evidence that oil storage tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume shall be based on the combined oil storage capacity of all manifold tanks or the oil storage capacity of the largest single oil storage tank within the secondary containment area, whichever is greater. For permanently manifolded oil storage tanks that function as one storage unit, the worst case discharge shall be based on the combined oil storage capacity of all manifolded tanks or the oil storage capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of the worst case discharge calculation, permanently manifolded oil storage tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

This section provides a discussion of the potential for a worst-case discharge of oil or hazardous substances on Mayberry Oil Service property, as well as the factors that could potentially delay response to a discharge of this type.

5.2.1 WORST-CASE DISCHARGE VOLUME

The worst-case discharge volume at Mayberry Oil Service, as calculated from formulas provided in 40 CFR 112 Appendix D, is one million gallons (1,000,000 gallons). This volume is a sum of one of the single largest aboveground oil storage tank(s) with secondary containment

5.2.2 FACILITY-SPECIFIC WORST CASE SPILL SCENARIOS

TABLE 5.3 WORST CASE DISCHARGES

SPILL SCENARIOS	WORST CASE SPILL
Loading and unloading of surface transportation; 32% of Spills, Spill on Concrete/Asphalt	Travel Off-Site, West to Stormwater Retention Ponds, Impacts Little Buffalo Creek, Deep River, & Cape Fear River.
Facility maintenance; Spill on Concrete/Asphalt	Travel Off-Site, West to Stormwater Retention Ponds, Impacts Little Buffalo Creek, Deep River, & Cape Fear River.
Facility piping; 35% of Spills, Spill on Concrete/Asphalt	Travel Off-Site, West to Stormwater Retention Ponds, Impacts Little Buffalo Creek, Deep River, & Cape Fear River.
Pumping stations and sumps; Spill on Concrete/Asphalt	Travel Off-Site, West to Stormwater Retention Ponds, Impacts Little Buffalo Creek, Deep River, & Cape Fear River.
Oil Storage Tanks; 5% of Spills Spill on Concrete/Asphalt	Travel Off-Site, West to Stormwater Retention Ponds, Impacts Little Buffalo Creek, Deep River, & Cape Fear River.
Vehicle Refueling; 12% of Spills	NA
Age and Condition of Facility and Components. Spill on Concrete/Asphalt	Travel Off-Site, West to Stormwater Retention Ponds, Impacts Little Buffalo Creek, Deep River, & Cape Fear River.

Facility-specific spill scenarios that could result in a worst-case discharge of oil or hazardous substances at Mayberry Oil Service are:

1) **Catastrophic failure of a storage tank due to old age and poor condition, which is extremely unlikely**
2) **Vehicle collision with a storage tank, which is also very unlikely due to tank construction and existing in-place protective measures (i.e., bollards).**
3) **Collision of a mobile fuel tanker with another vehicle during loading/off loading operations, which is the most likely scenario**

5.2.3 FACTORS THAT AFFECT RESPONSE EFFORTS

Response to a worst-case discharge of oil or hazardous substances at Mayberry Oil Service could be affected by the same factors addressed in Section 5.1.2. Availability of remediation equipment will adversely affect response ability. Response equipment available at Mayberry Oil Service is more appropriate for responding to and controlling small and medium discharges. For large discharges, Mayberry Oil Service has established a reciprocal agreement with the Hazardous Waste Clean Up Contractors and state and local agencies to assist with spill response. However, response time from the state and local agencies is well within the response times listed for Tier I response time.

The greatest potential for off-site migration of a worst-case scenario is a discharge that reaches Little Buffalo Creek via normally dry tributaries and drainage ditching. Rapid deployment of absorbent booms to these areas is critical to reducing the probability of spilled material reaching Little Buffalo Creek. Equipment deployment to these areas is an integral part of the spill training exercises.

TABLE 5.4 FACTORS THAT AFFECT THE RESPONSE EFFORTS

FACTOR	WORST CASE SPILLS
Size of the discharge;	**Mayberry Oil will began spill control operations ASAP. For Worst Case spills of 1,000,000 gals. professional spill cleanup contractors shall be notified/deployed ASAP.**
Proximity to down gradient wells, waterways, and drinking water intakes;	**Drinking water supplies (wells or surface intakes) will be affected by a worst case discharge. Little Buffalo Creek, Deep River & Cape Fear River will be impacted by worst case spills. (SEE TABLE 4.2)**
Proximity to fish and wildlife and sensitive environments;	**There may be several proposed endangered species areas within/without the installation; Fish & Wildlife will be impacted on Little Buffalo Creek, Deep River & Cape Fear River.**
Likelihood that the discharge will travel offsite (*i.e.,* topography, drainage);	**There is a strong likelihood that a worst case spill/discharge from this facility would travel offsite.**
Location of the material discharged (*i.e.,* on a concrete pad or directly on the soil);	**Spill locations will always be on concrete/asphalt/railroad liners which makes spill response easier. Once off site, spill will impact streams, rivers, ponds, dams, soils & swamps. Response will be more difficult to a release that may occur during a major storm event; however, access is not expected to be a significant problem.**
Material discharged;	**The type of material discharged is not likely to delay response, as Mayberry Oil Service generally stores only common fuels in large quantities.**
Weather or aquatic conditions (*i.e.,* river flow);	**Weather conditions are not likely to cause delays in response to oil or hazardous substance discharges, as all Mayberry Oil Service personnel train in adverse weather conditions to minimize weather impacts. Rain Event will cause spill to go off site. Rivers/Streams at flood stage will prevent optimal clean-up conditions spill clean up.**
Available remediation equipment;	**Remediation equipment is readily available and spill response personnel are trained in the deployment of the equipment. Equipment availability and proper training will enhance the response and limit the adverse effect on the environment. Worst Case Spills will require the services of professional clean up contractors.**
Probability of a chain reaction of failures	**A chain reaction of failure is not believed to have a significant probability of occurring. This conclusion is based on the type of storage and regular maintenance practices implemented by Mayberry Oil Service personnel.**
Direction of discharge pathway.	**The direction of the spill pathway will have little effect on the response. The facility and environments are accessible for response equipment. Off site professional clean-up contractors will be called in ASAP.**

6.0 DISCHARGE DETECTION SYSTEMS

This section of the FRP describes procedures and equipment used to detect discharges. Spill detection by personnel and automated spill detection, as applicable, are included for both regular operations and after hours operation.

6.1 DISCHARGE DETECTION BY PERSONNEL

Because of its size, Mayberry Oil Service relies on the individuals in each unit to be responsible for detecting spills. The Manager of Environmental, Health and Safety for this facility is assigned the responsibility of conducting monthly inspections of his/her facility for malfunctions or deterioration of equipment that may lead to the release of POL or hazardous substances to the environment.

These inspections are recorded in an inspection log and become a part of the unit SPCC Plan. Detailed inspection guidelines are included in Mayberry Oil Service SPCC Plan and also discussed in Section 8 of this document. Specific inspections may also be developed, within the unit, depending upon circumstances.

Each field erected tank rests on engineered concrete supports/foundations. Field erected tanks shall be integrity tested at intervals not to exceed the standards set forth in: API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction, Second Edition, December 1995; including Addendum 1, (December 1996), Addendum 2, (December 1997), Addendum 3, (December 1998) and Addendum 4 (December 1999) and Third Edition December 2001. Shop-fabricated tanks 30,000 gallons or under, combining appropriate visual inspection with the measures described below would generally provide environmental protection equivalent to that provided by visual inspection plus another form of testing. Specifically, the US EPA generally believes that visual inspection plus elevation of a shop-built container in a manner that decreases corrosion potential (as compared to a container in contact with soil) and makes all sides of the container, including the bottom, visible during inspection (e.g., where the containers are mounted on structural supports, saddles, or some forms of grillage) would be considered "equivalent." In a similar vein, US EPA also generally believe an approach that combines visual inspection with placement of a barrier between the container and the ground, designed and operated in a way that ensures that any leaks are immediately detected, to be considered "equivalent." For example, we believe it would generally provide equivalent environmental protection to place a shop-built container on an adequately designed, maintained, and inspected synthetic liner (concrete). Seals, valves, and piping outside the tank containment area are in plain view of facility employees. Visible piping, seals, and valves associated with the ASTs are also inspected. All inspections include written notations of observations made and the date and nature of any repairs or other remedial actions that need to be taken.

In addition to the monthly, formal inspections, each individual in the facility is responsible for immediately reporting any leak or spill of POL and/or hazardous substances. All storage facilities are located in work areas that are occupied during normal work hours. As discussed in Section 3.0, Emergency Response Information, in the event of a POL or hazardous substance discharge during work hours that cannot be handled by Mayberry Oil Service specifically trained employees, or if unsure of the proper response, personnel are trained to immediately call 911 to reach the local Fire Department's Spill Response Team. The Emergency Notification Telephone List (Subsection 3.1.1) is posted in all work locations. During non-work hours, Mayberry Oil Service security guard service periodically patrol work locations and are trained to immediately report any oil or hazardous substance discharge to the designated employees and Local Fire Departments.

6.2 AUTOMATED DISCHARGE DETECTION

A number of automated systems are in place at Mayberry Oil Service. Some are used to prevent overfilling, while others are used to detect leaks.

- **The five (5) large field erected tanks are equipped with automated systems to handle both overfilling and to detect leaks. A high performance, polyethylene membrane coating on the concrete floor encloses the primary tank, providing secondary containment within the concrete diking system. A detection alarm sounds if a leak occurs and a manual safety valve prevents overfill.**
- **The shop fabricated tanks are equipped with automated systems to handle both overfilling and to detect leaks. A high performance, polyethylene membrane coating on the concrete floor encloses the primary tank, providing secondary containment within the concrete diking system. A detection alarm sounds if a leak occurs and a manual safety valve prevents overfill.**

No leak detection alarms have been reported at Mayberry Oil Service. Should any alarms occur during regular work hours, the source of the alarm would be immediately reported to Manager of Environmental, Health and Safety. Alarms that might occur during non-work hours would be reported to the Manager of Environmental, Health and Safety and local Fire Department.

The equipment would be thoroughly inspected to determine the source of the alarm and the contractor for the equipment would be notified. If a spill is verified, notification procedures as described in Section 3.1.1 are followed.

7.0 PLAN IMPLEMENTATION

This section presents detailed information on implementing Mayberry Oil Service FRP. It also discusses the accessibility of spill response equipment, disposal plans, and containment and drainage planning. All figures referenced within this section are presented at the end of this section.

112.20 (h) (7) Plan implementation. The response plan shall describe:

(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;

(ii) A description of the equipment to be used for each scenario;

(iii) Plans to dispose of contaminated cleanup materials; and

(iv) Measures to provide adequate containment and drainage of discharged oil.

7.1 SPILL RESPONSE RESOURCES FOR SMALL, MEDIUM, AND WORST-CASE DISCHARGES

Discharge scenarios have been identified in section 5, the facility owner or operator shall identify and describe implementation of the response actions. The facility owner or operator shall demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified discharge scenarios. The determination and demonstration of adequate response capability are presented in Section 112.5 (Appendix E) of this plan. In addition, steps to expedite the cleanup of oil discharges must be discussed.

Each unit at Mayberry Oil Service has spill control equipment ready and available to respond to small spills. Safety and emergency equipment, security devices, and operating and structural equipment are regularly inspected on a schedule determined by each unit. In addition, all of the equipment identified in Figure 3-3 is kept ready and available by the Mayberry Oil Service designated trained employees spill response Team (DESR) to respond to a POL or hazardous substance spill.

This equipment has been selected for its applicability and capability to handle spills at Mayberry Oil Service. The Mayberry Oil Service emergency response personnel identified in section 1.6.3 are ready and capable of responding to all spills at this facility. In the event that resources in addition to the Mayberry Oil Service designated trained employees are needed to control a release, Mayberry Oil Service has negotiated an agreement with the State and Local agencies and Hazardous Waste Clean Up Contractors to provide mutual emergency response assistance.

40 CFR 112 Appendix E (See Section 12 Engineering Calculations) provides guidelines for identification of response resources for small, medium, and worst-case discharges. Based on the guidelines provided in Appendix E, the following equipment is required:

REQUIRED RESPONSE RESOURCES FOR EPA FRP FACILITIES

I) Response Resources for a Small Discharge (less than or equal to 2,100 gallons):

a. 1000 ft. of containment boom (not sorbent boom).

b. Capability of deploying boom within 1 hour of the discovery of a small discharge.

c. Oil recovery devices with an effective daily recovery capacity equal to the amount of the oil discharged in a small discharge or greater. 2,100-gallon-per-day recovery capacity & 4,200-gallon-per-day storage capacity

d. Response equipment is available at the facility with in 2 hours of the detection of a small discharge.

e. Availability of temporary storage capacity equal to twice the volume of the small discharge

II) Response Resources for a Medium Discharge (36,000 gals./10% of WCD, whichever is less): Medium discharge (2,100 to 36,000 gallons):

a. Availability of sufficient quantities of boom for containment & collection and for protection of fish, wildlife and sensitive environments.

b. Oil recovery devices with an effective daily recovery capacity equal to 50% of the total volume of the medium discharge. Recovery capacity equal to 50 percent of the medium discharge volume = 2,000 gallons per day

c. Equipment arrival times within 6 hours (High Volume Ports & Great Lakes) and 12 hours (all other areas). Equipment available to be on site in no more than 12 hours

d. Availability of temporary storage capacity equal to the volume of the medium discharge. Temporary storage capacity equal to two times the recovery capacity = 4,000 gallons per day

III) Worst-case discharge (1,000,000 gallons): Response Resources for a Worst Case Discharge (calculated in Section 12.4 per Appendix D to 40 CFR 112):

a. Availability of sufficient quantities of boom for containment & collection and for protection of fish, wildlife and sensitive environments.

b. Identification of response resources with fire fighting capabilities.

c. Identification of an individual located at the facility to work with the fire department for Group 1 through Group 4 oil fires. (Per Section 12.5)

d. Identification of response resources to meet the applicable WCD Planning Volume (See Section 12.4 & 12.5-Attachment E-1 of Appendix E) and capable of arriving at the scene of a WCD within the applicable Response Tiers (see Section 12.5 of Appendix E).

e. For facilities required to plan for response in shallow water, at least 20% of the on-water response equipment shall, as appropriate, be capable of operating in water of 6 feet or less.

f. Availability of temporary storage capacity equal to twice the response equipment's daily recovery capacity

At a minimum, the following items must be addressed per Table 7.1:

Table 7.1 Spill Response Actions

Action Item	Small Spill	Medium Spill	Worst Case
Emergency plans for spill response *& Water Access Points with Measures to provide adequate containment and drainage of discharged oil.*	Mayberry Oil Trained Employees Action Plan per this Section & Clean Up Equipment per EARP Section 1.4	Mayberry Oil Trained Employees per this Section with Professional Clean Up Contractors with their equipment as needed, & Clean Up Equipment per EARP Section 1.4	Mayberry Oil Trained Employees per this Section with Professional Clean Up Contractors with their equipment as needed & Clean Up Equipment per EARP Section 1.4
	Water Access Points on the Property, Pond & Deep River Rd. BRG. Over Little Buffalo Creek.	Water Access Points at Deep River Rd. BRG., NC HWY. 15 BRG., US HWY. 1 BRG. Nance Rd. BRG., Low Water Dams/Utilities, Fish Camps	Water Access Points at Deep River Rd. BRG., NC HWY. 15 BRG., US HWY. 1 BRG. Nance Rd. BRG., Boat Ramp @ NC HWY. 42 BRG., Low Water Dams/Utilities, Buckhorn Lake, Fish Camps, State Parks, US HWY. 421 BRG.
Additional response training	Annual Training/Drills with Mayberry Oil Employees, Local Fire-LEPC, & Professional Clean Up Contractors.	Annual Training/Drills with Mayberry Oil Employees, Local Fire-LEPC, & Professional Clean Up Contractors	Annual Training/Drills with Mayberry Oil Employees, Local Fire-LEPC, & Professional Clean Up Contractors
Additional contracted help	Professional Clean Up Contractors per EARP	Professional Clean Up Contractors per EARP	Professional Clean Up Contractors EARP
Access to additional response equipment/experts	Professional Clean Up Contractors, Local Fire-LEPC-NC Environmental Agencies & US EPA-USCG	Professional Clean Up Contractors, Local Fire-LEPC-NC Environmental Agencies & US EPA-USCG	Professional Clean Up Contractors, Local Fire-LEPC-NC Environmental Agencies & US EPA-USCG
Ability to implement the plan including response training and practice drills.	Mayberry Oil Trained Employees per this Section &, Section 8, Professional Clean Up Contractors	Mayberry Oil Trained Employees per Section 7 & 8, Professional Clean Up Contractors	Mayberry Oil Trained Employees per Section 7 & 8, Professional Clean Up Contractors

Table 7.2 Oil Spill Response—Immediate Actions

1. Stop the product flow	Act quickly to secure pumps, close valves, etc.
2. Warn personnel	Enforce safety and security measures.
3. Shut off ignition sources	Motors, electrical circuits, open flames, etc.
4. Initiate containment	Around the tank and/or in the water with oil boom.
5. Notify NRC	1-800-424-8802
6. Notify OSC (Raleigh, NC)	Mr. Ken Rhame: 919-475-7397(Work) Email: Rhame.Kenneth@epamail.epa.gov
7. Notify, as appropriate	Mayberry Oil Safety/Environmental Officer, Mr. Opie Taylor

From Appendix E (Section 12.5)	Tier 1	Tier 2	Tier 3
On Water Oil Recovery Capacity	2,143	2,857	4,286
Contracted on Water Response Capacity	1,875	3,750	7,500
Identified on Water Response Capacity	268	0	0

Because the largest recorded spill at Mayberry Oil Service within the past three years has been 25 gallons, a "lessons-learned" review and update has not been required. Mayberry Oil Service has a cooperative agreement with the State and Local agencies and Hazardous Waste Clean up Contractors to provide mutual emergency response for spill response. The Fire Department is the federally Designated Emergency Response Agency for the city. To fulfill this critical responsibility, the Fire Department maintains a fully staffed and trained HAZMAT Team. Should a large spill take place, however, a review of the entire operation would take place upon resolution of the spill to evaluate the effectiveness and efficiency of the current plan.

7.1.1 UNIT SPILL RESPONSE ACTIONS

A diagram outlining initial unit spill response actions is presented in Figures 7-1 and 7-2. These figures are posted near each unit's spill response materials storage area.

7.1.2 INSTALLATION FIRE DEPARTMENT SPILL RESPONSE ACTIONS

When notified of a POL spill at this facility, the designated trained employees spill response Team (DESR) will immediately respond to the spill location. Initial response steps are taken to prevent any additional spillage, to prevent the spill from entering drains or storm ditches, and to contain the spill if possible. If the spill exceeds 100 gallons or if the spill has entered a drain or storm ditch, the designated trained employees Spill Response Team Leader will immediately notify State & Local emergency spill response agencies. The designated trained employees will then follow the procedures outlined in Section 7.4.

7.1.3 MAYBERRY OIL SERVICE DESIGNATED TRAINED EMPLOYEES SPILL RESPONSE Team (DESR Team) ACTIONS

When notified of a POL or hazardous substance release to a drain or storm ditch, the DTESP, or designee, will be available for technical assistance. The DESR Team in all instances will be responsible for initiating state and federal notification procedures. The DESR Team has full authority to implement removal actions.

7.2 DISPOSAL PLANS

Once a release has been contained and the material collected, plans must be made to dispose of any

contaminated waste. Disposal of all spill-related wastes will be coordinated through the DESR Team Hazardous Waste Management Branch and conducted by specialists in that area in accordance with Federal, State, local, and Mayberry Oil Service regulations. If temporary storage of spill related wastes is required, the materials will be stored at the designated tanks at the facility. The following identifies usual disposal actions for the materials listed:

- **Recovered Product - Turned over to DESR Team and disposed of as a hazardous waste (often incinerated or recycled).**
- **Contaminated Soil - Depending upon material spilled, either turned over to DESR Team or disposed of as a hazardous waste or air stripped as per Mayberry Oil Service air permit.**
- **Contaminated Equipment and Materials - Decontaminated on site by cleaning (cleaning liquid contained and disposed of as a hazardous waste) or disposed of in an approved landfill (i.e., brooms, filters, etc.)**
- **Personal Protective Equipment - Turned over to DESR Team and disposed of as a hazardous waste.**
- **Decontamination Solutions - Turned over to DESR Team and disposed of as a hazardous waste.**
- **Adsorbents - Depending upon material spilled, either disposed of as a hazardous waste or taken to landfill and air stripped as per Nobel Oil Service air permit.**
- **Spent Chemicals - Turned over to DESR Team and disposed of as a hazardous waste.**

7.3 CONTAINMENT AND DRAINAGE PLANNING

Mayberry Oil Service does have a formal spill containment and drainage plan because of the large number of POL storage tanks. Storm drains and drainage patterns are included on the individual drawings in Appendix C and section 10 of this plan. These drawings can be used for containment and drainage planning should a spill occur.

All various drainage channels throughout the facility, discharge to stormwater detention pond via drainage piping underneath the rail road tracks. Any stormwater overfill from the detention pond will discharge into drainage ditches that discharge to Little Buffalo Creek, east of Nobel Oil Service, beyond the facilities property boundary. If needed, booms can be placed at any location in these ditches.

All wash racks, dikes, rail car and other secondary containment drainage systems discharge to the Mayberry Oil Service industrial Hot Oil Burners, where the water is vaporized. There are no surface water bodies in the containment area. Fishing lakes in the outer areas of the facility are non-discharging and are unlikely to be affected by a spill. Should major containment be necessary, DESR has a variety of earth-moving machinery (back hoes, graders, etc.) and trained operators.

Figure 7-1
DESR Team OIL SPILL RESPONSE PROCEDURES

1. Stop the product flow. Without endangering personnel health and safety, prevent any further POL spillage.
2. Use onsite spill response materials to minimize or prevent the POL spill from entering a drain or storm ditch.

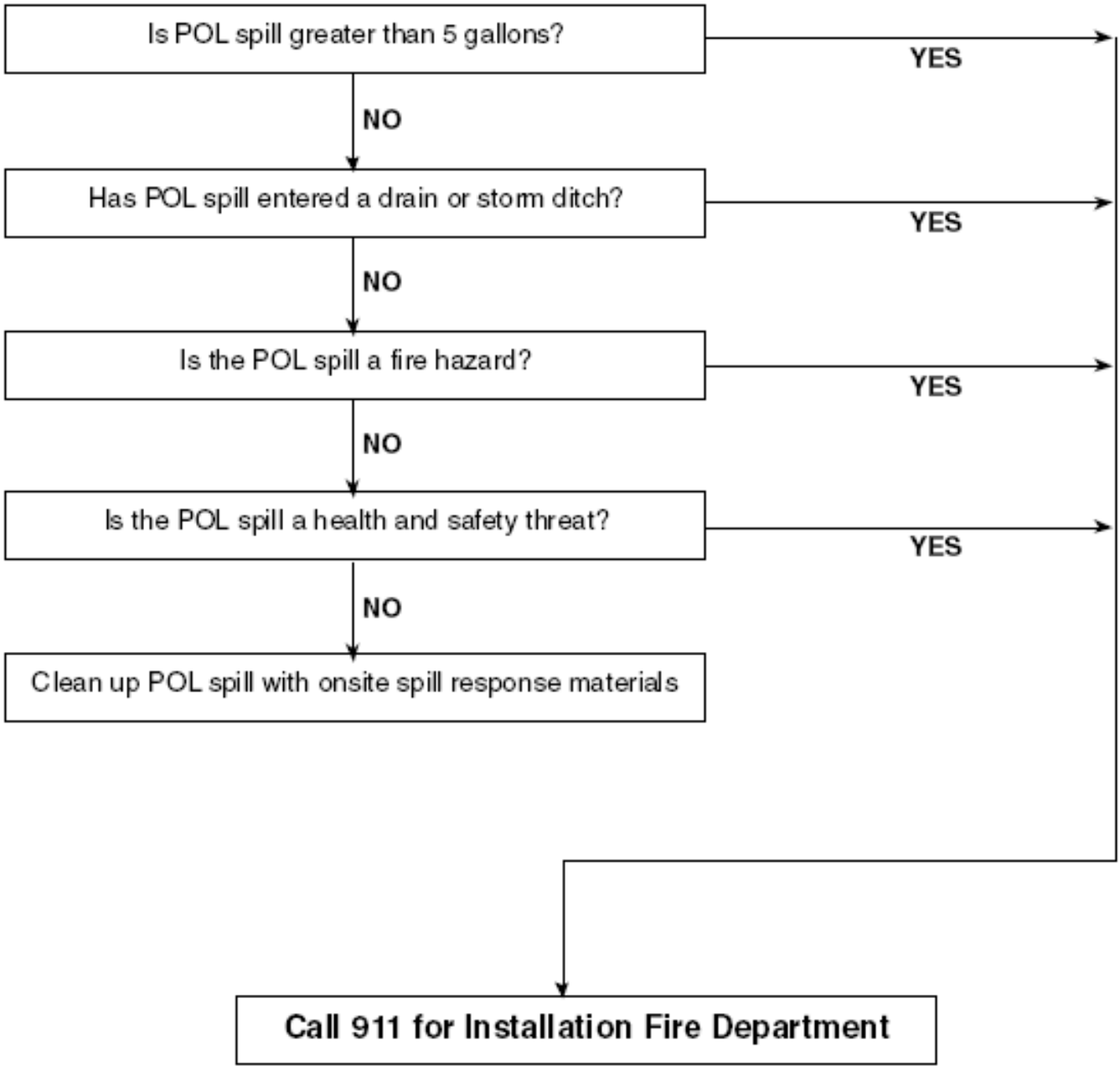
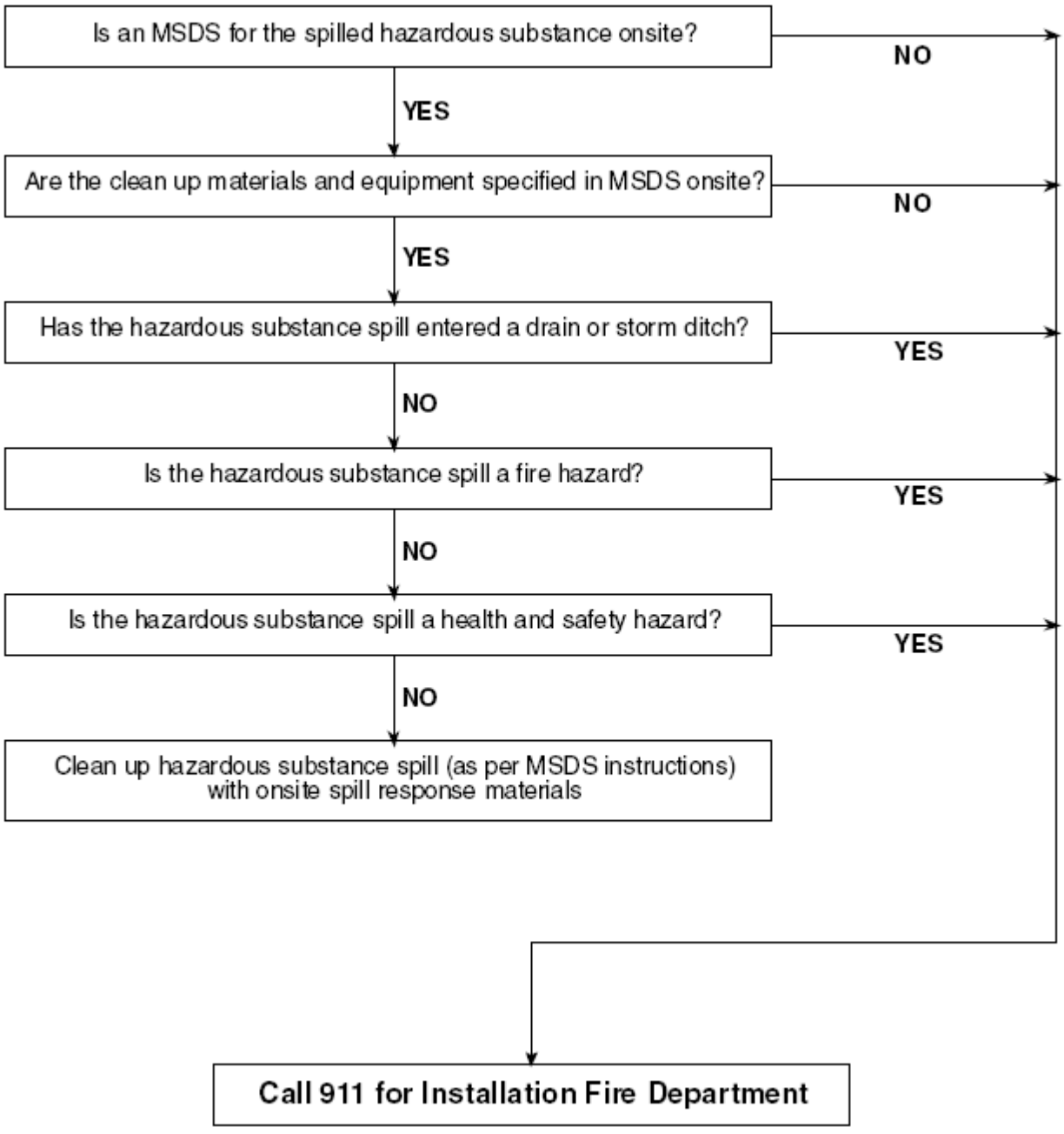


Figure 7-2

DESR Team HAZARDOUS SUBSTANCE SPILL RESPONSE PROCEDURES

1. Stop the product flow. Without endangering personnel health and safety, prevent any further hazardous substance spillage.

2. Use onsite spill response materials (if appropriate as per MSDS instructions) to minimize or prevent the hazardous substance spill from entering a drain or storm ditch.



7.4-MAYBERRY OIL SERVICE DESR Team SPILL RESPONSE PROCEDURES

The moment a release is identified; response actions should be immediately implemented. Three priorities must be observed in any emergency situation:

- **Safety of human health**

- **Protection of the environment**
- **Notification of appropriate personnel**

Each employee must be made aware of these points. Initial response requires evaluation and corrective action. Personnel must be taught the proper use of equipment, their capabilities and limitations.

Response procedures can be outlined in the following formats but may not apply to every situation.

- **Recognition of the release**
- **Notification of coordinator(s)**
- **Activation of alarms, if necessary**
- **Evacuation of all non-essential personnel**
- **Evaluation of the release**
- **Notification of local authorities and response centers, if necessary**
- **Corrective actions**
- **Clean up and disposal of waste materials, if necessary**
- **Report preparation, completion and submittal**

RESPONSE ACTION PROCEDURE

In the event there is an oil release within the facility, the following procedures shall be followed:

1. In the event of a spill/ release, contact one or more of the listed Emergency Coordinators (Appendix A) and be prepared to provide the following information:

- **Your Name and Location**
- **Location and Direction of the Release**
- **Identification and Amount of Oil Involved**
- **Individual(s) at the Scene and Action(s) Taken**

The Emergency Coordinators have the responsibility for coordinating emergency response measures in the event of a release, which could threaten human health or the environment.

2. The Mayberry Oil Service Emergency Coordinator shall determine whether the release is reportable to outside regulatory agencies by following criteria:

- **Oil release greater than 10 gallons (reportable quantity)**
- **Oil release of any quantity that has reached surface water or into a sewer, ditch, or culvert leading off the property**

NOTE: Any release that results in exposure to persons solely within the boundaries of the facility does not require notification.

3. If the released material is identified as being reportable, immediate notification must be made to the following:

- **Bass County Local Emergency Planning Committee (LEPC)**
  - **919-560-3941**
- **State Emergency Response Commission (SERC) of the North Carolina Solid and Hazardous Waste**
  - **919-733-2178**
- **National Response Center**
  - **800-424-8802**

The Emergency Coordinator is responsible for immediate notification of reportable spills to the above authorities and agencies.

4. This initial notification should be verbal (via telephone or in person) and should include:

- **Identity of the caller and the company (i.e., Mayberry Oil)**
- **Contact phone number**
- **Location of the release**
- **Type of product that was released**
- **Quantity of the product released**

- **Extent of actual and/ or potential water pollution**
- **Date and time of the release**
- **Cause of the release**

5. If required, the Emergency Coordinator shall order the area around the spill, or even the entire facility, evacuated. The Emergency Coordinator may shut down operations in and around the release site upon evaluation.

6. As dictated by the chemical and physical hazards present, the following precautions may be taken:

- **Secure the immediate area**
- **Response personnel should wear appropriate protective clothing (e.g., respirators, gloves, boots, tyveks, etc.)**
- **Plastic sheeting shall be used to prevent soil contamination, if necessary**
- **Isolation and containment of the material**
- **If flammable materials are also involved, appropriate fire extinguishers should be made available**

7. If the Emergency Coordinator determines that the release threatens the safety and health of personnel and/ or threatens the environment other than the facility, he shall contact the Bass County LEPC and/ or Emergency Management to determine if evacuation is required.

8. Containment of materials can be accomplished by the following ways (especially for releases outside of secondary containment):

- **Diking, using suitable materials and ensuring that the release do not escape to storm drains, sewers, etc.**
- **Use of sorbent materials to act as diking material**

There are two storm drains on the facility property. These drains, however, are located outside the operating areas of the plant and would not be impacted if there were any type of release within the facility. Nevertheless, these drains will be observed and protected during any spill event.

9. Clean-up operations may include the following:

- **Pumping free standing liquids (oil, oil and water)**
- **Skimming oil/ oil and water**
- **Solidification/ fixation of free standing liquids (Use of sorbent pads and absorbent powders)**
- **Solids, semi-solids and fixation medias shall be placed in appropriate containers for disposal**
- **Excavation of contaminated soils**

10. The Emergency Coordinator may choose to sample and analyze the soil, water, etc. to determine contamination level(s).

11. All containers will be manifested, labeled, placarded and handled in accordance with State, EPA, DOT and Company guidelines.

"SPILL REPORTING DOCUMENTATION ON SITE SPILLS WITHIN THE LAST 12 MONTHS"

Once the release has been brought under control and established, a written report must be submitted to the following agencies:

I) Bass County Emergency Management
225 E Weatherspoon Street
Mayberry, North Carolina 27330
(919) 775-3941

II) North Carolina Emergency Response Commission
116 W. Jones Street
Raleigh, North Carolina 27611
(919) 733-3867

The written report should include the following information:

- **Identity of the caller and the company (i.e., Mayberry Oil)**
- **Contact phone number**
- **Location of the release**
- **Type of product that was released**
- **Quantity of the product released**
- **Extent of actual and/ or potential water pollution**
- **Date and time of the release**
- **Cause of the release**
- **Actions taken to respond to and contain the release**
- **Any known or anticipated acute or chronic health risks associated with the release**
- **Where appropriate, advice regarding medical attention necessary for exposed individuals**

NOTE: If a reportable Quantity of any Hazardous substance, identified on the CERCLA list, is released in a 24-hour period, immediately notify the National Response Center (NRC 1-800-424-8802). A report can also be filed by the Manager of EHS or Emergency Coordinator online via the US Department of Transportation website.

Federal On-Scene Coordinators (OSCs)

–Based in Atlanta, GA. Outpost location in Raleigh, NC
OSC means the federal official predesignated by EPA or the USCG to coordinate and direct responses or coordinate and direct removal actions under the National Contingency Plan (NCP)

- **24/7 On-Call Status**

Respond to releases of hazardous substances and oil spills;
All environmental hazards response (air, water, land,);
Federal disaster and WMD/CT response capability;
Planning and Preparedness (Drills)
Oil Pollution Prevention (SPCC and FRP Inspections)

8.0 SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

This section presents the procedures for facility inspections and spill response training at Mayberry Oil Service. This information supplements information provided in the Mayberry Oil Service SPCC Plan. All figures referenced within this section are presented at the end of this section.

8.1 FACILITY SELF-INSPECTION

Inspections will be conducted in accordance with written procedures developed for the facility by the unit. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, are made a part of the site SPCC Plan. Written procedures for the inspections and recordkeeping requirements will follow the guidelines listed below and will be attached to the appropriate inspection record:

- **Each facility operator will conduct frequent inspections of his/her facility for malfunctions and deterioration of equipment, operator errors, and discharges which may be causing or may lead to the release of POL or hazardous substance to the environment, thereby posing a threat to human health.**
- **Inspections will be conducted monthly by the units. This frequency is based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction of any equipment or operator error goes undetected between inspections.**
- **Each unit must identify all problems and correct deficiencies immediately in order to avoid any harm to human health or the environment.**
- **Each unit will develop, follow, and maintain within their facility a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment necessary to prevent, detect, or respond to environmental or human health**

hazards. The schedule must identify all deficiencies encountered during the inspection and remedial actions implemented to correct the problems.

- **All inspections must be recorded in an inspection log and must include, at a minimum, the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions taken.**
- **Inspection records are retained for at least 5 years from the date of inspection.**
- **Inspections of procedures and pertinent records may be conducted periodically or at any time by the DESR Team or by proper state or federal authorities in conjunction with the DESR Team.**
- **All underground storage tanks will be gauged for quantity on a daily basis and the results recorded in the unit inventory log. Any noticeable decrease or increase in quantity indicates leakage out or into the tank. If product is added or removed between gauge checks any discrepancy between the gauged quantity and the calculated quantity may indicate leakage. All suspected leaks should be reported to the DESR Team initiation of cleaning, inspection and needed repairs.**

8.1.1 TANK INSPECTIONS

DESR Team will conduct non certified tank inspections at Mayberry Oil Service. A tank visual inspection checklist is provided as Table 8-1.

8.1.2 RESPONSE EQUIPMENT INSPECTION

Response equipment listed in Subsection 3.2 of this Plan will be inspected at least annually by the DESR The recommended unit response equipment will be checked on a schedule developed by the unit that ensures spill response equipment is available and ready. A Response Equipment Inspection Log is provided in Figure 8-2.

8.1.3 SECONDARY CONTAINMENT INSPECTIONS

DESR will conduct secondary containment inspections at Mayberry Oil Service. A secondary containment visual inspection checklist is provided as Table 8-3. There is a remote stormwater detention pond used as emergency secondary containment at this facility.

8.2 FACILITY DRILLS/EXERCISES

Mayberry Oil Service has developed a facility response drill/exercise program to test the effectiveness of the SPCC Plan and FRP. At a minimum, one simulated spill is conducted each year to test the effectiveness and response of the DESR Team. The Mayberry Oil Service response drill/exercise program consists of internal drills/exercises, including qualified individual notification drills, spill management Team tabletop exercises, equipment development exercises, and unannounced exercises, as well as external exercises. During a drill, the local Fire Department Training Department and senior members of the response Team watch and critique procedures/actions.

Following the drill, an evaluation is conducted with drill participants. DESR Team personnel meet monthly or more often if needed, to discuss training objectives and to evaluate training and operational goals.

8.2.1 QUALIFIED INDIVIDUAL NOTIFICATION DRILL

Mayberry Oil Service conducts a Qualified Individual Notification Drill at least annually to ensure that the Qualified Individual is able to be reached in a spill response emergency to carry out his/her duties. The DESR Team randomly selects a unit to simulate an oil or hazardous substance release and to test the facility's response up to and including notification of the Qualified Individual. The DESR Team notes the results of the drill on the Mayberry Oil Service Spill Response Drill/Exercise Log (Table 8-4).

8.2.2 SPILL MANAGEMENT TEAM TABLETOP EXERCISE

Mayberry Oil Service conducts a Spill Management Team Tabletop Exercise at least annually to develop improved coordination within the DESR Team. The DESR Team consists of appropriate representatives from management and the facilities Manager of Environmental, Health and Safety. The exercises consist of evaluating facilities spill scenarios and appropriate responses to each spill scenario to ensure the DESR Team is familiar with the response plan and is able to use it effectively to conduct a spill response. The Manager of Environmental, Health and Safety records the results of the exercise on the Mayberry Oil service Spill Response Drill/Exercise Log (Table 8-4A).

8.2.3 EQUIPMENT DEPLOYMENT EXERCISES

The DESR Team conducts an equipment deployment exercise at least annually, scheduled immediately following the response equipment inspection. The equipment deployment exercise ensures that personnel who normally operate or supervise the operation of response equipment demonstrate their ability to deploy and operate the equipment. It also ensures the equipment is in good operating condition and is appropriate for the intended operating environment. Performance of the equipment deployment exercise will be noted on the Mayberry Oil Service Spill Response Drill/Exercise Log (Table 8-4).

8.2.4 UNANNOUNCED EXERCISES

Mayberry Oil Service conducts unannounced exercises at least annually to test facility spill response procedures. The DESR Team will randomly select a unit to simulate an oil or hazardous substance release and to test facilities response to the spill. Results of the exercise are recorded on the Mayberry Oil Service Spill Response Drill/Exercise Log (Table 8-4).

8.2.5 EXTERNAL EXERCISES

Mayberry Oil Service will conduct an external spill response exercise at least once every three years to test spill response coordination between Mayberry Oil Service and State & Local emergency management agencies. The Manager of Environmental, Health and Safety will record results of the exercise on the Mayberry Oil Service Spill Response Drill/Exercise Log (Table 8-4).

8.3 RESPONSE TRAINING

Mayberry Oil Service has developed a spill response training program to ensure that all spill response personnel (DESR Team) are trained in accordance with AR 200-1, OSHA CFR 1910-120, and NFPA 472. Personnel must successfully complete a program of formal classroom instruction and supervised on-the-job training to prepare them to operate and maintain the facility. Each service member and employee learns about the POL or hazardous materials typically stored or generated at their work site and the storage requirements for that substance.
On-the-job training, as applicable to their position, includes:

- **Location and use of emergency equipment**
- **Basic hazardous material/waste storage policies**
- **Inspections and procedures for correcting inadequacies**
- **Emergency procedures specified in the SPCC Plan and Contingency Plan, such as spill response, fire response, or explosives response**
- **Inspection of emergency and monitoring equipment**
- **Replacement of equipment (if necessary) after an exercise or emergency is over**
- **Communications and alarm systems; emergency telephone numbers to be used.**

The training frequency and techniques utilized at Mayberry Oil Service ensure that personnel are fully trained in emergency response. Records documenting the employee names and completed training programs (both introductory and review) are kept at the facility.

8.3.1 PERSONNEL SPILL RESPONSE TRAINING LOGS

The Manager of Environmental, Health and Safety maintains personnel spill response training records on a Personnel Spill Response Training Log, such as presented in Table 8-5.

8.3.2 DISCHARGE PREVENTION MEETING LOGS

Mayberry Oil Service conducts discharge prevention meetings at least annually and the Manager of Environmental, Health and Safety records the results of the meetings on the Discharge Prevention Meeting Log (Table 8-6). Meeting attendees include DESR personnel, Manager of Environmental, Health and Safety personnel, and representatives from individual facility operators, as appropriate.

Table 8.1
TANK INSPECTIONS
ALSO SEE SPCC PLAN PAGES

Weekly Facility Inspection Form

Date: _____ **Time:** _____ **Inspector (Print):** _____ **Inspector (Signature):** _____	**Legend** **NA = Not Applicable** **X = Satisfactory** **O = Repair or Adjustment Required** **C = See Comments/ Recommendations**

Aboveground Storage Tanks

- **Tank surfaces checked for signs of leakage** _____
- **Tank conditions good (no rusting, corrosion, pitting)** _____
- **Bolts, rivets, or seams not damaged** _____
- **Tank foundations intact** _____
- **Tank supports good (no deterioration or buckling)** _____
- **Level gauges and alarms working properly** _____
- **Vents are not obstructed** _____
- **Sump trenches and pits clear and unobstructed** _____
- **Valves, flanges, and gaskets are free from leaks** _____
- **Containment walls are intact** _____
- **Tanks properly labeled denoting hazards/ contents** _____

Piping

- **No signs of corrosion damage to pipelines or supports** _____
- **Out of service pipes capped** _____
- **Signs/ barriers to protect pipelines from vehicles are in place** _____
- **No leaks at valves, flanged, or other fittings** _____

Transfer Pad

- **Transfer pad condition good (no damage or deterioration)** _____
- **No leaks in hoses** _____
- **No standing oil or water on pad** _____
- **Containment area good (no damage or cracks)** _____
- **Connections are capped or blank flanged** _____
- **Spill kit maintained in serviceable condition** _____
- **Sump trenches and pits clear and unobstructed** _____

Security and Fire Protection

- **Fences and gate intact** _____
- **Gates have locks** _____
- **ASTs locked when not in use** _____
- **Starter controls for pumps locked when not is use** _____
- **Lighting is working and adequate** _____
- **Fire extinguishers are available and in working order** _____

Comments:

Table 8.2 INSPECTIONS, TESTS, RECORDS

SHOP FABRICATED TANKS ONLY

The inspections are for the basic part of the Plan. All inspection records are to be kept for a period of five years. All Integrity Testing documentation should be kept for the life of the facility. Copies of this form should be made for future use. This engineer has used Steel Tank Institutes (STI) Standard for "Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible & Flammable Liquids" SP001-01 for testing and inspection standards. For a copy, contact STI, 570 Oakwood Road, Lake Zurich, IL 60047, phone-847/438-8265, www.steeltank.com.

This engineer has also used the equivalent environmental protection requirements (see notes) allowed by US EPA 40 CFR §112.7(a) (2). Tanks that meet US EPA Equivalent Environmental Protection will not have integrity testing requirements.

Periodic tank inspections are to be performed by the tank owner or his designate. Qualified tank inspectors are to perform the certified tank testing/inspections. Qualified tank inspectors are those who are certified by API or STI. Field Erected Tanks over 265,000 gallons must comply with inspection and testing intervals specified in API 653, "Tank Inspection, Repair, Alternation, & Reconstruction."

STI Category I Tanks: ALL: STI Category II Tanks: NA: STI Category III Tanks: NA

STANDARD FOR THE INSPECTION
OF ABOVEGROUND STORAGE TANKS 5th ed. September, 2011
PERIODIC INSPECTION CHECKLISTS
Steel Tank Institute
A Division of STI/SPFA
944 Donata Court, Lake Zurich, IL 60047
Phone: 847/438-8265
Fax: 847/438-8766
Web site: www.steeltank.com

Owner may use the STI Inspection Sheet for their inspection logs

STI SP001 AST Record

OWNER INFORMATION	FACILITY INFORMATION	INSTALLER INFORMATION
Name	**Name**	**Name**
Number and Street	**Number and Street**	**Number and Street**
City, State, Zip Code	**City, State, Zip Code**	**City, State, Zip Code**

TANK ID_____

SPECIFICATION:

Design: ☐ **UL**_____ ☐ **SWRI** _____ ☐ **Horizontal** ☐ **Vertical** ☐ **Rectangular**

☐ **API**_____ ☐ **Other**_____ ☐ **Unknown**_____

Manufacturer: **Contents:** **Construction Date:** **Last Repair/Reconstruction Date:**

Dimensions: **Capacity:** **Last Change of Service Date:**

Construction: ☐ **Bare Steel** ☐ **Cathodically Protected (Check one: A.** ☐ **Galvanic or B.** ☐ **Impressed Current) Date Installed:** _____
☐ **Coated Steel** ☐ **Concrete** ☐ **Plastic/Fiberglass** ☐ **Other**_____
☐ **Double Bottom** ☐ **Double Wall** ☐ **Lined Date Installed:** _____

Containment: ☐ **Earthen Dike** ☐ **Steel Dike** ☐ **Concrete** ☐ **Synthetic Liner** ☐ **Other**

CRDM: ☐ **Date Installed:** **Type:**

Release Prevention Barrier: ☐ **Date Installed:** **Type:**

TANK ID_____

SPECIFICATION:

Design: ☐ **UL**_____ ☐ **SWRI**_____ ☐ **Horizontal** ☐ **Vertical** ☐ **Rectangular**
☐ **API** ☐ **Other**_____ ☐ **Unknown**

Manufacturer: **Contents:** **Construction Date:** **Last Repair/Reconstruction Date:**

Dimensions: **Capacity:** **Last Change of Service Date:**

Construction: ☐ **Bare Steel** ☐ **Cathodically Protected (Check one: A.** ☐ **Galvanic or B.** ☐ **Impressed Current) Date Installed:** _____
☐ **Coated Steel** ☐ **Concrete** ☐ **Plastic/Fiberglass** ☐ **Other**_____
☐ **Double Bottom** ☐ **Double Wall** ☐ **Lined Date Installed:** _____

Containment: ☐ **Earthen Dike** ☐ **Steel Dike** ☐ **Concrete** ☐ **Synthetic Liner** ☐ **Other**

CRDM: ☐ **Date Installed:** **Type:**

Release Prevention Barrier: ☐ **Date Installed:** **Type:**

TANK ID _____

SPECIFICATION:

Design: ☐ **UL**_____ ☐ **SWRI** _____ ☐ **Horizontal** ☐ **Vertical** ☐ **Rectangular**
☐ **API**_____ ☐ **Unknown** ☐ **Other** _____

Manufacturer: **Contents:** **Construction Date:** **Last Repair/Reconstruction Date:**

Dimensions: **Capacity:** **Last Change of Service Date:**

Construction: ☐ **Bare Steel** ☐ **Cathodically Protected (Check one: A.** ☐ **Galvanic or B.** ☐ **Impressed Current) Date Installed:** _____
☐ **Coated Steel** ☐ **Concrete** ☐ **Plastic/Fiberglass** ☐ **Other**
☐ **Double Bottom** ☐ **Double Wall** ☐ **Lined Date Installed:** _____

Containment: ☐ **Earthen Dike** ☐ **Steel Dike** ☐ **Concrete** ☐ **Synthetic Liner** ☐ **Other**

CRDM: ☐ **Date Installed:** **Type:**

Release Prevention Barrier: ☐ **Date Installed:** **Type:**

TANK ID_____

SPECIFICATION:

Design: ☐ **UL** ☐ **SWRI** ☐ **Horizontal** ☐ **Vertical** ☐ **Rectangular**
☐ **API**_____ ☐ **Unknown** ☐ **Other**_____

Manufacturer: **Contents:** **Construction Date:** **Last Repair/Reconstruction Date:**

Dimensions: **Capacity:** **Last Change of Service Date:**

Construction: ☐ **Bare Steel** ☐ **Cathodically Protected (Check one: A.** ☐ **Galvanic or B.** ☐ **Impressed Current) Date Installed:** _____
☐ **Coated Steel** ☐ **Concrete** ☐ **Plastic/Fiberglass** ☐ **Other**
☐ **Double Bottom** ☐ **Double Wall** ☐ **Lined Date Installed:** _____

Containment: ☐ **Earthen Dike** ☐ **Steel Dike** ☐ **Concrete** ☐ **Synthetic Liner** ☐ **Other**

CRDM:☐ **Date Installed:** **Type:**

Release Prevention Barrier:☐ **Date Installed:** **Type:**

TANK ID_____

SPECIFICATION:

Design: ☐ **UL**_____ ☐ **SWRI**_____ ☐ **Horizontal** ☐ **Vertical** ☐ **Rectangular**
☐ **API**_____☐ **Unknown** ☐ **Other** _____

Manufacturer: **Contents:** **Construction Date:** **Last Repair/Reconstruction Date:**

Dimensions: **Capacity:** **Last Change of Service Date:**

Construction: ☐ **Bare Steel** ☐ **Cathodically Protected (Check one: A.** ☐ **Galvanic or B.** ☐ **Impressed Current) Date Installed:** _____
☐ **Coated Steel** ☐ **Concrete** ☐ **Plastic/Fiberglass** ☐ **Other**
☐ **Double Bottom** ☐ **Double Wall** ☐ **Lined Date Installed:** _____

Containment: ☐ **Earthen Dike** ☐ **Steel Dike** ☐ **Concrete** ☐ **Synthetic Liner** ☐ **Other**

CRDM:☐ **Date Installed:** **Type:**

Release Prevention Barrier: ☐ **Date Installed:** **Type:**

STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date:_____ **Retain Until Date:**_____ **(36 months from inspection date)**

Prior Inspection Date:_____ **Inspector Name:**_____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- **For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.**
- **The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.**
- **Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.**
- **(*) designates an item in a non-conformance status. This indicates that action is required to address a problem.**
- **Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.**
- **Retain the completed checklists for 36 months.**
- **In the event of severe weather (snow, ice, wind storms) or maintenance (such as painting) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	**Check for water, debris, cracks or fire hazard**		
1.2 Primary tank	**Check for water**	**s* No N/A**	
1.3 Containment drain valves	**Operable and in a closed position**		
1.4 Pathways and entry	**Clear and gates/doors operable**		
2.0 Leak Detection			
2.1 Tank	**Visible signs of leakage**	**s* No**	
2.2 Secondary Containment	**Visible signs of leakage from tank into secondary containment**	**s* No**	
2.3 Surrounding soil	**Visible signs of leakage**		
2.4 Interstice	**Visible signs of leakage**		

Item	Task	Status	Comments
3.0 Tank Equipment			
3.1 Valves	Check for leaks.	Yes* No N/A	
	Tank drain valves must be kept locked.	Yes* No N/A	
3.2 Spill containment boxes on fill pipe	Inspect for debris, residue, and water in the box and remove.	Yes* No N/A	
	Drain valves must be operable and closed.	Yes* No N/A	
3.3 Liquid level equipment	Both visual and mechanical devices must be inspected for physical damage.	Yes No* N/A	
	Check that the device is easily readable	Yes No* N/A	
3.4 Overfill equipment	If equipped with a "test" button, activate the audible horn or light to confirm operation. This could be battery powered. Replace the battery if needed.	Yes No* N/A	
	If overfill valve is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	Yes No* N/A	
3.5 Piping connections	Check for leaks, corrosion and damage	Yes* No	
4.0 Tank Attachments and Appurtenances			
4.1 Ladder and platform structure	Secure with no sign of severe corrosion or damage?	Yes No* N/A	
5.0 Other Conditions			
5.1 Are there other conditions that should be addressed for continued safe operation or that may affect the site spill prevention plan?		Yes* No	

STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date:_____**Retain Until Date:** _____**(36 months from inspection date)**

Prior Inspection Date:_____**Inspector Name:**_____

Tanks Inspected (ID #'s):_____

Inspection Guidance:_____

- **For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.**
- **The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.**
- **Remove promptly upon discovery standing water or liquid in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.**
- **In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility must regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).**
- **(*) designates an item in a non-conformance status. This indicates that action is required to address a problem.**
- **Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.**
- **Retain the completed checklists for 36 months.**
- **Complete this checklist on an annual basis supplemental to the owner monthly-performed inspection checklists.**
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	**Check for:** • **Holes or cracks in containment wall or floor** • **Washout** • **Liner degradation** • **Corrosion** • **Leakage** • **Paint failure** • **Tank settling**	**Yes* No N/A**	
2.0 Tank Foundation and Supports			
2.1 Foundation	**Settlement or foundation washout?**	**Yes* No**	
2.2 Concrete pad or ring wall	**Cracking or spalling?**	**Yes* No N/A**	

Item	Task	Status	Comments
2.3 Supports	Check for corrosion, paint failure, etc.	s* No N/A	
2.4 Water drainage	Water drains away from tank?	s No* N/A	
2.5 Tank grounding	Strap secured and in good condition?	s No* N/A	
3.0 Cathodic Protection			
3.1 Gavlvanic cathodic protection system	Confirm system is functional, includes the wire connections for galvanic systems	s No* N/A	
3.2 Impressed current system	a. Inspect the operational components (power switch, meters, and alarms).		
	b. Record hour meter, ammeter and voltmeter readings.		
4.0 Tank Shell, Heads, Roof			
4.1 Coating	Check for coating failure		
4.2 Steel condition	Check for: • Dents • Buckling • Bulging • Corrosion • Cracking		
4.3 Roof slope	Check for low points and standing water		
5.0 Tank Equipment			
5.1 Vents	Verify that components are moving freely and vent passageways are not obstructed for: • Emergency vent covers • Pressure/vacuum vent poppets • Other moving vent components		

Item	Task	Status	Comments
5.2 Valves	Check the condition of all valves for leaks, corrosion and damage.	Yes* No	
5.2.1 Anti-siphon, check and gate valves	Cycle the valve open and closed and check for proper operation.	Yes No* N/A	
5.2.2 Pressure regulator valve	Check for proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above only)	Yes No* N/A	
5.2.3 Expansion relief valve	Check that the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing.)	Yes No* N/A	
5.2.4 Solenoid valves	Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be inspected for the presence and operation of the plunger.)	Yes No* N/A	
5.2.5 Fire and shear valves	Manually cycle the valve to ensure components are moving freely and that the valve handle or lever has clearance to allow valve to close completely.	Yes No* N/A	
	Valves must not be wired in open position.	Yes No* N/A	

Item	Task	Status	Comments
	Make sure fusible element is in place and correctly positioned.	Yes No* N/A	
	Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	Yes No* N/A	
5.3 Interstitial leak detection equipment	Check condition of equipment, including: • The window is clean and clear in sight leak gauges. • The wire connections of electronic gauges for tightness and corrosion • Activate the test button, if applicable.	Yes No* N/A	
5.4 Spill containment boxes on fill pipe	If corrosion, damage, or wear has compromised the ability of the unit to perform spill containment functions, replace the unit.	Yes* No N/A	
	Inspect the connections to the AST for tightness, as well as the bolts, nuts, washers for condition and replace if necessary.	Yes* No N/A	
	Drain valves must be operable and closed	Yes* No N/A	
5.5 Strainer	Check that the strainer is clean and in good condition.	Yes No* N/A	
5.5 Strainer	Access strainer basket and check cap and gasket seal as well as bolts.	s No* N/A	

Item	Task	Status	Comments
5.6 Filter	a. Check that the filter is in good condition and is within the manufacturer's expected service life. Replace, if necessary.		
5.7 Flame arrestors	b. Check for leaks and decreased fuel flow	s No* N/A	
	Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	s* No N/A	
5.8 Leak detector for submersible pump systems	Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.		
5.9 Liquid level equipment	Has equipment been tested to ensure proper operation?		
5.10 Overfill equipment	Does equipment operate as required?		
	Follow manufacturer's instructions		
	Follow manufacturer's instructions and regulatory requirements for inspection and functionality verification.		
	b. Confirm device is suited for above ground use by the manufacturer		

Item	Task	Status	Comments
9.0 Insulated Tanks			
9.1 Insulation	**Check condition of insulation for:** **Missing sections** **Areas of moisture** **Mold** **Damage**	**Yes* No N/A**	
9.5 Insulation cover or jacket	**Check for damage that will allow water intrusion**	**Yes* No N/A**	
10.0 Miscellaneous			
10.1 Electrical wiring and boxes	**Are they in good condition?**	**Yes N o* N/A**	
10.2 Labels and tags	**Ensure that all labels and tags are intact and readable.**	**Yes N o* N/A**	

Additional Comments:

STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date:_____ **Retain Until Date:**_____**(36 months from inspection date)**

Prior Inspection Date:_____ **Inspector Name:** _____

Containers Inspected (ID #'s):_____

Inspection Guidance:

- **For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.**
- **The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.**
- **(*) designates an item in a non-conformance status. This indicates that action is required to address a problem.**
- **Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.**
- **Retain the completed checklists for 36 months.**

Item	Area:	Area:	Area:	Area:
1.0 AST Containment/Storage Area				
1.1 ASTs within designated storage area?	Yes No	Yes No	Yes No	Yes No
1.2 Debris, spills, or other fire hazards in containment or storage area?	Yes No	Yes No	Yes No	Yes No
1.3 Water in outdoor secondary containment?	Yes No	Yes No	Yes No	Yes No
1.4 Drain valves operable and in a closed position?	Yes No	Yes No	Yes No	Yes No
1.5 Egress pathways clear and gates/doors operable?	Yes No	Yes No	Yes No	Yes No

Item	Area:	Area:	Area:	Area:
2.0 Leak Detection				
2.1 Visible signs of leakage around the container or storage area?	Yes No	Yes No	Yes No	Yes No
3.0 Container				
3.0 Noticeable container distortions, buckling, denting or bulging?	Yes No	Yes No	Yes No	Yes No

Table 8.2 INSPECTIONS, TESTS, RECORDS

A trained/experienced employee will perform a complete walk-through of the facility each day. This daily visual inspection involves: (1) looking for tank/piping damage or leakage, stained or discolored soils, or excessive accumulation of water in diked and bermed areas; (2) observing the effluent from the oil/water separator; and (3) verifying that all secondary containment drain valves are securely closed.

NOTES: **Regulations required under 40 CFR 112.8 (C) (6): "*Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs…. Examples of these integrity tests include, but are not limited to: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing.*

EQUIVALENT ENVIRONMENTAL PROTECTION: MAYBERRY OIL SERVICE CO., INC., is deviating from the integrity testing provision of §112.8(c)(6) for ALL ATMOSPHERIC TEMPERATURE & PRESSURE SHOP FABRICATED PETROLEUM ASTS based on good engineering practice after considering the tanks installation and alternative measures, the requirements of Steel Tank Institute (STI) Standard SP-001, and alternative measures implemented by the facility. Vertical Tanks are operated in a way that US EPA generally accepts an approach that combines visual inspection with placement of a barrier between the container and the ground, designed and operated in a way that ensures that any leaks are immediately detected, to be considered "equivalent" to integrity testing. The tanks are not insulated, and the outside secondary tank surface of the tank shells can therefore be observed on an ongoing basis. All tanks are located over a concrete floor, which functions as a release prevention barrier and has properly sized containment in accordance with §112.8(c) (2).

Under SP-001, the tanks are considered Category 1 tanks (aboveground storage tank with spill control and with continuous release detection method (CRDM)) and therefore require periodic inspection of the tanks. The owner/operator personnel performing these inspections are knowledgeable of storage facility operations, characteristics of the liquid stored, the type of aboveground storage tanks and its associated components. Owner/operator personnel perform monthly and annual inspections. The scope of inspections and procedures is covered in the training provided to employees involved in handling oil at the facility. The routine inspections focus specifically on detecting any change in conditions or signs of product leakage from the tank, piping system, and appurtenances.

In accordance with inspection procedures outlined in this Plan, if signs of leakage or deterioration from the tank are observed by owner/operator personnel, the tank is to be inspected by a tank inspector certified by the American Petroleum Institute or Steel Tank Institute to assess its suitability for continued service, according to SP-001.

Owner/operator personnel who conduct inspections are qualified through training, education and/or experience. The tank's physical configuration, combined with monthly and annual inspections, ensures that any small leak that could develop in the tank shell will be detected before it can become significant, escape secondary containment, and reach navigable waters.

Table 8.3 INSPECTIONS, TESTS, RECORDS
Field Erected Tanks Only

American Petroleum Institute (API)
1220 L Street, Northwest
Washington, D.C. 20005-4070
202-682-8161 (Phone)
202-962-4739 (Fax)
Web site: www.api.org

Tank inspection and testing standards for "Field Erected Tanks" typically over 50,000 gallons in size. Inspector must be API 653 or STI Certified. Reference Industry Standards by US EPA 40 CFR part 112: API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction, Second Edition, December 1995; including Addendum 1, (December 1996), Addendum 2, (December 1997), Addendum 3, (December 1998) and Addendum 4 (December 1999) and Third Edition December 2001.
NOTE: Field erected tanks that meet the following criteria may use the STI "Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible & Flammable Liquids" SP001-01 for testing and inspection standards appendix. This would only apply to steel ASTs that are as follows:

- **Welded and flat-bottom**
- **Up to 30 feet in diameter and with a height of less than 50 feet (± 265,000 gallons or less).**
- **Fabricated with full-fusion, butt-welded shells and with lap-welded or butt-welded bottom plates**
- **Fabricated with a shell thickness of each course less than ½ inch and with original nominal bottom thickness plates equal to ¼ inch or 6 mm**
- **Built to a nationally recognized standard.**

REFERENCE PUBLICATIONS:
A. API Publications
API Recommended Practice 575, *Inspection of Atmospheric and Low-Pressure Storage Tanks*
API Standard 650, *Welded Steel Tanks for Oil Storage*
API Recommended Practice 651, *Cathodic Protection of Aboveground Petroleum Storage Tanks*
API Recommended Practice 652, *Lining of Aboveground Petroleum Storage Tank Bottoms*
API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*
API Standard 2015, *Cleaning Petroleum Storage Tanks*
API Publication 2207, *Preparing Tank Bottoms for Hot Work*
B. ASME Publications
American Society of Mechanical Engineers (ASME) *Boiler & Pressure Vessel Code*:
Section V, Nondestructive Examination
Section IX, Welding and Brazing Qualifications

API 653, SECTION 6-INSPECTION

A visual external inspection must be conducted at least every 5 years or RCA/4N years by an authorized inspector. A formal internal inspection must be accomplished every 20 years; or if corrosion rates are not known every 10 years. Authorized Inspector must be API 653 Certified.
The external condition shall be monitored by close visual inspection from the ground on a routine basis. Routine In-Service Inspections performed may be done by owner/operator personnel.

Personnel performing this inspection should be knowledgeable of storage facility operations, the tank, and the characteristics of the product stored. The interval of such inspections shall be consistent with the conditions at the particular site, but shall not exceed one month.

The routine in-service inspection shall include a visual inspection (monthly) as the following table indicates: Evidence of leaks; shell distortions; signs of settlement; corrosion; and condition of the foundation, paint coatings, insulation systems, and appurtenances should be documented for follow up action by an authorized inspector. For a more complete inspection checklist see API-653 Appendix C

Table 8-4
Spill Response Drill/Exercise Log
Qualified Individual Notification Drill Log

Date:

Qualified Individual(s)	Attending Firms/Companies	Emergency Scenario	Evaluation:	Changes to be Implemented
				Implementation Date_____

Table 8-4A
Spill Management Team Tabletop Exercise Log

Date:

Qualified Individual(s)	Attending Firms Companies	Emergency Scenario	Evaluation:	Changes to be Implemented
				Implementation Date_____

Table 8-5
Personnel Spill Response Training Log

NAME	Response training/date and number of hours	Prevention training/date and number of hours

Table 8-6
Discharge Prevention Meeting Log

NAME	Subject/issue identified	Required action & Implementation date(s)

9.0 SECURITY

112.20 (h)(10)- *Security systems.* The response plan shall include a description of facility security systems.

According to 40 CFR 112.7(g) facilities are required to maintain a certain level of security, as appropriate. In this section, a description of the facility security shall be provided and include, as appropriate:
(1) emergency cut-off locations (automatic or manual valves);
(2) enclosures (e.g., fencing, etc.);
(3) guards and their duties, day and night;
(4) lighting;
(5) valve and pump locks; and
(6) pipeline connection caps.
The SPCC Plan contains similar information. Duplicate information may be photocopied and inserted in this section.

All of Mayberry Oil Service POL and hazardous substance storage areas are located within fenced and lighted areas. Units responsible for specific storage systems lock the tanks and limit access to the tank area. All areas are regularly patrolled by the specific employees after hours. Personnel are not permitted free range on the facility. All access gates are protected 24 hours per day, 7 days per week.

Visitors must check in and are issued daily passes that must be displayed.
Area lights and fencings are shown in Appendix C.

10.0 FACILITY DIAGRAMS (see also Appendix C)

Unit-specific diagrams that show the locations of oil and hazardous substance storage locations and site drainage are included in this section and in the Mayberry Oil Service SPCC Plan. Site evacuation diagrams are included, (see EARP & Section 3.0 EMERGENCY RESPONSE INFORMATION)

Requirements of Facility Diagram:
(1) The Site Plan Diagram shall, as appropriate, include and identify:
- **(A) The entire facility to scale;**
- **(B) Above and below ground bulk oil storage tanks;**
- **(C) The contents and capacities of bulk oil storage tanks;**
- **(D) The contents and capacity of drum oil storage areas;**
- **(E) The contents and capacities of surface impoundments;**
- **(F) Process buildings;**
- **(G) Transfer areas;**
- **(H) Secondary containment systems (location and capacity);**
- **(I) structures where hazardous materials are stored or handled, including materials stored and capacity of storage;**
- **(J) Location of communication and emergency response equipment;**
- **(K) Location of electrical equipment which contains oil; and**
- **(L) For complexes only, the interface(s) (i.e., valve or component) between the portion of the facility regulated by EPA and the portion(s) regulated by other Agencies. In most cases, this interface is defined as the last valve inside secondary containment before piping leaves the secondary containment area to connect to the transportation-related portion of the facility (i.e., the structure used or intended to be used to transfer oil to or from a vessel or pipeline). In the absence of secondary containment, this interface is the valve manifold adjacent to the tank nearest the transfer structure as described above. The interface may be defined differently at a specific facility if agreed to by the RA and the appropriate Federal official.**

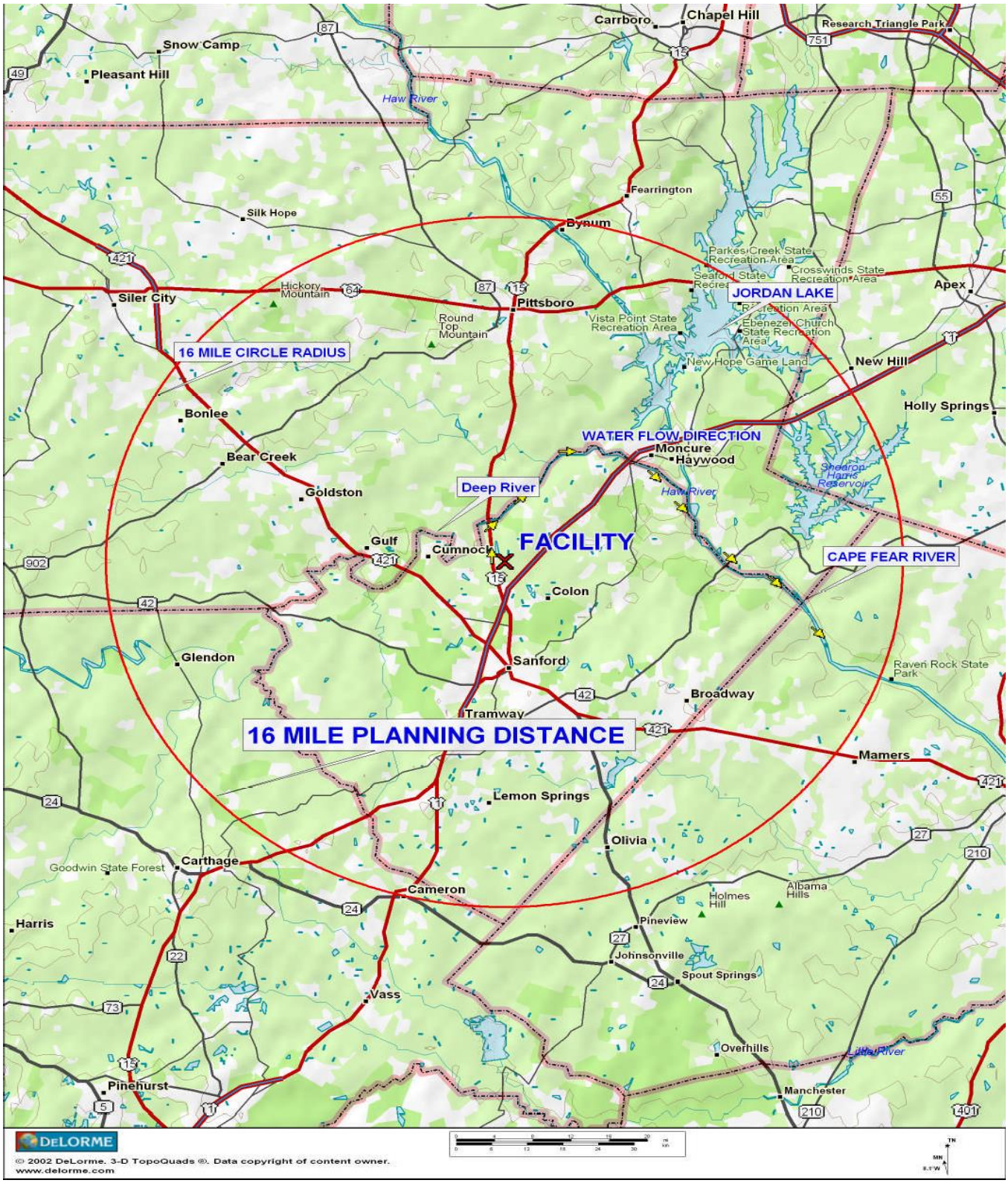
(2) The Site Drainage Plan Diagram shall, as appropriate, include:
- **(A) Major sanitary and storm sewers, manholes, and drains;**
- **(B) Weirs and shut-off valves;**
- **(C) Surface water receiving streams;**
- **(D) Fire fighting water sources;**
- **(E) Other utilities;**
- **(F) Response personnel ingress and egress;**
- **(G) Response equipment transportation routes; and**
- **(H) Direction of discharge flow from discharge points.**

(3) The Site Evacuation Plan Diagram shall, as appropriate, include:
- **(A) Site plan diagram with evacuation route(s); and**
- **(B) Location of evacuation regrouping areas.**

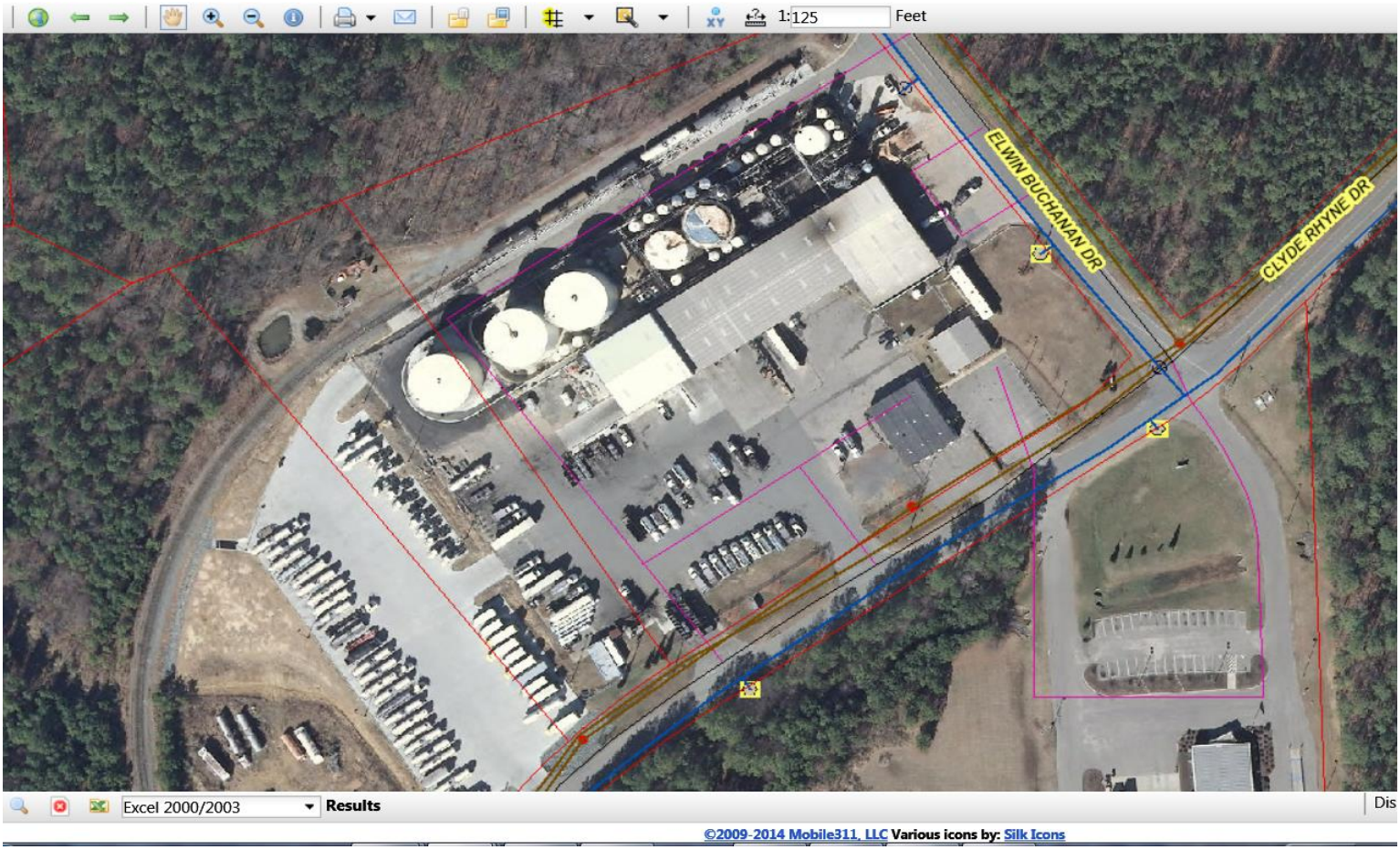
Facility Diagram/Print/Legend
See Attached Prints 1/3, 2/3 & 3/3

Print Item Letter/#	*Description of Item*	*Located at Print/Page Number*
A	*The entire facility to scale*	*3*
B	*Specify on the diagram above and below ground bulk oil storage tanks (NO UNDERGROUND OIL TANKS ON PROPERTY)*	*2*
C	*Contents and capacities of bulk oil storage tanks*	*2*
D	*Contents and capacities of drum oil storage areas*	*2*
E	*Contents and capacities of surface impoundments*	*1 & 3*
F	*Location of process buildings*	*1 & 2*
G	*Location of transfer areas*	*1*
H	*Location and capacity of secondary containment systems*	*1, 2 & 3*
I	*Structures where hazardous materials are stored or handled, including materials stored and capacity of storage*	
J	*Location of communication and emergency response equipment*	
K	*Location of electrical equipment which contains oil*	
Drainage Diagram/Prints		
1	*Storm sewer system, including locations of inlets, manholes and outlets*	*1 & 3*
2	*Control structures such as weirs, sluice gates, etc.*	*3*
3	*Ditches, wet-weather streams and other surface water features*	*1 & 3*
4	*Direction of overland spill flow from potential sources*	*1 & 3*

PLANNING DISTANCE/PLOT MAP OF AREA/GENERAL AREA MAPS #1



WATER, SEWER, UTILITIES MAP#2



Sewer Line/Pipe

Manholes

Water Line/Pipe

Water Hydrant Valve

Gas line Pipe

Property Boundaries/Lines

Section 11.0
COPY of FEDERAL FRP REGULATIONS
Title 40: Protection of Environment (CFR)
PART 112—OIL POLLUTION PREVENTION
§112.20 Facility Response Plans

(a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response plan to the Regional Administrator, according to the following provisions:
(1) For the owner or operator of a facility in operation on or before February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101–380, 33 U.S.C. 2701 et seq.) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.
(i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.
(ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.
(2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.
(i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.
(ii) For a newly constructed facility that commences operation after August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).
(iii) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).
(iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.
(3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.
(4) Preparation and submission of response plans — Animal fat and vegetable oil facilities. The owner or operator of any non-transportation-related facility that handles, stores, or transports animal fats and vegetable oils must prepare and submit a facility response plan as follows:
(i) Facilities with approved plans. The owner or operator of a facility with a facility response plan that has been approved under paragraph (c) of this section by July 31, 2000 need not prepare or submit a revised plan except as otherwise required by paragraphs (b), (c), or (d) of this section.
(ii) Facilities with plans that have been submitted to the Regional Administrator. Except for facilities with

approved plans as provided in paragraph (a)(4)(i) of this section, the owner or operator of a facility that has submitted a response plan to the Regional Administrator prior to July 31, 2000 must review the plan to determine if it meets or exceeds the applicable provisions of this part. An owner or operator need not prepare or submit a new plan if the existing plan meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must prepare and submit a new plan by September 28, 2000.
(iii) Newly regulated facilities. The owner or operator of a newly constructed facility that commences operation after July 31, 2000 must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(ii) of this section. The plan must meet or exceed the applicable provisions of this part. The owner or operator of an existing facility that must prepare and submit a plan after July 31, 2000 as a result of a planned or unplanned change in facility characteristics that causes the facility to become regulated under paragraph (f)(1) of this section, must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(iii) or (iv) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.
(iv) Facilities amending existing plans. The owner or operator of a facility submitting an amended plan in accordance with paragraph (d) of this section after July 31, 2000, including plans that had been previously approved, must also review the plan to determine if it meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must revise and resubmit revised portions of an amended plan to the Regional Administrator in accordance with paragraph (d) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.
(b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Administrator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.
(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.
(c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of the facility in writing and:
(1) Promptly review the facility response plan;
(2) Require amendments to any response plan that does not meet the requirements of this section;
(3) Approve any response plan that meets the requirements of this section; and
(4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.
(d)(1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:
(i) A change in the facility's configuration that materially alters the information included in the response plan;
(ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;
(iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil described in paragraph (h)(5) of this section;
(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and
(v) Any other changes that materially affect the implementation of the response plan.
(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.
(3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.
(4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have

the potential to cause significant and substantial harm to the environment.
(e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that the facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.
(f)(1) A facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (a)(2) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in Attachment C-I to Appendix C to this part:
(i) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or
(ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:
(A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;
(B) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) 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 of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act;
(C) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake; or
(D) The facility has had a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the last 5 years.
(2)(i) To determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the Regional Administrator shall consider the following:
(A) Type of transfer operation;
(B) Oil storage capacity;
(C) Lack of secondary containment;
(D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;
(E) Proximity to drinking water intakes;
(F) Spill history; and
(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.
(ii) Any person, including a member of the public or any representative from a Federal, State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.
(3) To determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:
(i) Frequency of past discharges;
(ii) Proximity to navigable waters;
(iii) Age of oil storage tanks; and
(iv) Other facility-specific and Region-specific information, including local impacts on public health.
(g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans prepared

pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.
(2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.
(3) The owner or operator shall review and update the facility response plan periodically to reflect changes at the facility.
(h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless you have prepared an equivalent response plan acceptable to the Regional Administrator to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in Appendix F to this part:
(1) Emergency response action plan. The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:
(i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;
(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;
(iii) A description of information to pass to response personnel in the event of a reportable discharge;
(iv) A description of the facility's response equipment and its location;
(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
(vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
(vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of discharged oil; and
(viii) A diagram of the facility.
(2) Facility information. The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.
(3) Information about emergency response. The response plan shall include:
(i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);
(ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;
(iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;
(iv) A description of information to pass to response personnel in the event of a reportable discharge;
(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
(vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;
(vii) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
(viii) A diagram of evacuation routes; and
(ix) A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:
(A) Activate internal alarms and hazard communication systems to notify all facility personnel;
(B) Notify all response personnel, as needed;
(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;

(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;
(E) Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;
(F) 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);
(G) Assess and implement prompt removal actions to contain and remove the substance released;
(H) Coordinate rescue and response actions as previously arranged with all response personnel;
(I) Use authority to immediately access company funding to initiate cleanup activities; and
(J) Direct cleanup activities until properly relieved of this responsibility.
(4) Hazard evaluation. The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.
(5) Response planning levels. The response plan shall include discussion of specific planning scenarios for:
(i) A worst case discharge, as calculated using the appropriate worksheet in Appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;
(ii) A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and
(iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.
(6) Discharge detection systems. The response plan shall describe the procedures and equipment used to detect discharges.
(7) Plan implementation. The response plan shall describe:
(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;
(ii) A description of the equipment to be used for each scenario;
(iii) Plans to dispose of contaminated cleanup materials; and
(iv) Measures to provide adequate containment and drainage of discharged oil.
(8) Self-inspection, drills/exercises, and response training. The response plan shall include:
(i) A checklist and record of inspections for tanks, secondary containment, and response equipment;
(ii) A description of the drill/exercise program to be carried out under the response plan as described in §112.21;
(iii) A description of the training program to be carried out under the response plan as described in §112.21; and
(iv) Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.
(9) Diagrams. The response plan shall include site plan and drainage plan diagrams.
(10) Security systems. The response plan shall include a description of facility security systems.
(11) Response plan cover sheet. The response plan shall include a completed response plan cover sheet provided in Section 2.0 of Appendix F to this part.
(i)(1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision.

The Regional Administrator shall consider the request and render a decision as rapidly as practicable.
(2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.
(3) After a request for reconsideration under paragraph (i)(1) or (i)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.
[59 FR 34098, July 1, 1994, as amended at 65 FR 40798, June 30, 2000; 66 FR 34560, June 29, 2001; 67 FR 47151, July 17, 2002]

§112.21 FACILITY RESPONSE TRAINING AND DRILLS/EXERCISES.
(a) The owner or operator of any facility required to prepare a facility response plan under §112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in §112.20(h)(8).
(b) The facility owner or operator shall develop a facility response training program to train those personnel involved in oil spill response activities. It is recommended that the training program be based on the USCG's Training Elements for Oil Spill Response, as applicable to facility operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.
(1) The owner or operator shall be responsible for the proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations.
(2) Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel.
(3) Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup.
(c) The facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. A program that follows the National Preparedness for Response Exercise Program (PREP) (see Appendix E to this part, section 13, for availability) will be deemed satisfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.
[59 FR 34101, July 1, 1994, as amended at 65 FR 40798, June 30, 2000]

12.0 ENGINEERING CALCULATIONS

12.1 Appendix C to Part 112—Substantial Harm Criteria

Attachment C-III—Calculation of the Planning Distance

The flowchart provided in Attachment C–I to this appendix shows the decision tree with the criteria to identify whether a facility "could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines." In addition, the Regional Administrator has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA.

Regulation 2.0 Oil Transport on Moving Navigable Waters

2.1 The facility owner or operator must use the following formula or a comparable formula as described in §112.20(a)(3) to calculate the planning distance for oil transport on moving navigable water:

$d=v\times t\times c$; where

d: the distance downstream from a facility within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down in the event of an oil discharge (in miles);
v: the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1 and 2 of this attachment);
t: the time interval specified in Table 3 based upon the type of water body and location (in hours); and
c: constant conversion factor 0.68 secω mile/hrω ft (3600 sec/hr ÷ 5280 ft/mile).

Table 1—Manning's Roughness Coefficient for Natural Streams
[Note: Coefficients are presented for high flow rates at or near flood stage.]

Stream description	Roughness coefficient (n)
Minor Streams (Top Width <100 ft.)	
Clean:	
Straight	0.03
Winding	0.04
Sluggish (Weedy, deep pools):	
No trees or brush	0.06
Trees and/or brush	0.10
Major Streams (Top Width >100 ft.)	
Regular section:	
(No boulders/brush)	0.035
Irregular section:	
(Brush)	0.05

Regulation 2.2 Chezy-Manning's equation is used to determine velocity:

$v=1.5/n\times r^{2/3}\times s^{1/2}$; where

v=the velocity of the river of concern (in ft/sec);
n=Manning's Roughness Coefficient from Table 1 of this attachment;
r=the hydraulic radius; the hydraulic radius can be approximated for parabolic channels by multiplying the average mid-channel depth of the river (in feet) by 0.667 (sources for obtaining the mid-channel depth are listed in Table 2 of this attachment); and
s=the average slope of the river (unitless) obtained from U.S. Geological Survey topographic maps at the address listed in Table 2 of this attachment. **(ENGINEER USED 2013 DeLORME 3-D TOPO/QUADS MAPPING SOFTWARE & GOOGLE EARTH)**

Regulation 5.0 Oil Transport Over Land

Regulation 5.1 Facility owners or operators must evaluate the potential for oil to be transported over land to navigable waters of the United States. The owner or operator must evaluate the likelihood that portions of a worst case discharge would reach navigable waters via open channel flow or from sheet flow across the land, or be prevented from reaching navigable waters when trapped in natural or man-made depressions excluding secondary containment structures.

Regulation 5.2 As discharged oil travels over land, it may enter a storm drain or open concrete channel intended for drainage. It is assumed that once oil reaches such an inlet, it will flow into the receiving navigable water. During a storm event, it is highly probable that the oil will either flow into the drainage structures or follow the natural contours of the land and flow into the navigable water. Expected minimum and maximum velocities are provided as examples of open concrete channel and pipe flow. The ranges listed below reflect minimum and maximum velocities used as design criteria.[4] the calculation below demonstrates that the time required for oil to travel through a storm drain or open concrete channel to navigable water is negligible and can be considered instantaneous…..

Regulation 5.4 The distances that shall be considered to determine the planning distance are illustrated in Figure C-I of this attachment. The relevant distances can be described as follows:

D1=Distance from the nearest opportunity for discharge, X_1, to a storm drain or an open concrete channel leading to navigable water.

D2=Distance through the storm drain or open concrete channel to navigable water.

D3=Distance downstream from the outfall within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down as determined by the planning distance formula.

D4=Distance from the nearest opportunity for discharge, X_2, to fish and wildlife and sensitive environments not bordering navigable water.

Regulation 5.5 A facility owner or operator whose nearest opportunity for discharge is located within 0.5 mile of navigable water must complete the planning distance calculation (D3) for the type of navigable water near the facility or use a comparable formula.

Regulation 5.6 A facility that is located at a distance greater than 0.5 mile from a navigable water must also calculate a planning distance (D3) if it is in close proximity (i.e., D1 is less than 0.5 mile and other factors are conducive to oil travel over land) to storm drains that flow to navigable waters. Factors to be considered in assessing oil transport over land to storm drains shall include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity. Storm drains or concrete drainage channels that are located in close proximity to the facility can provide a direct pathway to navigable waters, regardless of the length of the drainage pipe. If D1 is less than or equal to 0.5 mile, a discharge from the facility could pose substantial harm because the time to travel the distance from the storm drain to the navigable water (D2) is virtually instantaneous.

Regulation 5.7 A facility's proximity to fish and wildlife and sensitive environments not bordering navigable water, as depicted as D4 in Figure C–I of this attachment, must also be considered, regardless of the distance from the facility to navigable waters. Factors to be considered in assessing oil transport over land to fish and wildlife and sensitive environments should include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity.

12.2 SITE SPECIFIC CALCULATIONS:

Upper Little Buffalo Creek Estimated Stream Velocity

$v= (1.5/n)\times(r^{2/3})\times(s^{1/2})$; where
n=0.10
Mid level depth = 1.0 ft.
r=0.667x1.0ft. = 0.667ft.
c=0.4167 miles
s=(267-265/0.4167) x (1/5280) = 0.00090909

$v=(1.5/0.10) \times (0.667^{2/3}) \times (0.0090909^{1/2}) =$ **0.3452 FPS**

Oil Transport Over Land Velocity
Property discharges to storm water retention pond (remote impounding) approximately 250 feet from the nearest tank. Normally dry drainage ditches discharge into Little Buffalo Creek approximately 1,123 feet from the storm water retention pond.

D1= 250 feet over concrete/asphalt to intermittent stream.
Surface sheet flow velocity estimated a 1.0 FPS or 250 seconds or 0.06944 hours

D2= not applicable (no man made storm water conveyance systems off property)

D3= 1,123 feet via normally dry (intermittent stream) drainage ditching to Little Buffalo Creek.
n=0.10
Mid level depth = 0.5 ft.
r= 0.667 x 0.5 = 0.3335
c= 0.2127
s= (324-294/0.2127) x (1/5280) = 0.026712
$v= (1.5/n) \times (r^{2/3})\times(s^{½})$: = (1.5/0.10) x $(0.3335^{2/3})$x $(0.025712^{1/2})$ = 1.1525 FPS

D3 time = 1,123 feet/1.1525 FPS = 974.4 seconds or 0.27067 hours
Impact time to Little Buffalo Creek = 0.06944 hours + 0.27067 hours = 0.34011 hours

D4= 250 feet to property line.
D4 time = 250 feet/1.0 FPS = 250 seconds or 0.06944 hours
Impact time to Sensitive Environments = 0.06944 hours

Little Buffalo Creek Pond Surface Velocity Calculations:

From US EPA FRP 3.0 Oil Transport on Still Water
3.1 For bodies of water including lakes or ponds that do not have a measurable velocity, the spreading of the oil over the surface must be considered. Owners or operators of facilities located next to still water bodies may use a comparable means of calculating the planning distance. If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable calculation must be attached to the response plan cover sheet.

Pond is approximately 2,917ft. long by average width of 160 ft. wide. The surface area in square feet covered by an oil discharge on still water, A1, can be determined by the following formula, where V is the volume of the discharge in gallons (worst case) and C is a constant conversion factor:

$A_1 = 10^5 \times V^{3/4} \times C$
C = 0.1643
$A_1 = 10^5 \times (1{,}000{,}000 \text{ gallons})^{3/4} \times (0.1643)$
A_1 Covered Area = 519,562,219.5 ft^2

To account for the assumption that oil will spread in a semi-circular shape, the area of a circle is divided

by 2 and is designated as A_2.
$A_2 = (\pi \times r^2)/2$
Solving for the radius, r, using the relationship $A_1 = A_2$: $519{,}562{,}219.5ft^2 = (\pi \times r^2)/2$
r = 18191.5ft (3.44 miles)

Assuming a 20 knot wind under storm conditions:
1 knot=1.15 miles/hour: 20 knots×1.15 miles/hour/knot=23 miles/hr
Assuming that the oil slick moves at 3 percent of the wind's speed:
23 miles/hour×0.03=0.69 miles/hour or 1.012 FPS

To estimate the distance that the oil will travel, use the times required for response resources to arrive at different geographic locations as shown in Table 3 US EPA FRP Attachment.
For Great Lakes and all other areas: 27 hrs×0.69 miles/hr=18.6 miles

The total distance that the oil will travel from the point of discharge, including the distance due to spreading, is calculated as follows:
Great Lakes and all other areas: d=18.6+10.9 miles or approximately 29.5 miles

Time for oil spill to traverse pond:
2,917ft. x 1.012FPS = 2,952 seconds or .8200 hours

Lower Little Buffalo Creek Estimated Stream Velocity

$v= (1.5/n)\times(r^{2/3})\times(s^{1/2})$; where
n=0.10
Mid level depth = 1.0 ft.
r=0.667x1.0ft. = 0.667ft.
c=1.22 miles
s=(261-212/1.22) x (1/5280) = 0.0076068

$v=(1.5/0.10) \times (0.667^{2/3}) \times (0.0076068^{1/2}) =$ **0.9989 FPS**

DEEP RIVER STREAM FLOW CALCULATIONS:

The river crosses the fall line of North Carolina, an area where rivers are quite rocky and have a moderately high gradient. The Lockville Hydroelectric Plant, Deep River, 3.5 miles upstream from Haw River, Moncure, Chatham County, NC (near US Highway 1 Bridge) is approximately 8ft. high and in 1920 this site was turned into a hydroelectric plant by the Moncure Manufacturing Company.

The hydroelectric plant is still in operation today. Deep River is over 100 feet wide in most places.

$v = (1.5/n) \times (r^{2/3}) \times (s^{1/2})$; where
n = 0.05
Average Mid Level Channel Depth = 1.5 ft. (Estimated from local County data)
r = 0.667x 1.5ft. = 1.334ft.
c = 10.54 miles
s = (212-162/10.54) x (1/5280) = 0.00089845

$v = (1.5/0.05) \times (1.334^{2/3}) \times (0.001809^{1/2}) =$ **1.091 FPS**

CAPE FEAR RIVER STREAM FLOW CALCULATIONS:

The Cape Fear River is a 202 miles long backwater river in east central North Carolina in the United States. It flows into the Atlantic Ocean near Cape Fear, from which it takes its name. It is approximately 202 miles with an average discharge of 3,885 ft^3/s. Cape Fear River is over 100 feet wide in most places.

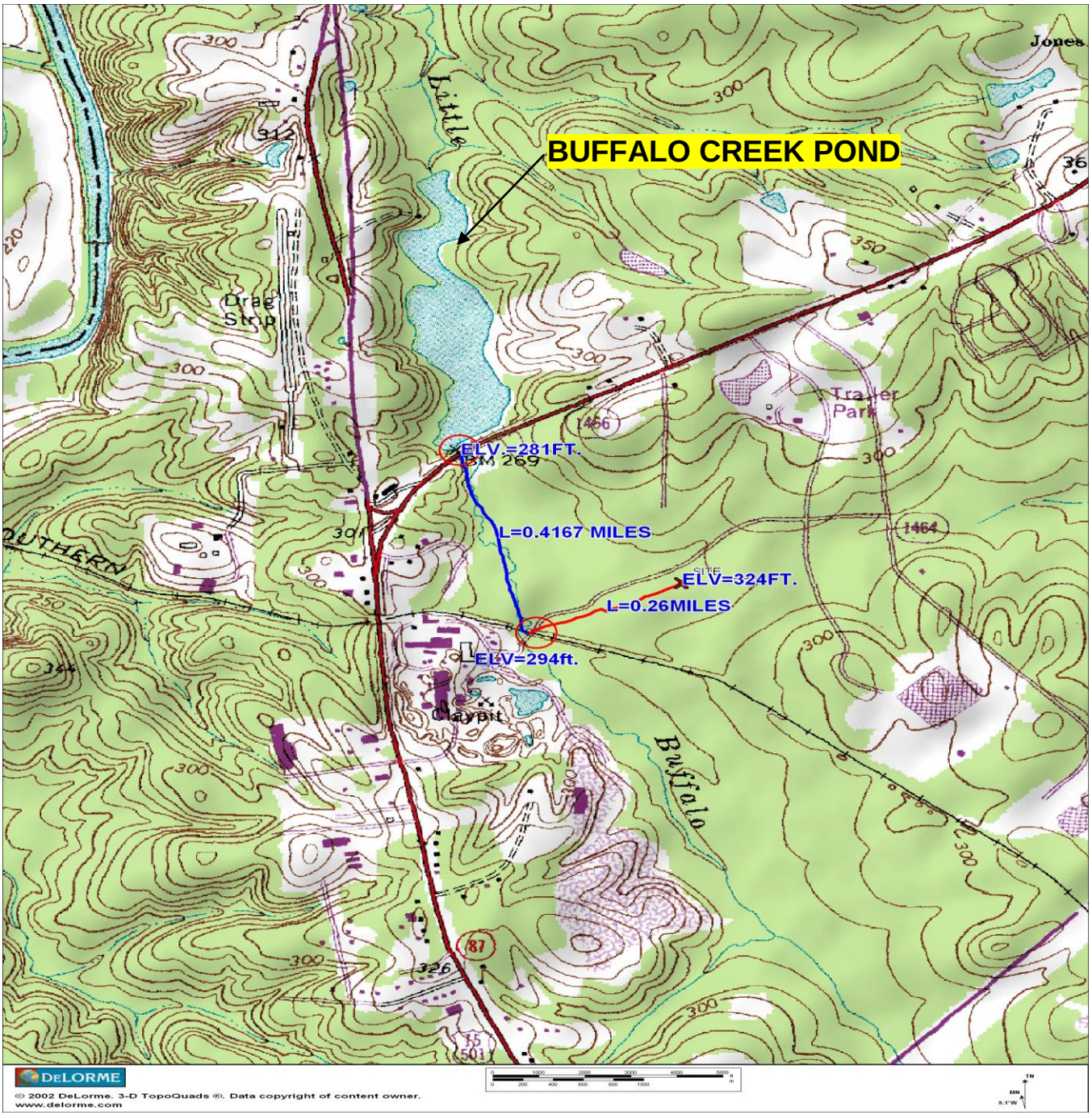
The Cape Fear River Basin is one of four river basins contained entirely within the state's boundaries. The headwaters (origin) of the basin are the Deep and Haw Rivers. These rivers converge in

Chatham County just below B. Everett Jordan Dam to form the Cape Fear River. The river ends as a 35-mile-long coastal estuary that is an important nursery area for juvenile fish, crabs and shrimp.

The Corps of Engineers built and continues to maintain three locks and dams that ensure a minimum channel depth of 8 feet on the Cape Fear River from Fayetteville to Wilmington.

$V = (1.5/n)\times(r^{2/3})\times(s^{1/2})$; where
N = 0.05
Average Mid Level Channel Depth = 10ft. (From USGS/Corp of Engineers)
r = 0.667x 8ft. = 5.37ft.
c = 18.00 miles (at approx. location 2 miles upstream of Railroad bridge at Lillington, NC)
s = (162-116/18) x (1/5280) = 0.00048400
$v = (1.5/0.05) \times (5.37^{2/3}) \times (0.00048400^{1/2}) =$ **2.035 FPS**

12.3 MAP OF INITIAL PLANNING DISTANCE & ELEVATIONS



112.4 Appendix D to Part 112—Determination of a Worst Case Discharge Planning Volume

An owner or operator is required to complete this worksheet if the facility meets the criteria, as presented in Appendix C to this part, or it is determined by the RA that the facility could cause substantial harm to the environment. The calculation of a worst case discharge planning volume is used for emergency planning purposes, and is required in 40 CFR 112.20 for facility owners or operators who must prepare a response plan. When planning for the amount of resources and equipment necessary to respond to the worst case discharge planning volume, adverse weather conditions must be taken into consideration. An owner or operator is required to determine the facility's worst case discharge planning volume from either part A of this appendix for an onshore storage facility, or part B of this appendix for an onshore production facility. The worksheet considers the provision of adequate secondary containment at a facility.

A.2 SECONDARY CONTAINMENT— MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment? (Y/N) **NO**

A.2.1 If the answer is yes, the final worst case discharge planning volume equals the *total aboveground oil storage capacity at the facility.*

(1) FINAL WORST CASE VOLUME: _____GAL

(2) Do not proceed further.

A.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER ‘‘0’’ (zero). **ZERO GAL**

A.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of above-ground oil storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A.2.2.

FINAL WORST CASE VOLUME: 1,000,000 GALLONS

112.5 Appendix E to Part 112—Determination and Evaluation of Required Response Resources for Facility Response Plans

1.1 The purpose of this appendix is to describe the procedures to identify response resources to meet the requirements of §112.20. To identify response resources to meet the facility response plan requirements of 40 CFR 112.20(h), owners or operators shall follow this appendix or, where not appropriate, shall clearly demonstrate in the response plan why use of this appendix is not appropriate at the facility and make comparable arrangements for response resources.

1.2.8 *Persistent oils* include:

(1) A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95

Petroleum Storage in 1,000,000 gallon tanks M-1 & M-2

- **VGO-Vacuum Gas Oil, Specific Gravity = 0.86-0.88**
- **On Specification Fuel Oil, Number 4 Oil Specific Gravity = 0.88**
- **Used Oil, Used Crankcase Oil, Used Motor Oil, Specific Gravity = 0.88**

Use Persistent Oils Group 3

TABLE 1 TO APPENDIX E—RESPONSE RESOURCE OPERATING CRITERIA

Oil Recovery Devices		
Operating environment	**Significant wave height[1]**	**Sea state**
Rivers and Canals	≤ 1 foot	1
Inland	≤ 3 feet	2
Great Lakes	≤ 4 feet	2–3
Ocean	≤ 6 feet	3–4

Boom				
	Use			
Boom property	**Rivers and canals**	**Inland**	**Great Lakes**	**Ocean**
Significant Wave Height[1]	≤ 1	≤ 3	≤ 4	≤ 6
Sea State	1	2	2–3	3–4
Boom height—inches (draft plus freeboard)	6–18	18–42	18–42	≥42
Reserve Buoyancy to Weight Ratio	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—pounds	4,500	15,000–20,000	15,000–20,000	≥20,000
Skirt Fabric Tensile Strength—pounds	200	300	300	500
Skirt Fabric Tear Strength—pounds	100	100	100	125

[1]Oil recovery devices and boom *shall* be at least capable of operating in wave heights up to and including the values listed in Table 1 for each operating environment.

TABLE 2 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE FOR PETROLEUM OILS

Spill location	**Rivers and canals**			**Nearshore/Inland/Great Lakes**		
Sustainability of on-water oil recovery	**3 days**			**4 days**		
Oil group[1]	**Percent natural dissipation**	**Percent recovered floating oil**	**Percent oil onshore**	**Percent natural dissipation**	**Percent recovered floating oil**	**Percent oil onshore**
1—Non-persistent oils	80	10	10	80	20	10
2—Light crudes	40	15	45	50	50	30
3—Medium crudes and fuels	20	15	65	30	50	50
4—Heavy crudes and fuels	5	20	75	10	50	70

[1]The response resource considerations for non-petroleum oils other than animal fats and vegetable oils

are outlined in section 7.7 of this appendix.
Note: Group 5 oils are defined in section 1.2.8 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

TABLE 3 TO APPENDIX E—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS[1]

Non-Persistent Oil:	
Group 1	1.0
Persistent Oil:	
Group 2	1.8
Group 3	**2.0**
Group 4	1.4
Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.	

[1]See sections 1.2.2 and 1.2.7 of this appendix for group designations for non-persistent and persistent oils, respectively.

TABLE 4 TO APPENDIX E—ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS

Operating area	**Tier 1**	**Tier 2**	**Tier 3**
Rivers and Canals	0.30	0.40	0.60
Inland/Nearshore Great Lakes	0.15	0.25	0.40

Note: These mobilization factors are for total resources mobilized, not incremental response resources.

TABLE 5 TO APPENDIX E—RESPONSE CAPABILITY CAPS BY OPERATING AREA

	Tier 1	**Tier 2**	**Tier 3**
February 18, 1993:			
All except Rivers & Canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day.
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers & Canals	1.5K bbls/day	3.0K bbls/day	6.0K bbls/day.
February 18, 1998:			
All except Rivers & Canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.35K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers & Canals	**1.875K bbls/day**	**3.75K bbls/day**	**7.5K bbls/day.**
February 18, 2003:			
All except Rivers & Canals, Great Lakes	TBD	TBD	TBD.
Great Lakes	TBD	TBD	TBD.
Rivers & Canals	TBD	TBD	TBD.

Note: The caps show cumulative overall effective daily recovery capacity, not incremental increases.
TBD=To Be Determined.

TABLE 6 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE FOR ANIMAL FATS AND

VEGETABLE OILS

Spill location	**Rivers and canals**			**Nearshore/Inland/Great Lakes**		
Sustainability of on-water oil recovery	**3 days**			**4 days**		
Oil group[1]	**Percent natural loss**	**Percent recovered floating oil**	**Percent recovered oil from onshore**	**Percent natural loss**	**Percent recovered floating oil**	**Percent recovered oil from onshore**
Group A	40	15	45	50	20	30
Group B	20	15	65	30	20	50

[1]Substances with a specific gravity greater than 1.0 generally sink below the surface of the water. Response resource considerations are outlined in section 10.6 of this appendix. The owner or operator of the facility is responsible for determining appropriate response resources for Group C oils including locating oil on the bottom or suspended in the water column; containment boom or other appropriate methods for containing oil that may remain floating on the surface; and dredges, pumps, or other equipment to recover animal fats or vegetable oils from the bottom and shoreline.
Note: Group C oils are defined in sections 1.2.1 and 1.2.9 of this appendix; the response resource procedures are discussed in section 10.6 of this appendix.

Table 7 to Appendix E—Emulsification Factors for Animal Fats and Vegetable Oils

Oil Group [1]:	
Group A	1.0
Group B	2.0

Attachment E-1 --
Worksheet to Plan Volume of Response Resources for Worst Case Discharge - Petroleum Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) 23,810.00

Step (B) Oil Group[1] (Table 3 and section 1.2 of this appendix) 3

Step (C) Operating Area (choose One)…

☐ Near Shore/Inland Great Lakes: √ Or Rivers and Canals

Step (D) Percentage of Oil (Table 2 of this Appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
(D1) 20	(D2) 15	(D3) 65

Step (E1) On-Water Oil Recovery = Step (D2) x Step(A) / 100 (E1) 3,571.00

Step (E2) Shoreline Recovery = Step (D3) x Step (A) / 100 (E2) 15,476.00

Step (F) Emulsification Factor (Table 3 of this appendix) (F) 2.0

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1		Tier 2		Tier 3	
0.30	(GI)	0.40	(G2)	0.60	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-1 (continued) --
Worksheet to Plan Volume of Response Resources for Worst Case Discharge - Petroleum Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
2,143.00	2,857.00	4286.00
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) 30,952.00

Step (E2) x Step (F)

Part IV On-Water Response Capacity by Operating Area (Table 5 of this Appendix) (Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
1,875	3,750	7,500
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but Not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
268.0	0	0
Part II Tier 1-Step (J1)	Part II Tier 2-Step (J2)	Part II Tier 3-Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

ENGINEERS CONCLUSIONS FROM APPENDIX E:

Mayberry Oil Service must have under contract or have oil spill materials/equipment on hand to contain for all three Tiers:

Tier 1 1,875 barrels per day for 12 hours
Tier 2 3,750 barrels per day for 36 hours
Tier 3 7,500 barrels per day for 60 hours

FROM APPENDIX E Chapter 6

6.0 Determining Effective Daily Recovery Capacity for Oil Recovery Devices

6.1 Oil recovery devices identified by a facility owner or operator must be identified by the manufacturer, model, and effective daily recovery capacity. These capacities must be used to determine whether there is sufficient capacity to meet the applicable planning criteria for a small discharge, a medium discharge, and a worst case discharge to the maximum extent practicable.

6.2 To determine the effective daily recovery capacity of oil recovery devices, the formula listed in section 6.2.1 of this appendix shall be used. This formula considers potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. The RA may assign a lower efficiency factor to equipment listed in a response plan if it is determined that such a reduction is warranted.

6.2.1 The following formula shall be used to calculate the effective daily recovery capacity:

R = T × 24 hours × E

Where:

R—Effective daily recovery capacity;

T—Throughput rate in barrels per hour (nameplate capacity); and

E—20 percent efficiency factor (or lower factor as determined by the Regional Administrator).

FROM APPENDIX E Chapter 7

7.2.2 The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 3 of this appendix. Facilities that handle, store, or transport oil from different petroleum groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

7.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of an oil discharge. For all other rivers and canals, inland, near shore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

7.2.4 The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 2 of this appendix. The facility owner or operator shall identify and ensure the availability, by contract or other approved means as described in §112.2, of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in §112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1993 must make arrangements to identify and ensure the availability, by contract or other approved means as described in §112.2, for additional capacity to be under contract by 1998 or 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's total oil storage capacity.

7.3 The procedures discussed in sections 7.3.1–7.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Group 1 through Group 4 oils).

7.3.1 The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, or 4) or non-persistent (Group 1)]; and the geographic area(s) in which the facility operates (*i.e.* , operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 2 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

7.3.2 The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 7.2.2 of this appendix.

7.3.3 The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

7.4 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 1 through Group 4 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for Group 1 through Group 4 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

FOR MORE INFORMATION SEE:
API RP 1145 Preparation of Response Plans for Oil Spills from Offshore Facilities, Second Edition

www.PDHcenter.com PDH Course G324 www.PDHonline.org

Appendix F To Part 112—Facility-Specific Response Plan (US EPA June 30, 2000)

For copies of Tables, Charts, Formulas and Appendix's see Full US EPA Regulations

1.1 Emergency Response Action Plan Several sections of the response plan shall be co-located for easy access by response personnel during an actual emergency or oil discharge. This collection of sections shall be called the Emergency Response Action Plan. The Agency intends that the Action Plan contain only as much information as is necessary to combat the discharge and be arranged so response actions are not delayed.

The Action Plan may be arranged in a number of ways. For example, the sections of the Emergency Response Action Plan may be photocopies or condensed versions of the forms included in the associated sections of the response plan. Each Emergency Response Action Plan section may be tabbed for quick reference. The Action Plan shall be maintained in the front of the same binder that contains the complete response plan or it shall be contained in a separate binder. In the latter case, both binders shall be kept together so that the entire plan can be accessed by the qualified individual and appropriate spill response personnel. The Emergency Response Action Plan shall be made up of the following sections:

1. Qualified Individual Information (Section 1.2) partial
2. Emergency Notification Phone List (Section 1.3.1) partial
3. Spill Response Notification Form (Section 1.3.1) partial
4. Response Equipment List and Location (Section 1.3.2) complete
5. Response Equipment Testing and Deployment (Section 1.3.3) complete
6. Facility Response Team (Section 1.3.4) partial
7. Evacuation Plan (Section 1.3.5) condensed
8. Immediate Actions (Section 1.7.1) complete
9. Facility Diagram (Section 1.9) complete

1.3 Emergency Response Information

(A) (5) Section 1.3.4 lists the facility response personnel, including those employed by the facility and those under contract to the facility for response activities, the amount of time needed for personnel to respond, their responsibility in the case of an emergency, and their level of response training. Three different forms are included in this section. The Emergency Response Personnel List shall be composed of all personnel employed by the facility whose duties involve responding to emergencies, including oil discharges, even when they are not physically present at the site. An example of this type of person would be the Building Engineer-in-Charge or Plant Fire Chief. The second form is a list of the Emergency Response Contractors (both primary and secondary) retained by the facility. Any changes in contractor status must be reflected in updates to the response plan. Evidence of contracts with response contractors shall be included in this section so that the availability of resources can be verified. The last form is the Facility Response Team List, which shall be composed of both emergency response personnel (referenced by job title/position) and emergency response contractors, included in one of the two lists described above, that will respond immediately upon discovery of an oil discharge or other emergency (i.e., the first people to respond). These are to be persons normally on the facility premises or primary response contractors. Examples of these personnel would be the Facility Hazardous Materials (HAZMAT) Spill Team 1, Facility Fire Engine Company 1, Production Supervisor, or Transfer Supervisor. Company personnel must be able to respond immediately and adequately if contractor support is not available.

(6) Section 1.3.5 lists factors that must, as appropriate, be considered when preparing an evacuation plan.
(7) Section 1.3.6 references the responsibilities of the qualified individual for the facility in the event of an emergency.

1.3.5 Evacuation Plans

1.3.5.1 Based on the analysis of the facility, as discussed elsewhere in the plan, a facility-wide evacuation plan shall be developed. In addition, plans to evacuate parts of the facility that are at a high risk of exposure in the event of a discharge or other release must be developed. Evacuation routes must be shown on a diagram of the facility (see section 1.9 of this appendix). When developing evacuation plans, consideration must be given to the following factors, as appropriate:

(1) Location of stored materials;
(2) Hazard imposed by discharged material;
(3) Discharge flow direction;
(4) Prevailing wind direction and speed;
(5) Water currents, tides, or wave conditions (if applicable);
(6) Arrival route of emergency response personnel and response equipment;

(7) Evacuation routes;
(8) Alternative routes of evacuation;
(9) Transportation of injured personnel to nearest emergency medical facility;
(10) Location of alarm/notification systems;
(11) The need for a centralized check-in area for evacuation validation (roll call);
(12) Selection of a mitigation command center; and
(13) Location of shelter at the facility as an alternative to evacuation.

1.4.2 Vulnerability Analysis

The vulnerability analysis shall address the potential effects (*i.e.*, to human health, property, or the environment) of an oil discharge.

1.4.3 Analysis of the Potential for an Oil Discharge Each owner or operator shall analyze the probability of a discharge occurring at the facility. This analysis shall incorporate factors such as oil spill history, horizontal range of a potential discharge, and vulnerability to natural disaster, and shall, as appropriate, incorporate other factors such as tank age.

This analysis will provide information for developing discharge scenarios for a worst case discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of discharges. The owner or operator may need to research the age of the tanks and the oil spill history at the facility.

1.4.4 Facility Reportable Oil Spill History
(12) Description(s) of how each oil discharge was detected.

1.5 Discharge Scenarios
In this section, the owner or operator is required to provide a description of the facility's worst case discharge, as well as a small and medium discharge, as appropriate. A multi-level planning approach has been chosen because the response actions to a discharge (*i.e.*, necessary response equipment, products, and personnel) are dependent on the magnitude of the discharge. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge.

The facility owner or operator shall discuss the potential direction of the discharge pathway.

1.5.1 Small and Medium Discharges
1.5.1.1 To address multi-level planning requirements, the owner or operator must consider types of facility-specific discharge scenarios that may contribute to a small or medium discharge. The scenarios shall account for all the operations that take place at the facility, including but not limited to:
(1) Loading and unloading of surface transportation;
(2) Facility maintenance;
(3) Facility piping;
(4) Pumping stations and sumps;
(5) Oil storage tanks;
(6) Vehicle refueling; and
(7) Age and condition of facility and components.
1.5.1.2 The scenarios shall also consider factors that affect the response efforts required by the facility. These include but are not limited to:
(1) Size of the discharge;
(2) Proximity to downgradient wells, waterways, and drinking water intakes;
(3) Proximity to fish and wildlife and sensitive environments;
(4) Likelihood that the discharge will travel offsite (*i.e.,* topography, drainage);
(5) Location of the material discharged (*i.e.* on a concrete pad or directly on the soil);
(6) Material discharged;
(7) Weather or aquatic conditions (*i.e.* river flow);
(8) Available remediation equipment;
(9) Probability of a chain reaction of failures; and
(10) Direction of discharge pathway.

1.6 Discharge Detection Systems
In this section, the facility owner or operator shall provide a detailed description of the procedures and equipment used to detect discharges. A section on discharge detection by personnel and a discussion of automated discharge detection, if applicable, shall be included for both regular operations and after hours operations. In addition, the facility owner or operator shall discuss how the reliability of any automated system will be checked and how frequently the system will be inspected.
1.6.1 Discharge Detection by Personnel
In this section, facility owners or operators shall describe the procedures and personnel that will detect any discharge of oil or release of a hazardous substance. A thorough discussion of facility inspections must be included. In addition, a description of initial response actions shall be addressed. This section shall reference section 1.3.1 of the response plan for emergency response information.
1.6.2 Automated Discharge Detection
In this section, facility owners or operators must describe any automated discharge detection equipment that the

facility has in place. This section shall include a discussion of overfill alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

1.7 Plan Implementation
In this section, facility owners or operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5 of the response plan.

This section shall include the identification of response resources for small, medium, and worst case discharges; disposal plans; and containment and drainage planning. A list of those personnel who would be involved in the cleanup shall be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after an oil discharge event and the time frame to update the plan must be described.

1.7.1 Response Resources for Small, Medium, and Worst Case Discharges
1.7.1.1 Once the discharge scenarios have been identified in section 1.5 of the response plan, the facility owner or operator shall identify and describe implementation of the response actions. The facility owner or operator shall demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified discharge scenarios. The determination and demonstration of adequate response capability are presented in Appendix E to this part. In addition, steps to expedite the cleanup of oil discharges must be discussed. At a minimum, the following items must be addressed:

1.7.3 Containment and Drainage Planning A proper plan to contain and control a discharge through drainage may limit the threat of harm to human health and the environment. This section shall describe how to contain and control a discharge through drainage, including:

1.8.2 Facility Drills/Exercises
(A)
(B) The PREP Guidelines specify that the facility conduct internal and external drills/exercises. The internal exercises include: qualified individual notification drills, spill management team tabletop exercises, equipment deployment exercises, and unannounced exercises. External exercises include Area Exercises. Credit for an Area or Facility-specific Exercise will be given to the facility for an actual response to a discharge in the area if the plan was utilized for response to the discharge and the objectives of the Exercise were met and were properly evaluated, documented, and self-certified.

1.8.3 Response Training
Section 112.21(a) requires facility owners or operators to develop programs for facility response training. Facility owners or operators are required by § 112.20(h)(8)(iii) to provide a description of the response training program to be carried out under the response plan. A facility's training program can be based on the USCG's Training Elements for Oil Spill Response, to the extent applicable to facility operations, or another response training program acceptable to the RA. The training elements are available from the USCG Office of Response (G–MOR) at (202) 267–0518 or fax 267–4085/4065.

Personnel response training logs and discharge prevention meeting logs shall be included in sections 1.8.3.1 and 1.8.3.2 of the response plan respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.9 Diagrams
(2) (H) direction of discharge flow from discharge points.

Attachments to Appendix F
Attachment F–1—Response Plan Cover Sheet This cover sheet will provide EPA with basic information concerning the facility. It must accompany a submitted facility response plan. Explanations and detailed instructions can be found in Appendix F.

Please type or write legibly in blue or black ink. Public reporting burden for the collection of this information is estimated to vary from 1 hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to:
Chief, Information Policy Branch,
Mail Code: PM–2822, U.S. Environmental
Protection Agency, Ariel Rios Building, 1200
Pennsylvania Avenue, NW., Washington,
D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503.

2.0 MAYBERRY OIL EMERGENCY RESPONSE ACTION PLAN-(ERAP)

STANDALONE FROM FACILITY RESPONSE PLAN (FRP)

40 CFR 112.20 (h) (1) ***Emergency response action plan. The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:***
(i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;
(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;
(iii) A description of information to pass to response personnel in the event of a reportable discharge;
(iv) A description of the facility's response equipment and its location;
(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
(vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
(vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of discharged oil; and
(viii) A diagram of the facility.

STANDALONE DOCUMENT: Must remain in front of Facility Response Plan.

The Emergency Response Action Plan (ERAP) co-locates several sections of the Mayberry Oil Service Company. The ERAP should be easily accessible to response personnel during an oil or hazardous substance spill. The ERAP contains only as much information as is necessary to combat a spill and is arranged so that response actions are not delayed. Emergency Response Action Plan section may be tabbed for quick reference. The Action Plan shall be maintained in the front of the same binder that contains the complete response plan or it shall be contained in a separate binder. The ERAP has the following information:

1.1 Qualified individual information
1.2 Emergency notification telephone list
1.3 Spill response notification forms
1.4 Response equipment list and location
1.5 Response equipment testing and deployment drill log
1.6 Emergency response personnel
1.7 Evacuation plan
1.8 Immediate actions
For additional information on spill mitigation procedures, see Sections 2 through 10 of this FRP.

1.1 QUALIFIED INDIVIDUAL INFORMATION

The qualified individual for the Mayberry Oil Service Company FRP is the Facility Manager. Upon notification of an oil or hazardous substance release to a drain or storm ditch, this person or a designee will be available for technical assistance. Also, the Environmental, Health and Safety Manager has full authority to implement removal actions, and in all instances will be responsible for initiating state and federal notification procedures.

Facility Manager: *Mr. Mark Giaquinto;*
Phone: *919-774-8180 extension 102*

1.2 EMERGENCY NOTIFICATION TELEPHONE LIST (see Section 1.6 for more information)

1. Local Fire Department: 911 Emergency

Northview Rural Fire Department
104 Perkison Road
Sanford, North Carolina 27330
919-774-6221

Deep River Fire Department
5107 Deep River Road
Sanford, North Carolina 27330
919-774-9622

2. "Person-In-Charge" of Facility Spill Response:
Home Telephone Number and Street Address:
Name: Yoke P. Chung
Home Address: 155 Deerfield Country Road, Randleman, NC 27317
Home Phone: 336-674-0669, Cell: 919-770-7561
Corporate Office Phone: 919-774-8180, or 1-800-662-5364

3. Local Emergency Planning Committee or Haz-Mat Response Team, Telephone Number: Lee County Emergency Management, 225 E. Weatherspoon Street, Sanford, NC 27330; Phone; 919-775-3941

4. Emergency Cleanup Contractor or Response Facility Name, Telephone Number:
Shamrock Environmental Corporation: 800-881-1098
IMS Environmental Services, Inc.: 800-229-4671

5. State Division of Environmental Management: 919-791-4200 (must call)

6. State Emergency Response Commission: 1-800-451-1403 (must call)

7. National Response Center: 1-800-424-8802 (must call)

8. Downstream Water Suppliers who need to be notified: _____
_____

Emergency Contacts and Response Services:

Primary Emergency Coordinator
Mark Giaquinto, Facility Manager
Business Hours Phone Number: 919-774-8180 extension 102
Mobile Phone Number:
Digital Pager Number: Not Available
Home Phone Number:

Alternate Emergency Coordinator
James Jones, Maintenance Supervisor
Business Hours Phone Number: 919-774-8180 extension 127
Mobile Phone Number: 919-417-9557
Digital Pager Number: Not Available
Home Phone Number: 919-552-1041

Alternate Emergency Coordinator/ Oil Spill Prevention Coordinator
Yoke Chung, Manager of Environmental, Health and Safety
Business Hours Phone Number: 919-774-8180 extension 134
Mobile Phone Number: 919-770-7561

Digital Pager Number: **919-861-4734**
Home Phone Number: **336-674-0669**

Additional Mayberry Oil Contacts

The Emergency Coordinators will evaluate the emergency situation and, if necessary, contact one or more of the following individuals.

James Mayberry, President and CEO
Business Hours Phone Number: **919-774-8180 extension 108**
Mobile Phone Number: **919-880-0729**
Digital Pager Number: **800-844-8087**
Home Phone Number: **919-387-9551**

Jamie Hanrahan
1-919-774-8180 extension 123

Richard Kalin, Vice President of Operations
Business Hours Phone Number: **919-774-8180 extension 110**
Mobile Phone Number: **919-819-5290**
Digital Pager Number: **Not Available**
Home Phone Number: **919-362-8782**

1.3 SPILL RESPONSE NOTIFICATION FORM

You must report a spill if:

- ✓ **Discharge causes a sheen or discoloration on the surface of a body of water;**
- ✓ **Discharge violates applicable water quality standards; and**
- ✓ **Discharge causes a sludge or emulsion to be deposited beneath the surface of the water or on adjoining shorelines.**

Reporting a hazardous substance release or oil spill takes only a few minutes. To report a release or spill, contact the federal government's centralized reporting center, the National Response Center (NRC), at 1-800-424-8802. The NRC is staffed 24 hours a day by U.S. Coast Guard personnel, who will ask you to provide as much information about the incident as possible (see the next page).

PLANNING DISTANCE MAP-

1.3 Spill Response Notification Form, Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the US EPA Regional Administrator, within 60 days of the qualifying discharge incident.

Facility:	**Nobile Oil Service, Inc.**
Owner/Operator:	**Jim Mayberry**
Name of person filing report:	
Location:	**5617 Clyde Rhyne Drive** **Sanford, North Carolina 27330**
Maximum storage capacity:	
Daily throughput:	
Nature of qualifying incident(s):	
Description of the facility (attach maps, flow diagrams, and topographical maps):	

Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred:
Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:
Additional preventive measures taken or contemplated to minimize possibility of recurrence:
Other pertinent information:

1.3 Discharge Notification Form
(Fill in ASAP after Spill-See Pages 9 and 10 for Contact Information)

Part A: Discharge Information		
General information when reporting a spill to outside authorities: **Name:** **Address:** **Telephone:** **Owner/Operator:** **Primary Contact:** **Work Phone :** **Cell (24 hrs):**		
Type of Oil:	**Discharge Date and Time:**	
Quantity released:	**Discovery Date and Time:**	
Quantity released to a waterbody:	**Discharge Duration:**	
Location/Source:		
Actions taken to stop, remove, and mitigate impacts of the discharge:		
Affected media: **Air/Water/Soil**	**Storm water sewer/POTW** **dike/berm/oil-water separator** **other: _____**	
Notification person:	**Telephone contact:** **Business:** **24-hr:**	
Nature of discharges, environmental/health effects, and damages: **Injuries, fatalities or evacuation required?**		
Part B: Notification Checklist		
	Date and time	**Name of person receiving call**
Discharge in any amount		
Discharge in amount exceeding 25 gallons and *not affecting a waterbody or groundwater*		
Local Fire Department		
State Agency of Environmental Management		
Discharge in any amount and affecting (or threatening to affect) a waterbody		
Local Fire Department		
State Agency of Environmental Management		
Part B: Notification Checklist		
	Date and time	**Name of person receiving call**
County LEPC (Lee County)		
National Response Center **(800) 424-8802**		

1.4 RESPONSE EQUIPMENT LIST AND LOCATION

Discharge Response Equipment Inventory

The discharge response equipment inventory is verified during the monthly inspection and must be replenished as needed.

Date of Last Update: February 14, 2014

In an emergency, equipment may become necessary to help rescue and treat victims, to protect Mayberry Oil Service response personnel and to mitigate hazardous conditions (e.g. - to contain the release or fight fires). Some regular equipment can double for emergency equipment (e.g. vacuum trucks, pumps, forklift, etc.). All staged equipment should be in working order, fueled and in good repair at all times.

Personal Protective Equipment (PPE) should be in a state of readiness and availability at all times. For example, a dedicated stock level of PPE should be available and medical first-aid kits should be well stocked and easily assessable.

The following list is representative of the type equipment that should be available at the facility at any time:

Backhoe	**PPE**
Tracked Excavator	**Hard Hats**
Forklift	**Respirators**
Vacuum Trucks	**Chemical Suits**
Vacuum Tanker	**Gloves**
Skid Loader	**Boots**
Pressure Washers	**Eye Protection**
Oil Transfer Trucks	
Transport Tankers	

Additionally, as Mayberry Oil Service is an Oil-Dri® distributor, there is a stock of oil sorbent booms and pads located in the warehouse. There are also one to two pallets of Oil-Dri® absorbent in 40-lb bags located onsite at any one time.

TANK TRUCK & RAIL CAR LOADING/UNLOADING AREA

❑ Skimmers/Pumps—Number & Operational Status:_____
Type, Model, and Year:_____
Capacity: _____ gal./min., Daily Effective Recovery Rate:_____

❑ Spill Kits	_____
❑ Empty 55-gallons drums to hold contaminated material	_____
❑ Loose absorbent material	_____ **pounds**
❑ Absorbent pads	_____ **boxes**
❑ Nitrile gloves	_____ **pairs**
❑ Neoprene gloves	_____ **pairs**
❑ Vinyl/PVC pull-on overboots	_____ **pairs**
❑ Non-sparking shovels	_____
❑ Brooms	_____
❑ Drain seals or mats	_____
❑ Sand bags/hay bales	_____
❑ Booms	_____

SHOP-MAINTENANCE-WAREHOUSE BUILDING

❑ Skimmers/Pumps—Number & Operational Status:_____

Type, Model, and Year:_____

Capacity: _____ gal./min., Daily Effective Recovery Rate:_____

❑ Spill Kits	_____
❑ Empty 55-gallons drums to hold contaminated material	_____
❑ Loose absorbent material	_____ **pounds**
❑ Absorbent pads	_____ **box**
❑ Nitrile gloves	_____ **pairs**
❑ Neoprene gloves	_____ **pairs**
❑ Vinyl/PVC pull-on overboots	_____ **pairs**
❑ Non-sparking shovels	_____
❑ Brooms	_____
❑ Drain seals or mats	_____
❑ Sand bags/hay bales	_____
❑ Booms	_____

Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)

Type	Amount	Date Purchased	Treatment Capacity	Storage Location

Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 CFR 300.910) and the Area Contingency Plan (ACP), where applicable?_____ (Y/N).

Name and State of On-Scene Coordinator (OSC) authorizing use: _____

Date Authorized: _____ .

Dispersant Dispensing Equipment—Operational Status:

Type and Year	Capacity	Storage Location	Response Time (minutes)

Communication Equipment (include operating frequency and channel and/or cellular phone numbers)—Operational Status:

Type and Year	Quantity	Storage Location/Number

Fire Fighting and Personnel Protective Equipment—Operational Status: ___

Type and Year	Quantity	Storage Location

Other (e.g., Heavy Equipment, Boats and Motors)—Operational Status: ___

Type and Year	Quantity	Storage Location

1.5 Response Equipment Testing/Deployment

Date of Last Update: February 14, 2014

RESPONSE EQUIPMENT TESTING AND DEPLOYMENT DRILL LOG

Response Frequency	Equipment Last Inspection	Inspection Date	Frequency Last Deployment	Deployment Date

1.6 Emergency Response Agencies
1.6.1 Fire, Police, Other Emergency Response Agencies
Date of Last Update: February 14, 2014

Agency Name	EMERGENCY DIAL-911 Phone[1]	Response time	Responsibility during response action	Response training type
Northview Fire Department	919-774-6221	10 Minutes	Control Spills, Fires, Evacuations/Coordination	POL Fires/Spills
Deep River Fire Department	919-774-9622	10 Minutes	Control Spills, Fires, Evacuations/Coordination	POL Fires/Spills
National Response Center (NRC)	800-424-8802	Phone	POL Spills Environmental Regulators	POL Spills Environmental Regulators
Lee County LEPC	919-775-3941	30 Minutes	Control Spills, Fires, Evacuations/Public Safety	POL Fires/Spills/Public Safety
Police (Sanford)	919-775-8268	10 Minutes	Control Evacuations/Public Safety	POL Fires/Spills/Public Safety
NC State Highway Patrol	919-775-7205	15 Minutes	Control Evacuations/Public Safety	POL Fires/Spills/Public Safety
Central Carolina Hospital, Sanford, NC	919-774-2100	10 Minutes	Medical	Medical (Burns-Chemical Exposure)
Carolina Poison Center	800-222-1222	Phone	Medical	Medical-Poison
US EPA Region 4 24 Hour Emergency Number	404 562-8700	Phone	POL Spills Environmental Regulators	POL Spills Environmental Regulators
OSHA Federal	404-347-2281	Phone	Employee Safety	Employee Safety
OSHA NC (NCDOL)	919-733-2456	Phone	Employee Safety	Employee Safety
NC Div. of Enforcement & Emergency Response	919-791-4200 Raleigh Regional Office	Phone	POL Spills Environmental Regulators	POL Spills Environmental Regulators
NC Solid Waste – Hazardous Waste Management	919-	Phone	POL Spills Environmental Regulators	POL Spills Environmental Regulators
NC Emergency Response Committee (SERC)	800-451-1403	Phone	NC Community Right to Know Emergency Response Commission	NC Community Right to Know Emergency Response Commission
Bureau of Explosives	800-293-4048	Phone	Explosives	Explosives
NC Dept. of Justice – SBI Hazardous Devices Unit	919-662-4500	Phone	Legal/Criminal	Legal/Criminal
NC Depart of Agriculture – Pesticide	919-733-3556	Phone	Pesticides Contamination	Pesticides Contamination

CHEMTREC	**800-424-9300**	**Phone**	**US/NC DOT Transport Spills**	**US/NC DOT Transport Spills**
Lee County Water Treatment Plant Mr. Scott Christiansen, Superintendent	***919-777-1800***	***Phone***	***Shut Down Water Intake on Cape Fear River***	***Emergency POL Spills Environmental Regulators***
Harnett County Water Treatment Plant, Mr. Allan Obriant –Supervisor, Lillington, NC,	***910-893-7575***	***Phone***	***Shut Down Water Intake on Cape Fear River***	***Emergency POL Spills Environmental Regulators***

[1]Dial 911 for ALL EMERGENCES.

1.6.2 Emergency Response Contractors

Date of Last Update: February 14, 2014

Contractor	Phone	Response time	Contract responsibility[1]
1. Shamrock Environmental Corporation 503 Patton Ave. Greensboro, NC 27406	**800-881-1098**	**1.0 hours**	**Spill Control & Clean Up**
2. HEPACO 301 Travis Park Drive Cary, NC 27511	**800-888-7689**	**3 hours**	**Spill Control & Clean Up**

[1]Include evidence of contracts/agreements with response contractors to ensure the availability of personnel and response equipment.

1.6.3 MAYBERRY OIL SERVICE DESIGNATED TRAINED EMPLOYEES SPILL RESPONSE Team (DESR Team)

List of Designated Emergency Coordinators-Team member/Qualified Individual:	Response Time (minutes):	Cell Phone (day/evening) with Main Office Extensions:	
	30≤		
	30≤		
	30≤		
	30≤		
	30≤		
	30≤		
	30≤		

Date of Last Update: February 14, 2014

Everyone in the facility has 40 Hour HAZWOPER training as well as Industrial Services personnel.

Note: If the facility uses contracted help in an emergency response situation, the owner or operator must provide the contractors' names and review the contractors' capacities to provide adequate personnel and response equipment.

1.7 EVACUATION PLAN & DIAGRAM (See ERAP Appendix A)

If it should become necessary to evacuate the Mayberry Oil Service facility, then the following procedures should be taken:

7. **Shut off all equipment and utilities such as gas, electric, and water, if it can be done safely. This will also apply to the used oil process and the thermal treatment unit. The Emergency Shut-Off is located on the main switchgear inside the Motor Control Center (MCC). Follow shutdown procedures.**
8. **Proceed out the designated exits in an orderly fashion and congregate in the chosen assembly areas. The primary assembly area is at the main office parking lot. The secondary assembly area is at head of the rail spur on the north end of the facility.**
9. **All managers should account for all personnel and report this to the Emergency Coordinator. Immediately notify the Emergency Coordinator and/ or Emergency Response Personnel if personnel are missing. All personnel are to report to the designated assembly areas unless accounted for and released. No personnel should leave the facility during an emergency.**
10. **Office employees should close and lock any fireproof file drawers, if time permits.**
11. **Depending on the emergency, take all back-up tapes and records that time and ability to remove will permit and provide for their safekeeping.**
12. **See the facility evacuation maps for the location of emergency exits, alarms, and fire extinguishers.**

In the unlikely event that evacuation is necessary, the Manager of Environmental, Health and Safety or designated employee will contact the Police/Fire to initiate evacuation activities.

Communications and Alarms

Once an Emergency Coordinator has been contacted, that Emergency Coordinator will make the decision to contact external emergency response services, or to evacuate the facility. This decision will be based on an evaluation of the release.

The Mayberry Oil Service telephone system has an intercom system that allows for complete coverage of the facility in an emergency. In the event of an emergency, call the Emergency Coordinator and give the location and details. The Emergency Coordinator will then sound the telephone alarm, if needed.

If the Emergency Coordinator cannot be reached and there is a need to evacuate the facility, press Page 2 (Facility Exterior) on the telephone. After the tone state the following in a slow, clear voice:

THERE IS AN EMERGENCY AT THE FACILITY. PLEASE EVACUATE THE AREA IN AN ORDERLY MANNER. ALL PERSONNEL MEET AT THE DESIGNATED ASSEMBLY AREAS.

Repeat this for Page 1 (Offices) on the telephone.

Telephones are located in the offices and in the warehouse. To access an outside line, press lines 1 through 8, and then dial the number. To access an extension, press Intercom then the extension number. Again, Emergency Coordinators will make the call to outside emergency response agencies.

Certain facility personnel also maintain 2-way FM radios that can also relay additional information on the emergency. Minimize unnecessary radio traffic during an emergency situation and allow Emergency Coordinators priority on radio communications. This is expected to be the primary form of notification for most oil releases.

Alarm stations containing an air horn have been placed in designated areas throughout the facility to ensure quick notification in case of an emergency situation. In the event of a fire or emergency, simply pull the handle to the alarm station box until the box is open and you can retrieve the air horn device. To operate the air horn, hold the canister in your hand and depress the trigger device extending from the air horn. Hold the air horn trigger continuously until all personnel have identified the signal and started to evacuate the area or building.

There is also alarm systems associated with the process systems. These alarms will be addressed by the facility operating procedures. If these alarms will affect the facility as a whole then the general alarm system (air horn system) will be activated.

SEE APPENDIX A, EMERGENCY EVACUATION DIAGRAM HERE:
In an unsafe situation, contact the Primary Emergency Coordinator or a Manager immediately.

Employees response upon hearing the fire alarm, please evacuate to the area of Clyde Rhyne Drive between STI Polymer and Mayberry Oil Services, Inc. which serves as the plant assembly area. If the Emergency Coordinator changes the assembly area then you will be directed to the backup location.

Designated employees are to collect the Contractor Sign In Logs (from the Control Room and the Pad Building) and the Front Desk Visitor Log and bring them to the assembly area to ensure accurate head count of visitor and contractors.

When walking along Elwin Buchanan Road, please exercise caution due to vehicle traffic.

Once in the assembly area, please group by division and let your manager, or designated alternate, know that you are safely evacuated. That manager or designated alternate will, in turn, notify the Office Coordinator of the division headcount.

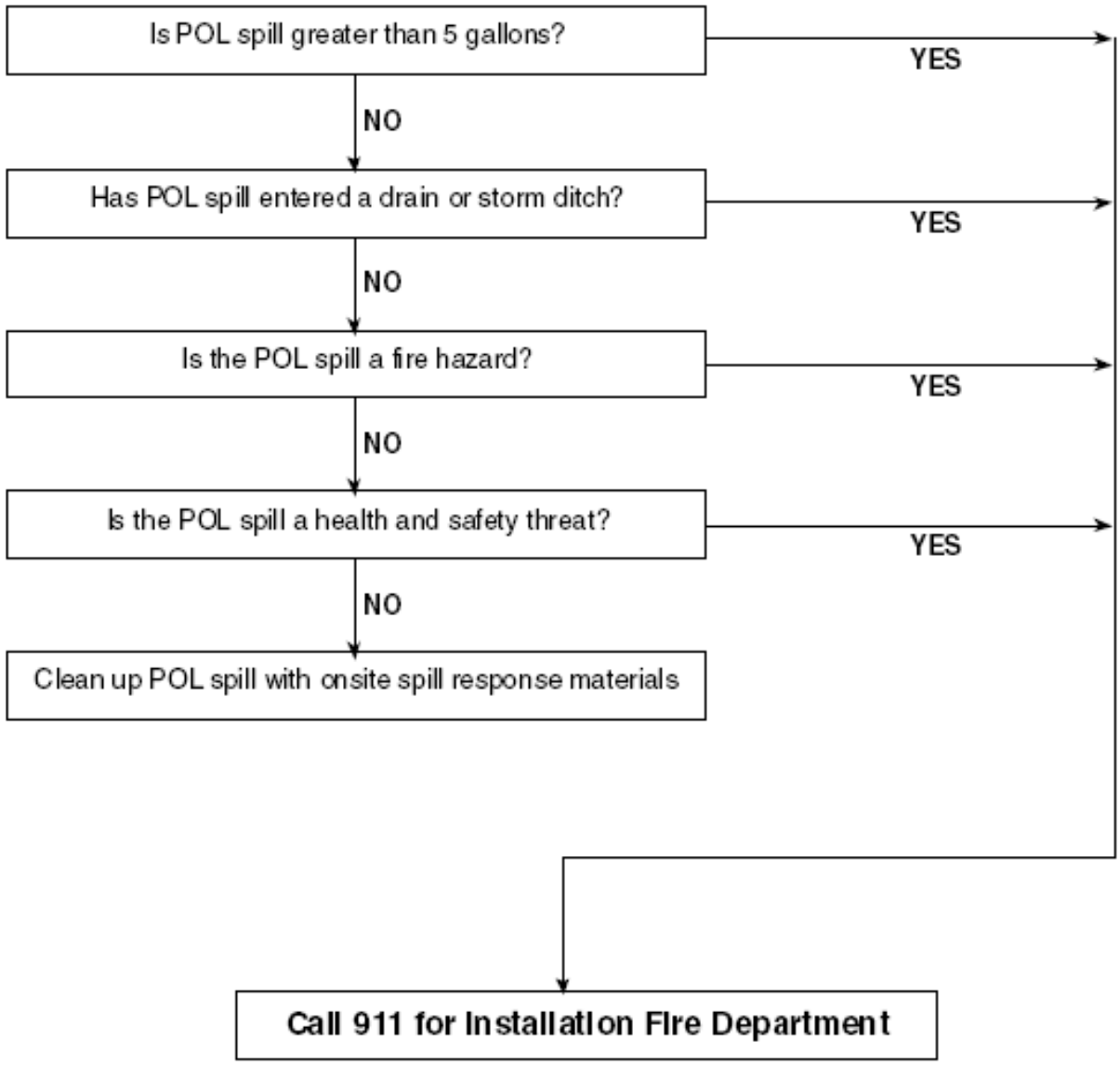
Wait for further instructions and please keep conversations to a minimum and do not use your cell phones. This ensures that everyone will hear any instructions that are given. Additional responsibilities may be assigned to personnel by the Emergency Coordinators as the emergency situation develops.

Do not leave unless directed by management.

1.8 IMMEDIATE ACTIONS

1.8.1 Petroleum, Oils & Lubricants (POL) Oil Spill Response—Immediate Actions

1. Stop the product flow	**Act quickly to secure pumps, close valves, etc.**
2. Warn personnel	**Enforce safety and security measures.**
3. Shut off ignition sources	**Motors, electrical circuits, open flames, etc.**
4. Initiate containment	**Around the tank and/or in the water with oil boom.**
5. Notify NRC	**1-800-424-8802**
6. Notify OSC	
7. Notify, as appropriate	



MAYBERRY OIL SERVICE DESR Team SPILL RESPONSE PROCEDURES

The moment a release is identified; response actions should be immediately implemented. Three priorities must be observed in any emergency situation:

- **Safety of human health**
- **Protection of the environment**
- **Notification of appropriate personnel**

Each employee must be made aware of these points. Initial response requires evaluation and corrective action. Personnel must be taught the proper use of equipment, their capabilities and limitations.

Response procedures can be outlined in the following formats but may not apply to every situation.

- **Recognition of the release**
- **Notification of coordinator(s)**
- **Activation of alarms, if necessary**
- **Evacuation of all non-essential personnel**
- **Evaluation of the release**
- **Notification of local authorities and response centers, if necessary**
- **Corrective actions**
- **Clean up and disposal of waste materials, if necessary**
- **Report preparation, completion and submittal**

RESPONSE ACTION PROCEDURE

In the event there is an oil release within the facility, the following procedures shall be followed:

1. In the event of a spill/ release, contact one or more of the listed Emergency Coordinators (Appendix A) and be prepared to provide the following information:

- **Your Name and Location**
- **Location and Direction of the Release**
- **Identification and Amount of Oil Involved**
- **Individual(s) at the Scene and Action(s) Taken**

The Emergency Coordinators have the responsibility for coordinating emergency response measures in the event of a release, which could threaten human health or the environment.

2. The Mayberry Oil Service Emergency Coordinator shall determine whether the release is reportable to outside regulatory agencies by following criteria:

- **Oil release greater than 10 gallons (reportable quantity)**
- **Oil release of any quantity that has reached surface water or into a sewer, ditch, or culvert leading off the property**

NOTE: Any release that results in exposure to persons solely within the boundaries of the facility does not require notification.

3. If the released material is identified as being reportable, immediate notification must be made to the following:

- **Lee County Local Emergency Planning Committee (LEPC)**
  - **919-560-3941**
- **State Emergency Response Commission (SERC) of the North Carolina Solid and Hazardous Waste**
  - **919-733-2178**
- **National Response Center**

- **800-424-8802**

The Emergency Coordinator is responsible for immediate notification of reportable spills to the above authorities and agencies.

4. This initial notification should be verbal (via telephone or in person) and should include:

- **Identity of the caller and the company (i.e., Mayberry Oil)**
- **Contact phone number**
- **Location of the release**
- **Type of product that was released**
- **Quantity of the product released**
- **Extent of actual and/ or potential water pollution**
- **Date and time of the release**
- **Cause of the release**

5. If required, the Emergency Coordinator shall order the area around the spill, or even the entire facility, evacuated. The Emergency Coordinator may shut down operations in and around the release site upon evaluation.

6. As dictated by the chemical and physical hazards present, the following precautions may be taken:

- **Secure the immediate area**
- **Response personnel should wear appropriate protective clothing (e.g., respirators, gloves, boots, tyveks, etc.)**
- **Plastic sheeting shall be used to prevent soil contamination, if necessary**
- **Isolation and containment of the material**
- **If flammable materials are also involved, appropriate fire extinguishers should be made available**

7. If the Emergency Coordinator determines that the release threatens the safety and health of personnel and/ or threatens the environment other than the facility, he shall contact the Lee County LEPC and/ or Emergency Management to determine if evacuation is required.

8. Containment of materials can be accomplished by the following ways (especially for releases outside of secondary containment):

- **Diking, using suitable materials and ensuring that the release do not escape to storm drains, sewers, etc.**
- **Use of sorbent materials to act as diking material**

There are two storm drains on the facility property. These drains, however, are located outside the operating areas of the plant and would not be impacted if there were any type of release within the facility. Nevertheless, these drains will be observed and protected during any spill event.

9. Clean-up operations may include the following:

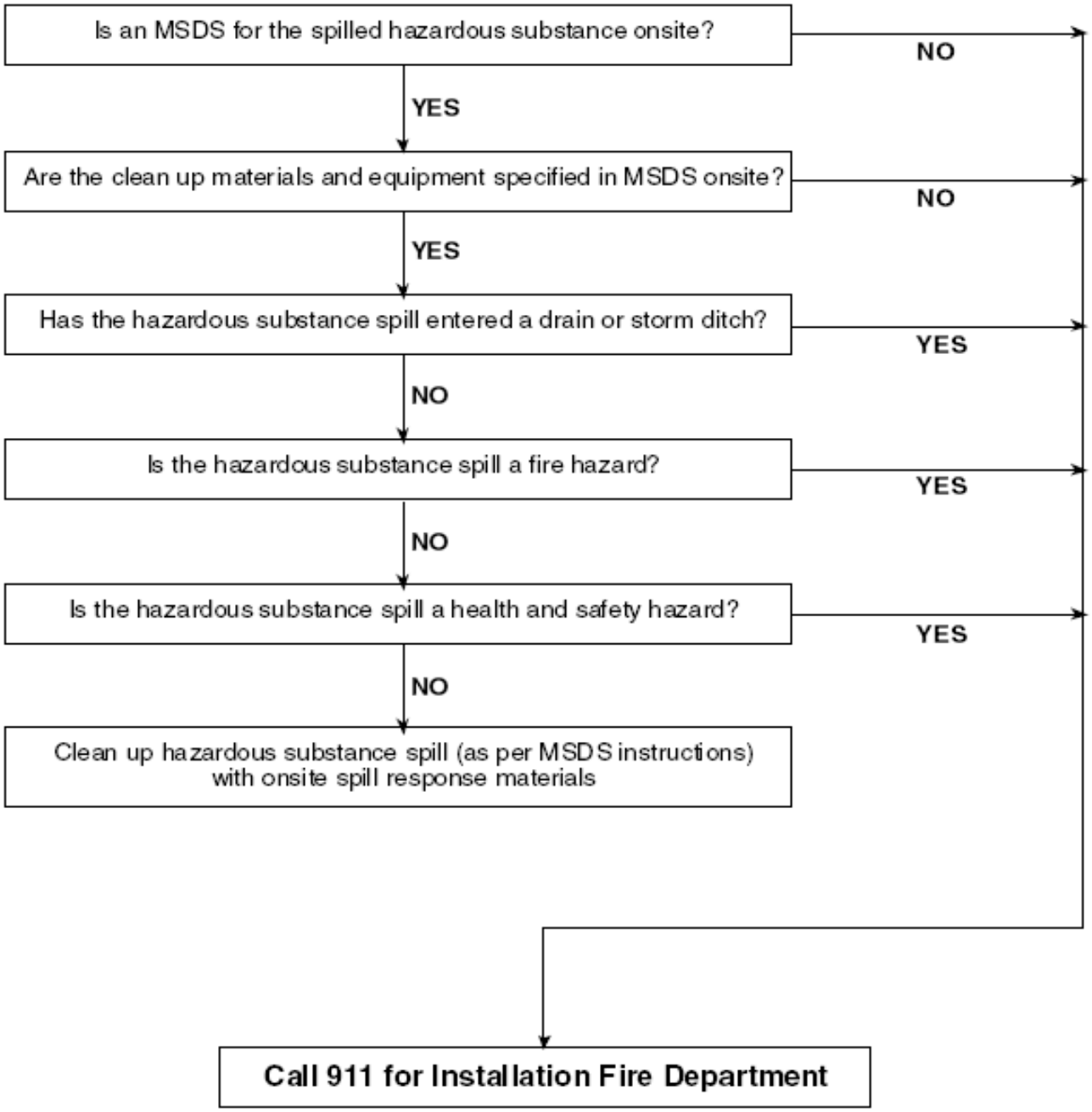
- **Pumping free standing liquids (oil, oil and water)**
- **Skimming oil/ oil and water**
- **Solidification/ fixation of free standing liquids (Use of sorbent pads and absorbent powders)**
- **Solids, semi-solids and fixation medias shall be placed in appropriate containers for disposal**
- **Excavation of contaminated soils**

10. The Emergency Coordinator may choose to sample and analyze the soil, water, etc. to determine contamination level(s).

11. All containers will be manifested, labeled, placarded and handled in accordance with State, EPA, DOT and Company guidelines.

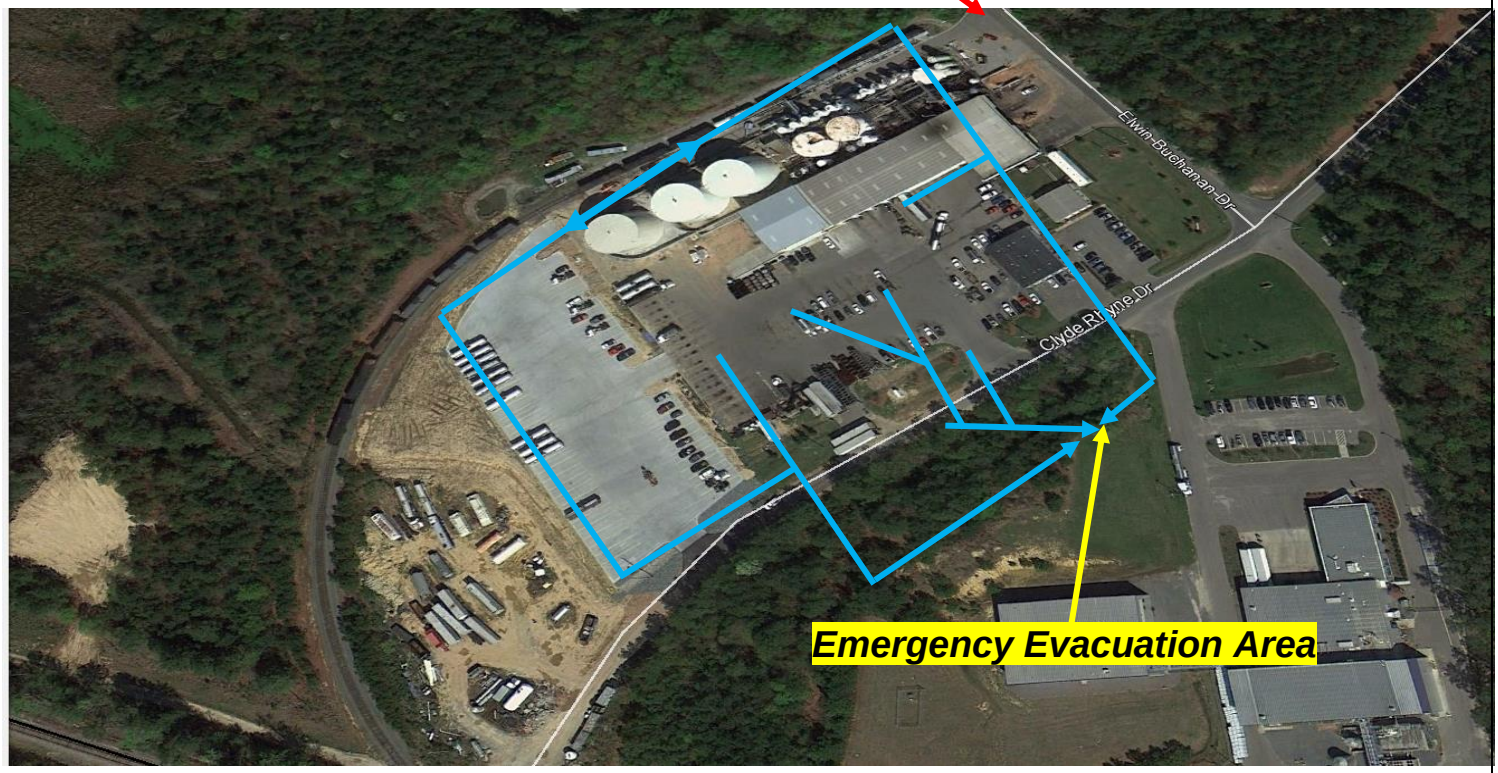
1.8.2 Hazardous Substances

1. Stop the product flow	**Act quickly to secure pumps, close valves, etc.**
2. Warn personnel	**Enforce safety and security measures.**
3. Shut off ignition sources	**Motors, electrical circuits, open flames, etc.**
4. Initiate containment	**Around the tank and/or in the water with oil boom.**
5. Notify NRC	**1-800-424-8802**
6. Notify OSC	
7. Notify, as appropriate	



APPENDIX A
Emergency Evacuation Diagram
EVACUATION ROUTES

SECONDARY RALLY POINT



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Wait for further instructions and please keep conversations to a minimum and do not use your cell phones. This ensures that everyone will hear any instructions that are given. Additional responsibilities may be assigned to personnel by the Emergency Coordinators as the emergency situation develops.

Do not leave unless directed by management.

Appendix B
Facility Diagram/Print/Legend
See Attached Prints 1/3, 2/3 & 3/3

Print Item Letter/#	*Description of Item*	*Located at Print/Page Number*
A	*The entire facility to scale*	*3*
B	*Specify on the diagram above and below ground bulk oil storage tanks (NO UNDERGROUND OIL TANKS ON PROPERTY)*	*2*
C	*Contents and capacities of bulk oil storage tanks*	*2*
D	*Contents and capacities of drum oil storage areas*	*2*
E	*Contents and capacities of surface impoundments*	*1 & 3*
F	*Location of process buildings*	*1 & 2*
G	*Location of transfer areas*	*1*
H	*Location and capacity of secondary containment systems*	*1, 2 & 3*
I	*Structures where hazardous materials are stored or handled, including materials stored and capacity of storage*	
J	*Location of communication and emergency response equipment*	
K	*Location of electrical equipment which contains oil*	
Drainage Diagram/Prints		
1	*Storm sewer system, including locations of inlets, manholes and outlets*	*1 & 3*
2	*Control structures such as weirs, sluice gates, etc.*	*3*
3	*Ditches, wet-weather streams and other surface water features*	*1 & 3*
4	*Direction of overland spill flow from potential sources*	*1 & 3*