ExxonMobil Billings Refinery

Facility Response Plan (FRP)

Emergency Response Action Plan (ERAP)

Oil Spill Response Plan (OSRP)

Revision 13

US EPA RESPONSE PLAN COVER SHEET

Facility Response Plan No. FRP 08A0020

GENERAL INFORMATION

Owner/Operator of Facility: ExxonMobil Refining and Supply Company
Facility Name: ExxonMobil Billings Refinery
Facility Address: 700 ExxonMobil Road, Billings, Montana 59101
Mailing Address: P.O. Box 1163, Billings, Montana 59103
Facility Phone No.: 406-657-5380
Latitude (Degrees North): [redacted]
Facility Dunn & Bradstreet Number: 010380574
Largest Aboveground Oil Storage Tank Capacity (gallons): [redacted]
Number of Aboveground Oil Storage Tanks: 97
NAICS/SIC Code: 324110 / 2911
Maximum Fixed Aboveground Bulk Oil Storage Capacity (gallons): [redacted]
Approximate Portable/Mobile Container Oil Storage Capacity (gallons): [redacted]
Approximate Oil Filled Equipment Oil Storage Capacity (gallons): [redacted]
Approximate Aggregate Oil Storage Capacity (gallons): [redacted]
Worst Case Oil Discharge Amount (gallons): [redacted]
Facility Distance to Navigable Water: 0 - 1/4 mile

CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION

1.	Does the facility have a maximum storage capacity greater than or equal to 42,000 gallons (1000 bbls) **AND** do the operations include water transfers of oil to or from vessels?	YES	[NO]
2.	Does the facility have a maximum storage capacity greater than or equal to 1,000,000 gallons (23,810 bbls) **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]
3.	Does the facility have a maximum storage capacity greater than or equal to 1,000,000 gallons (23,810 bbls) **AND** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III or an alternative formula considered acceptable by the RA) such that a discharge from the facility could cause injury to an environmentally sensitive area as defined in Appendix D?	[YES]	NO
4.	Does the facility have a maximum storage capacity greater than or equal to 1,000,000 gallons (23,810 bbls) **AND** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III or an alternative formula considered acceptable by the RA) such that a discharge from the facility would shut down a public water intake?	YES	[NO]
5.	Does the facility have a maximum storage capacity greater than or equal to 1,000,000 gallons (23,810 bbls) **AND** within the past 5 years, has the facility experienced a reportable spill in an amount greater or equal to 10,000 gallons (238 bbls)?	YES	[NO]

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

Refinery Manager
Title

Jon Wetmore
Name (print or type)

Date

US DOT RESPONSE PLAN COVER SHEET

US EPA Facility Response Plan No. FRP 08A0020

GENERAL INFORMATION

Owner / Operator of Facility: ExxonMobil Refining and Supply Company
Facility Name: ExxonMobil Billings Refinery
Facility Address: 700 ExxonMobil Road, Billings, Montana 59101
Mailing Address: P.O. Box 1163, Billings, Montana 59103
Facility Phone No.: 406-657-5380

[redacted] (b) [redacted]
[redacted] (b
Facility Dunn & Bradstreet Number: 010380574
Largest Aboveground Oil Storage Tank Capacity (barrels) (b) (7) [redacted]
Number of Aboveground Oil Storage Tanks: 1[1] (F) (b)
NAICS/SIC Code: 324110 / 2911
Maximum Oil Storage Capacity (barrels): (b) (7) [redacted] (shell)
Worst Case Oil Discharge Amount (barrels) (b) (F) (b) [redacted][2]
Facility Distance to Navigable Water: 0 - 1/4 mile

APPLICABILITY OF SIGNIFICANT AND SUBSTANTIAL HARM

Has the line section experienced a release greater than 1,000 barrels (159 cubic meters) within the previous five years	**No**
Has the line section experienced two or more reportable releases, as defined in § 195.50, within the previous five years	**No**
Does the line section contain any electric resistance welded pipe, manufactured prior to 1970, operate at a maximum operating pressure established under § 195.406 that corresponds to a stress level greater than 50 percent of the specified minimum yield strength of the pipe	**No**
Is the line section located within a 5 mile (8 kilometer) radius of potentially affected public drinking water intakes and could reasonably be expected to reach public drinking water intakes	**No**
Is the line section located within a 1 mile (1.6 kilometer) radius of potentially affected environmentally sensitive areas, and could reasonably be expected to reach these areas	**No**

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

Refinery Manager
Title

Jon Wetmore
Name (print or type)

Date

1 Facility operates only one DOT Breakout Tank at any given time.
2 Worst Case Discharge based upon RSPA guidance document

EXXONMOBIL REFINING AND SUPPLY COMPANY

EMERGENCY RESPONSE ACTION PLAN
FRP 08A0020

Billings Refinery

Revision 13

TABLE OF CONTENTS

Note: Several Figures included in this Emergency Response Action Plan (ERAP) are also referenced in the Oil Spill Recovery Plan (OSRP). Figure numbers are retained from the OSRP for clarity, and Figure numbers may not correspond to the ERAP section in which they are referenced. See Section 9.0 for all such figures and tables.

1.0 FACILITY AND QUALIFIED INDIVIDUAL INFORMATION

Facility Name:	ExxonMobil Billings Refinery
Street Address:	700 ExxonMobil Road Billings, Montana 59101
Mailing Address:	Post Office Box 1163 Billings, Montana 59103
Telephone Number:	(406) 657-5380
Facsimile Number:	(406) 657-5374
Facility Location:	Parts of Sections 18 and 19 T1N, R27E and Sections 23, 24, 25 and 26 T1N, R26E; Yellowstone County; [redacted] (b)(7)(F) [redacted]
NAICS/SIC Code:	324110 / 2911, onshore non-transportation-related petroleum refining
Date of Initial Operation:	1949
Response Plan Number:	FRP 08A0020
Facility Owner/Operator:	ExxonMobil Refining and Supply Company
FRP Coordinator:	Environmental Coordinator, 406-657-5380
Qualified Individual (QI):	Shift Superintendent In-plant Emergency Line: 5200 Backup: 406-657-5320 Radio: A/1
Alternate QI:	Emergency Response Coordinator Office: 406-657-5267 Backup: 406-325-1469 (cellular)

The term Qualified Individual and Incident Commander are used interchangeably throughout this document.

2.0 EMERGENCY NOTIFICATION PROCEDURE AND PHONE LIST

Notification Sequence

An oil spill incident or a substantial threat of an incident at ExxonMobil Billings Refinery will trigger a set of prioritized internal and external notifications. Figure 2.1 provides the logical sequence for alerting personnel of a spill. All notifications must be made immediately. The notification procedures must be followed to completion. If the responsible person (see Figure 2.1) is unable to notify a person listed, then the responsible person must make the notifications (if any) for that person.

Figure 2.3 provides telephone numbers needed to perform this task.

The primary method of making notifications is by telephone. If this is not available, the radio should be used.

NOTE: "Spill" means the release of oil onto the land or water by any manner. This includes by leaking, discharging, pumping, pouring, emitting, emptying, and/or dumping. **Any visible oil sheen in the water must be reported to regulatory agencies.**

Regulatory Notifications

Figure 2.2 provides a decision tree for alerting regulatory agencies. The Qualified Individual or his alternate will work with the Environmental/Regulatory Advisor to determine who should be called and who will do the notifications. Initial notifications will not be delayed pending collection of all information on the form. All required government agency notifications will be made as soon as possible after the discovery of the spill. Follow-up notifications will be made by the Environmental/Regulatory Advisor as directed by the Shift Superintendent (Incident Commander). The organizations, agencies and individuals called will depend on the type and size of the spill, the time of day, day of the week, and other circumstances regarding the spill.

The following guidelines should be observed when reporting information to regulatory agencies.

- Never include information that has not been verified.
- Never speculate as to cause of the incident or make any acknowledgment of liability.
- Document persons/agencies notified and content of message.
- **Do not delay reporting due to incomplete information.**
- Provide as much information as possible.
- It is not necessary to gather all the information prior to making the initial notification to the regulatory agencies.
- Be as precise as possible as to quantities spilled.
- Be concise.

The individual making the notifications should complete the Spill Response Activity Log in Figure 2.5 by listing the time each agency was notified and the name(s) of the agency personnel contacted. The individual should immediately notify the Shift Superintendent (Incident Commander) of any written follow-up report(s) by an Agency.

FIGURE 2.1

NOTIFICATION SEQUENCE - OVERVIEW

(INSERT FIGURE 2-1)

FIGURE 2.2

NOTIFICATION SEQUENCE – REGULATORY AGENCIES

(INSERT FIGURE 2-2)

FIGURE 2.3

NOTIFICATION LIST

EXXONMOBIL CONTACT LISTING

Response Position	Telephone Number or Pager Number	Particulars
Qualified Individual (Shift Superintendent)	5200 406-657-5320 Radio A/1	On-duty 24 hours per day, 7 days a week - Detailed listing of names and contact information is provided in the weekly "Emergency Operations Center Manning" (see Note 1)
Alternate QI (Emergency Response Coordinator)	406-657-5267 (b) (6) [redacted]	On call - Detailed listing of names and contact information is provided in the weekly "Emergency Operations Center Manning" (see Note 1)
Oil Spill Response Team	Text Messaging System (see Note 1)	On call - Detailed listing of names and contact information is provided in the weekly "Emergency Operations Center Manning" sheet.
Environmental / Regulatory Advisor	Text Messaging System (see Note 1)	On call - Detailed listing of names and contact information is provided in the weekly "Emergency Operations Center Manning"
Emergency Operations Center Manning Team (ICS Team) (see Note 1)	Text Messaging System (see Note 1)	On call
North America Regional Response Team (NARRT) (see Note 2)	activation number 866-285-8895	On Call, response time < 24 hours
Strike Team (see Note 3)	5200 406-657-5320 Radio A/1	On Call, response time < 24 hours

Notes:

1. The OSRT and ICS members are identified in the Text Messaging System list entitled “Emergency Operations Center (EOC) Manning” which is used to contact the OSRT and ICS team members. The list is updated weekly and is maintained in the refinery intranet system and a hard copy is posted in the OCC. The list includes the cellular and / or home phone numbers of each member of the OSRT and ISC. The Text Messaging System is activated by the Shift Superintendents or their designees as needed to call out the OSRT and ICS members. In addition, the refinery has contracted Answer net Network to provide this follow-up emergency call-out service. Answer net (406-657-9246) will call the people on the lists by priority and then fax the responses to their calls to the refinery.

2. The NARRT is capable of providing resources from other business units in addition to a complete emergency response management and support team of approximately 40 functional groups to work affiliate/facility personnel and government officials in response to a major spill release or other emergency. Each position has several primary and alternates assigned to provide 24-hour incident management. The NARRT is designed to be rapidly deployed and can be partially or fully activated to bring whatever resources are needed.

3. The Strike Teams' primary mission is to ensure quick, competent and caring response to any incident at the request of the ExxonMobil Business unit. The Strike Teams will also provide the core oil spill technical skills to the North American Regional Response Team (NARRT). The Strike Teams will provide the field support for the NARRT and oversee contractors and OSROs in the field for larger incidents.

FIGURE 2.3 (Continued)

NOTIFICATION LIST

- **RESPONSE AGENCIES**

National Response Center (**NRC**)..... 800-424-8802

Montana Disaster and Emergency Services (**SERC**), Helena.....406-324-4777

Yellowstone County Disaster and Emergency Service (**LEPC**)..... 406-657-8200

Lockwood Rural Fire District #8..... 911
Administration..... 406-252-1460

City of Billings Fire Department 406-657-8423

Billings Police 911
Administration..... 406-657-8460

Yellowstone County Sheriff Department (Com Center)..... 911 or 406-657-8200

Montana State Highway Patrol ..... 800-525-5555 or 406-245-6193

- **REGULATORY AGENCIES**

Montana (MDEQ) Spill Reporting (24 hours) 406-324-4777

U.S. EPA, Region VIII, Denver ..... 800-227-8914 or 303-293-1788
Region VIII Montana Office, Helena 406-449-5414

- **Montana-Wyoming Spill Control Cooperative COOP)**

Cenex Harvest States (CHS) 406-628-5231
ConocoPhillips 406-255-2500

- **Clean Harbors Environmental Services, Inc. (OSRO Contract Spill Responder)**

Clean Harbors Emergency Operations Center (24 hours)..... 800-645-8265
Rocky Mountain ER Operations (TJ Engstrom)..... 406-370-6565

FIGURE 2.3 (Continued)

NOTIFICATION LIST

- **OTHER AGENCIES (AS NECESSARY)**

USCG, 13th District (Fax) 206-442-5886
Fish, Wildlife, and Parks Department 406-247-2970
U.S. Fish and Wildlife Service 406-247-7360

- **OTHER SERVICES (AS NECESSARY)**

National Weather Service, Billings.....406-652-1916
Department of Transportation.....800-525-7355
American Medical Response (Ambulance) ..... 911 or 406-259-9601
HELP 24-Hour helicopter, Billings..... 800-538-4357
Deaconess Medical Center, Billings..... 406-657-4000
Saint Vincent's Hospital and Health Center, Billings 406-657-7000
Logan International Airport Air Traffic Control.....406-248-8384

- **MEDIA (AS NECESSARY)**

Billings Gazette..... 406-657-1282
KURL Radio..... 406-245-3121
KYYA Radio..... 406-652-8400
KCTR Radio 406-248-7827
KSVI TV..... 406-652-4743
KTVQ TV 406-252-5611
KULR TV 406-656-8000

- **SURROUNDING BUSINESSES (AS NECESSARY)**

Montana Sulfur & Chemical Co.....406-252-9324 or ext. 315
Brenntag West Chemical..... 406-248-3131
Transbas 406-245-4171
CHS (Cenex) Pipeline..... 406-628-5200
Hi Ball Trucking 406-656-6700
Montana Rail Link..... 406-523-1463 (Chief Dispatcher for Emergencies)

- **UTILITIES (AS NECESSARY)**

Public Utilities One Call System..... 800-424-5555
Billings Public Utilities ..... 406-657-8353 or 406-657-8200
Lockwood Water..... 406-259-4120
Burlington Northern Railroad ..... 406-256-4400 or 406-652-6964
Montana Rail Link Railroad..... 406-256-4270
Montana-Dakota Utilities Co. 406-255-1300
Montana Power Co. 888-467-2669
Yellowstone Valley Electric Co-Op..... 406-348-3411
Billings Tele-Communications 406-238-7700
Town of Hysham (downstream water user) 406-342-5544

FIGURE 2.3 (Continued)

NOTIFICATION LIST

- **ADDITIONAL EQUIPMENT (AS NECESSARY)**

D&R Fire and Safety Equipment Company, Billings 800-877-0129
Strategic Supply Inc..... 406-248-8098
Great Northern Equipment 406-259-9720
Big Sky Industrial, Inc. (vacuum trucks)..... 406-256-4949
Philip Services Corp. (vacuum trucks) 406-252-1999
Lynch Flying Service, Inc. 406-252-0508
Central Coptors, Inc..... 406-586-9185

3.0 SPILL RESPONSE NOTIFICATION FORM

Figure 2.4, UNIVERSAL ENVIRONMENTAL EMERGENCY NOTIFICATION FORM, provides the initial, internal written report that the Shift Superintendent is to complete in the event of spill or release situations. The form will be used to provide accurate oil spill incident information for the initial and follow-up notifications to federal, state, and local agencies. As mentioned previously, do not delay reporting due to incomplete information.

Within 30 days of a incident related to the Breakout Tank 2, the RSPA Form 700-1 must be submitted to US DOT Office of Pipeline Safety in accordance with 49 CFR Part 195.50. The form and instructions are located in the “O&M Procedures Manual & Operator Qualification Program” for Tank 2.

The individual making the notifications should complete the Spill Response Activity Log in Figure 2.5 by listing the time each agency was notified and the name(s) of the agency personnel contacted. The individual should immediately notify the Shift Superintendent (Incident Commander) of any written follow-up report(s) by an Agency.

FIGURE 2.4

UNIVERSAL ENVIRONMENTAL EMERGENCY NOTIFICATION FORM

No. _____

➔ ITEMS MUST BE GIVEN IN PHONE NOTIFICATIONS

➔EXXONMOBIL REFINING AND SUPPLY COMPANY
➔BILLINGS REFINERY
➔700 EXXONMOBIL ROAD
BILLINGS, MONTANA 59101
YELLOWSTONE COUNTY
(b) (7)(F), (b) (3) "
FACILITY OIL STORAGE CAPACITY: (b) (7)(F), (b) (3)
406-657-5320

NOTE:

(1) DO NOT SPECULATE; IF UNKNOWN, REPORT CALL WILL BE RETURNED WITH ADDITIONAL INFORMATION.
(2) IT IS NOT NECESSARY TO COMPLETE ALL INFORMATION BEFORE MAKING REGULATORY NOTIFICATIONS.

EXXONMOBIL REPORTER

➔NAME: _____ ➔TITLE: _____ PHONE: _____

SIGNATURE: _____ ➔DATE: _____ TIME: _____a.m./p.m.

EMERGENCY INCIDENT DESCRIPTION

TYPE OF EMERGENCY (CIRCLE):

Ammonia/CL_2 Cylinder Failure ➔CERCLA/SARA Materials (circle): Y/N/Unknown at this time

Oil Sheen on River ➔Substance(1) _____

Major HF Acid Cloud ➔Amount Released(1) _____

Major H2S Release ➔Known or Anticipated Health Risk (circle): Y/N/ Unknown at this time.

SO2 SIP Limit ➔If yes, what are they: _____
(Refer to MSDS Sheet)

➔Malfunction (See definition of notification guide) (circle) Yes No Unknown

Other (Specify Reason for Discharge): _____

➔Incident Location/Emission Point/Equipment ID: _____

➔Date And Time Of Incident Discovery: _____

Incident Discovered By: _____

➔Material Released(1): _____

➔Situation Expected To Be/Was Corrected At _____ A.M./P.M. On (Date) _____

➔Quantity Released To Soil (1) _____ Water(1) _____ AIR(1) _____
➔Associated CEMS or Opacity Reading (if available):_____
➔Ambient Monitoring Data Not Available_____

➔Identify water body (River, Ditch, etc.): _____

Weather conditions at time of discovery: _____

➔Number of injuries/fatalities (circle)(1) : Y/N/Unknown at this time. _____

Environmental damage to wildlife, vegetation, etc. (circle)(1) : Y/N/Unknown at this time

_____

RESPONSE ACTIONS

➔Immediate response actions taken: _____
_____

➔Community action requested (evacuation, roadblock, etc.): _____
_____

➔Other response organizations involved (Fire Dept., Spill Contractor, etc.): _____
_____

➔Subsequent response actions planned (Do not speculate or make unfounded commitments.):_____
_____
_____

REGULATORY NOTIFICATIONS (NRC, SERC, LEPC, EPA, STATE, OTHER)

TIME	AGENCY	PERSON'S NAME	PERSON'S TITLE	REMARKS/CASE NO.

Additional Information: _____
_____

cc: Environmental Coordinator
Fuels I & II Department Head
Safety Advisor

FIGURE 2.5

SPILL RESPONSE ACTIVITY LOG

(INSERT FIGURE 2-5)

4.0 EQUIPMENT LIST

See Figure 7.1 for a listing of the refinery's spill response equipment, including the quantities, types, model numbers, and capacities. The equipment is located in the areas marked on Figure 1.1 and described in Figure 7.1. Most of the equipment is in the Oil Spill Response (OSR) Building near the firehouse.

The six pumps are rated at 675 gpm (total), which equates to a combined daily effective recovery rate of approximately 4,600 barrels per day using a 20% efficiency factor. The two vacuum trucks are each rated at 867.8 gpm at 15" Hg, which equates to a combined daily effective rate of 11,900 barrels per day using a 20% efficiency factor. The containment boom is constructed of PVC coated fabric with internal flotation for a freeboard height of six (6) inches. The boom has a six (6) inch skirt. The boom has universal connectors. The boom is rated for river usage, which is typical of significant wave heights of less than or equal to one and a sea state category of 1.

The ExxonMobil Billings Refinery operates on an 800 MHz radio system to enhance communications both within and between departments. Repeaters are located on the cliffs above the City of Billings, and on refinery property to improve the coverage of the radio system.

The frequencies the Refinery is licensed to use are listed below.

Base Stations:	854.7625 MHz.
Mobile Units:	854.7625, 809.7625 MHz.

Additional response equipment is stored onsite at the refinery, except for some sorbents which are stored at the ExxonMobil Billings Terminal Warehouse. This equipment includes sorbent materials (booms, rolls, pom poms, pads, socks, blankets, and viscous sweep), assorted tools, emergency vehicles, and radios. This equipment would be accessible immediately in the event of an oil spill.

FIGURE 7.1

EXXONMOBIL BILLINGS REFINERY RESPONSE EQUIPMENT INSPECTION LIST

(INSERT FIGURE 7.1)

5.0 RESPONSE EQUIPMENT TESTING AND DEPLOYMENT

The refinery's oil spill response equipment is inspected semi-annually. The inspections are conducted by the Oil Spill Response Team members. Records of the inspections, including the date of the inspection and actual findings are maintained in a separate annex binder to the FRP and is located in the Emergency Response Coordinator's office. A copy of the Equipment Inspection Form is shown in Figure 7.1. Equipment shelf life is not applicable for the equipment listed in Figure 7.1. Inspection records are maintained on file for a minimum of five (5) years. Fuel in the internal combustion motors of response equipment is changed semi-annually and a fuel stabilizer is added.

In accordance with PREP, the refinery conducts equipment deployment drills twice a year for equipment cited in Figure 7.1 which is owned/operated by the refinery. One drill is conducted by the refinery and a second drill is conducted by the COOP. The refinery deploys the PREP specified minimum amount of equipment during each exercise. These drills may be combined with a notification and/or tabletop drill and may be announced or unannounced.

6.0 EMERGENCY RESPONSE PERSONNEL

ExxonMobil's OSRT and ICS team members will manage the on scene tactical response to an incident. The response will be organized in accordance with the Incident Command System (ICS). The composition of the response team will vary depending on the size and significance of the Incident. The "Emergency Manual" provides more details of the organization and the roles and responsibilities of each ICS member.

The OSRT is made of personnel with oil spill response skills. Additional resources are available (e.g., Fire Brigade, Rescue, and Medical) to assist in handling emergencies within the refinery. The OSRT members are in the call out list. The OSRT will respond to Tier I spills. The OSRT is a specialized group of personnel trained to respond to spills. This team is on site during normal working hours (e.g., personnel assigned various positions) and can provide immediate response as necessary (usually within less than 60 minutes). Additional OSRT members are on call during off hours to assist in responding to small spills exceeding the onsite OSRT's capabilities.

The Incident Command System provides supervisory levels that will make up the "Emergency Operations Center (EOC) Manning" Team (Incident Commander, Operations, Logistics, Process, etc.) that are available to create a command structure that can accommodate the emergency incident. Descriptions of each ICS position, the primary responsibilities, and pre-emergency planning activities are provided in the Emergency Manual.

The OSRT and ICS members are identified in the Text Messaging System list entitled "Emergency Operations Center (EOC) Manning" which is used to contact the OSRT and ICS team members. The list is updated weekly and is maintained in the refinery intranet system and a hard copy is posted in the OCC. The list includes the cellular and / or home phone numbers of each member of the OSRT and ISC. The Text Messaging System is activated by the Shift Superintendents or their designees as needed to call out the OSRT and ICS members. In addition, the refinery has contracted Answer net Network to provide this follow-up emergency call-out service. Answer net will call the people on the lists by priority and then fax the responses to their calls to the refinery.

The OSRT and ICS members will receive training in accordance with their position.

The number of positions/personnel required to staff the OSRT will depend on the size and complexity of the incident. The OSRT is an integral part of the ICS and performs the following duties and responsibilities:

- Obtain initial briefing.
- Perform tasks as requested. Representative tasks may include:
    - Helping deploy containment boom from both land and boat.
    - Operating a response boat.
    - Providing equipment for use in containing a spill.
    - Beginning skimming and recovery operations.

The Qualified Individual (QI) is responsible for the full implementation of the Facility Response Plan and is trained for these responsibilities. The designated Alternate Qualified Individuals (AQI) may provide relief to the QI as needed to ensure that at least one QI is available to respond on a 24 hour basis. The QI/AQI is responsible for implementing response plans, directing response operations, and resolving internal

conflicts that arise during response operations either directly or through the use of qualified designees.

The Qualified Individuals for the refinery are the shift superintendents, who are on-site and available 24 hours a day. The refinery has four operating shift teams that rotate on a 12 hour shift to continually fill these positions. The home numbers and addresses for each designated individual have not been provided since a QI is available 24 hours a day, seven days a week. The Shift Superintendents are identified in the Text Messaging System list entitled “Emergency Operations Center (EOC) Manning”. The QIs will receive training in accordance with their position.

If the Incident escalates to a level outside the scope of the Shift Superintendent, command may be transferred to the Incident Commander associated with the NARRT. The Federal On-Scene Commander (FOSC) will be advised in advance of any additional management support or QI change. However, at no time shall the authorization for or expenditure of funds in excess of the liability limits allowed by the Oil Pollution Act of 1990 be regarded as a waiver of any rights that ExxonMobil may have in claiming such liability limit or defenses under federal law.

7.0 EVACUATION PLAN

In the event an evacuation of the refinery is necessary, the Incident Commander would direct individuals in the refinery to leave the site by the most direct and safe route away from the incident. Figure 3.7 (three drawings) provides detailed evacuation routes (i.e., south, west gate and north gate) for the ExxonMobil Billings Refinery. Figure 3.7 also includes shows response equipment transportation routes.

It is not practical to identify specific spill flow directions because a release will be dependent on the equipment, location, weather conditions (precipitation, wind), sewer locations, material released, etc. and thus, cannot be delineated in Figure 3.7. Egress of individuals and ingress of response personnel will be directed from the Emergency Operations Center.

The Operations Control Center (OCC), Main Office Building, Laboratory, OPS Shelter, and Analyzer Bottle Building are designated as “Safe Havens”, and are intended to provide immediate temporary protection. The vapor release siren (located on the OCC building) would be activated with appropriate follow-up transmission to signal an evacuation. In the event of an evacuation, individuals would be instructed to assemble in the nearest refinery evacuation staging area. Six staging areas have been designated: the south staging area is located south of the office; the west staging area is west of the Garage and Mechanical Shop; the east staging area is in the contractor lot south of the asphalt area; the north staging area is located north of Tank 28; staging area is in adjacent to Tank 117; and the staging area adjacent to the Analyzer Bottle Building.

Evacuation procedures are contained in the Vapor Release/Evacuation Manual located in each Safe Haven. The procedures include head count procedures.

Depending upon incident specifics, including spill location, hazards imposed by spilled materials and wind direction/speed, individuals would be directed from the Incident Commander to exit the refinery from one of the three gates. Egress can be achieved through the south, west or north gates. The Incident Commander is responsible for accounting for all individuals required to evacuate the property and arranging for the safe transportation of injured personnel to the nearest emergency medical facility.

In the event that a community evacuation is required, the oil spill response team in conjunction with local fire and police departments, will utilize the efforts of the Local Emergency Planning Committee (LEPC) to evacuate necessary parts of the community. The community evacuation will be conducted as outlined in the LEPC’s “Hazardous Material Response and Evacuation Plan”.

8.0 SPILL RESPONSE PLAN

8.1 Immediate Response Actions

Immediate steps to be taken by the spill observer include the following:

1. Make an immediate assessment of the incident. If uncertain about the safety of an area, approach area wearing protective gear, including breathing apparatus.
2. Report nature and location of incident to Shift Superintendent. Shift Superintendent will activate Oil Spill Response Team, as appropriate, and will make arrangements to have spill reported to the appropriate agencies.
3. Take any steps deemed necessary to minimize threat to public health and safety and to reduce the severity of the incident. (For example, shutdown any hotwork or motorized equipment in the area.)
    - **Until confirmed otherwise, the spill environment must be presumed to be hazardous. That presumption remains until the characteristics of the spilled material have been determined and the area has been tested.**
    - **If the responder does not have data and equipment to make that determination, an immediate request for this specific need should be made.**
4. If possible, take immediate steps to secure the source. Refer to Section 8.2 for recommended actions.
5. The Shift Superintendent functions as the Incident Commander until relieved of this task under the Incident Command System.

8.2 Securing the Source

Securing the source is an extremely important step in spill response actions. However, a **source should only be secured if it can be performed safely and poses no threat to human health.** Steps taken to secure the source include the following.

- **For Transfer Equipment**

    1. If manifold fails, shut down upstream pumps, close upstream valves.
    2. If a hose failure is encountered, shut down upstream pumps, close upstream valves and drain hose in catch basin, if feasible.

- **For Tank Overflow**

    1. If the source of the spill is identified as a tank leaking or overflowing, divert oil to alternative tank or shut down upstream pump, close fill line valve and overflow valve (if necessary).
    2. Make every effort to contain the spill so as to limit affected area.

- **For Tank Failure**

    1. If the source of the spill is identified as a catastrophic tank failure (i.e., collapse) and safety conditions permit, divert oil to alternative tank and shut in all valves associated with the tank. If this is not possible, shut in the nearest upstream valve possible and all tandem lines associated with

the failed tank to eliminate the possibility of additional product being discharged. Consider pumping contents to planned recovery tanks.

2. Make every effort to contain the spill so as to limit the affected area.

- **For Piping Rupture**

1. If the source originates from a pipe failure, shut down pumps, close pipe section block valves on both sides of spill, construct or obtain temporary containment, and bleed pressure off of pipeline into containment.
2. Make every effort to contain the spill so as to limit the affected area.

- **For Explosion or Fire**

Liquids

1. Control or disperse vapors.
2. Cool heated structures.
3. Divert/control runoff.
4. Recover products.

Gases

1. Disperse vapors.
2. Isolate source of gas.
3. Protect exposures.
4. **If practical**, allow fire to burn itself out.

- **For Equipment Failure**

1. For all equipment failures, upstream valves will be closed and the appropriate lines or vessels will be drained or, if pressurized, will be bled down into containment structures.
2. Make every effort to contain the spill so as to limit the affected area.

8.3 General Response Considerations

Given below are general considerations that should be kept in mind when responding to a spill.

- Fire and explosion potential always exist.
- If uncertain about the safety of an area, approach wearing protective gear, including breathing apparatus.
- Approach spilled material from an upwind direction, if possible.
- Keep non-essential personnel away from scene.
- Toxic gases may be released by some spills.
- Do not walk into or touch any spilled material. Avoid inhaling fumes, smoke, and vapors, even if no hazardous materials are involved.
- Do not assume that gases or vapors are harmless because of lack of odor. Use air sampling equipment to ensure areas are safe to enter for continued response operations.
- Check the MSDS to determine the flammable and toxic characteristics of the spilled material.
- Speed is essential in recovery efforts, especially during the initial response.
- Determine strategic objectives at the beginning of a spill.

8.4 Spill Containment and Recovery

After initial response actions have been taken to stop further spillage and required agencies notified, ExxonMobil will begin spill containment, recovery, and disposal operations.

The Incident Commander will make an assessment of the size and hazards of the spill. The type of oil plus its location and predicted movement will be considered. Figure 1.2 contains details regarding the predicted drainage of the spill.

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed to control and contain the spill. Containment booms may be used to contain the spill. If the spill reaches the Yellowstone River, booms may be used to deflect or guide the spill to locations where it can more effectively be cleaned up using vacuum trucks or sorbent materials. Equipment and material will be used in the manner most effective for rapid and complete cleanup of the spill.

The spill response teams will interface and regularly communicate with the Federal On-Scene Coordinator (FOSC) if one is appointed. The FOSC and the Incident Commander will monitor and coordinate the clean-up activities to ensure satisfactory progress.

Guideline 1: Flash point over 100^{o} F (see Figure 8.1)

> These materials are not extremely hazardous and in most cases will float on the water. Although evaporation of these products can be significant, **the preferred response is containment and recovery.** Extreme caution should be exercised in order to assure that the area is safe and free of explosive vapors prior to commencement of containment and recovery activities. For crude spills, use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

Guideline 2: Flash point lower than 100^{o} F (see Figure 8.2)

> These materials float on the water and are extremely flammable. **Containment of these products may be extremely hazardous** as containment may allow explosive concentrations to form. **The preferred response is to knock down any vapors; then protect shorelines and marshes by diversionary booming and allowing the remaining product to evaporate.** Use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

Guideline 3: Asphalt (see Figure 8.3)

> Asphalt's main components are heavier than water. This material will therefore sink, leaving a sheen from its lighter components. **The preferred response is channel the asphalt to shallow water and recover as soon as possible.**

Guideline 4: Spills on land (see Figure 8.4)

The refinery will utilize all of the personnel and materials available locally. If more response is required, then it will be brought in from other locations as necessary. Response and cleanup

will continue until all of the recoverable oil is recovered, the environment is restored, and/or the unified command of the Incident Commander, Federal On-Scene Coordinator, and State On-Scene Coordinator have determined that further response and cleanup is either no longer necessary or advisable.

FIGURE 8.1

GUIDELINE 1

Considerations for Discharges of High Flash Oil into Water
Flash Point Over 100° F
Crude Oils
Distillate Fuels
Intermediate Stocks
Jet Fuel
Residual Fuel

These materials are not extremely flammable and the preferred response is containment and mechanical recovery.

☐ Identify source and stop discharge if possible.

☐ Activate OSRT as appropriate.

☐ Advise personnel and facilities in the area of any threat to their property or personnel.

☐ Deploy containment boom and skimmers in attempt to contain and recover as much product as possible. Monitor the boom for effectiveness.

☐ Determine the direction and expected duration of spill movement.

☐ Consider requesting U.S. Coast Guard establish safety or no wake zone in the area and ask FAA to restrict air space over response area.

☐ If spill escapes initial containment area, review the location of sensitive areas. Determine which of these may be threatened by the spill and direct response personnel to proceed with boom and skimmers to these locations.

☐ For crude discharge, use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

Personnel safety is the primary consideration in any emergency. Avoid excessive exposure to liquid and vapors. Refer to MSDS.

NOTE: These procedures are considerations only. Actual circumstances may dictate that procedures followed may differ somewhat from those listed below.

FIGURE 8.2

GUIDELINE 2

Considerations for Discharges of Low Flash Oil into Water
Flash Point Less Than 100° F
Crude Oil
Gasolines

These materials are extremely flammable. Containment of these materials may allow explosive concentrations to accumulate. The preferred response is to knock down the vapors and protect shorelines from fouling and allow evaporation to occur.

☐ Identify source and stop discharge if possible.

☐ Activate OSRT as appropriate.

☐ Advise personnel and facilities in the area of any threat to their property or personnel.

☐ Advise boats operating in the area of potential danger and direct them out of the area.

☐ Eliminate sources of vapor cloud ignition. Use water fog to knock down vapors and disperse material.

☐ Stay upwind and evacuate nonessential personnel.

☐ Determine the direction and expected duration of discharge movement.

☐ Consider requesting U.S. Coast Guard establish safety or no wake zone in the area and advisory – "High Flammability". Also consider requesting USCG ask FAA to restrict air space over response area.

☐ If the spill escapes initial containment area, review the location of sensitive areas. Determine which of these may be threatened by the spill and direct response personnel to proceed with boom to these areas to **divert** any remaining spilled oil away.

☐ Use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

☐ After crude's light ends have dissipated and have confirmed that its flash point is above 100° F, may contain crude with boom and mechanically remove.

☐ When gasoline's flashpoint is above 100° F, may contain gasoline with boom and mechanically remove.

Personnel safety is the primary consideration in any emergency. Avoid excessive exposure to liquid and vapors. Refer to MSDS.

NOTE: These procedures are considerations only. Actual circumstances may dictate that procedures followed may differ somewhat from those listed below.

FIGURE 8.3

GUIDELINE 3

Considerations for Discharges of Asphalt into Water

Asphalt's main components are heavier than water. This material will therefore sink, leaving a sheen from its lighter components. The preferred response is channel the asphalt to shallow water and recover as soon as possible.

☐ Identify source and stop discharge if possible.

☐ Activate OSRT as appropriate.

☐ Advise personnel and facilities in the area of any threat to their property or personnel.

☐ Deploy deflection boom to divert asphalt towards shallow water. Monitor boom for effectiveness. Use skimmers to remove asphalt if remains liquid. Otherwise, use buckets, dragline, clam shells, etc. to remove asphalt.

☐ Determine the direction and expected duration of the asphalt's movement.

☐ Consider requesting U.S. Coast Guard to establish a safety or no-wake zone in the area and ask FAA to restrict air space over response area.

☐ If asphalt escapes initial containment area, review the location of sensitive areas. Determine which of these may be threatened by the spill and direct response personnel to proceed with boom and skimmers to these locations.

☐ If possible, protect shoreline with plastic before asphalt's impact.

Personnel safety is the primary consideration in any emergency. Avoid excessive exposure to liquid and vapors. Refer to MSDS.

NOTE: These procedures are considerations only. Actual circumstances may dictate that procedures followed may differ somewhat from those listed below.

FIGURE 8.4

GUIDELINE 4

Considerations for Spills On Land

- ☐ Identify source and stop discharge if possible.
- ☐ Activate OSRT as appropriate.
- ☐ Use explosimeter and other approved sampling equipment to assure areas are safe to enter for any response operations.
- ☐ Advise personnel in the area of any threat and/or initiate evacuation of endangered people. Inform affected system operators – such as, utilities, telephone company, or railway.
- ☐ Start confinement operations immediately to prevent oil from reaching waterways or groundwater. Consider allowing oil to spread out versus pool as pooling provides head pressure, which causes soil penetration.
- ☐ If the ground is permeable, consider moving affected soil to a temporary storage location where the ground is less permeable.
- ☐ Before excavating locate underground utilities.
- ☐ Recover the oil and contaminated soil. Be alert for underground cables and water bearing formations. Remember that oil may penetrate deeper if impermeable natural layers are disturbed.
- ☐ For low flash oil: (1) Use non-sparking systems. (2) Have fire trucks/firefighting equipment nearby. (3) Warn all involved of the oil's flammability. (4) Consider allowing oil to spread out over a large area. (5) Consider putting protective foam over it.
- ☐ If oil enters any underground piping system (such as sewer system), contact operator immediately.
- ☐ As far as possible, do not allow vehicles to run over oil saturated areas.
- ☐ Consider implications of digging trenches to contain and/or drain oil.

Personnel safety is the primary consideration in any emergency. Avoid excessive exposure to liquid and vapors. Refer to MSDS.

NOTE: These procedures are considerations only. Actual circumstances may dictate that procedures followed differ somewhat from those listed below.

9.0 FACILITY DIAGRAMS AND LIST OF TANKS

The following pages contain diagrams to assist in developing priorities for deploying response resources. The details included on these maps will assist responders in: (1) Gaining an awareness of the facility's size and operations; (2) Identifying critical areas of environmental sensitivity and economic importance; and (3) Monitoring and protecting access/staging areas for equipment deployment operations.

Information regarding the actual location of the spill and visual observation/verification of spill movement must be used to make a final determination on which diagrams and maps are to be used to develop a response strategy.

The diagrams included in this section of the Plan are the following:

Figure 1.1	Site Plan
Figure 1.2	Site Surface and Sewer Drainage Plan
Figure 1.3	Fire Water System
Figure 3.7	Evacuation Plan (three drawings)
Figure 9.1	Response Map Index
Figure 9.2	Planning Distance Environmental and Logistical Information

The locations of tanks and container storage areas are delineated in the Site Plan (Figure 1.1). The figure does not show the substance stored, shell capacity, and type of tank as the drawing would be overly complicated with this amount of information. The following tables identify the oil filled tanks and equipment and should be used as part of the drawing. The tables also lists the secondary containment associated with the oil filled tanks and equipment,

Table C.1	Fixed Aboveground Storage Tanks (Atmospheric Tanks)
Table C.2	Fixed Aboveground Storage Tanks (Misc. Atmospheric Tanks)
Table C.3	Portable Containers (Drums, Totes, Roll-off Bins) Storage Areas
Table C.4	Mobile Containers
Table C.5	Oil Filled Operational and Manufacturing Equipment (Excluding Electrical)
Table C.6.a / 6.b	Oil Filled Electrical Equipment
Table C.7	Secondary Containment Volumes for Product Tankage

FIGURE 2.1

NOTIFICATION SEQUENCE - OVERVIEW

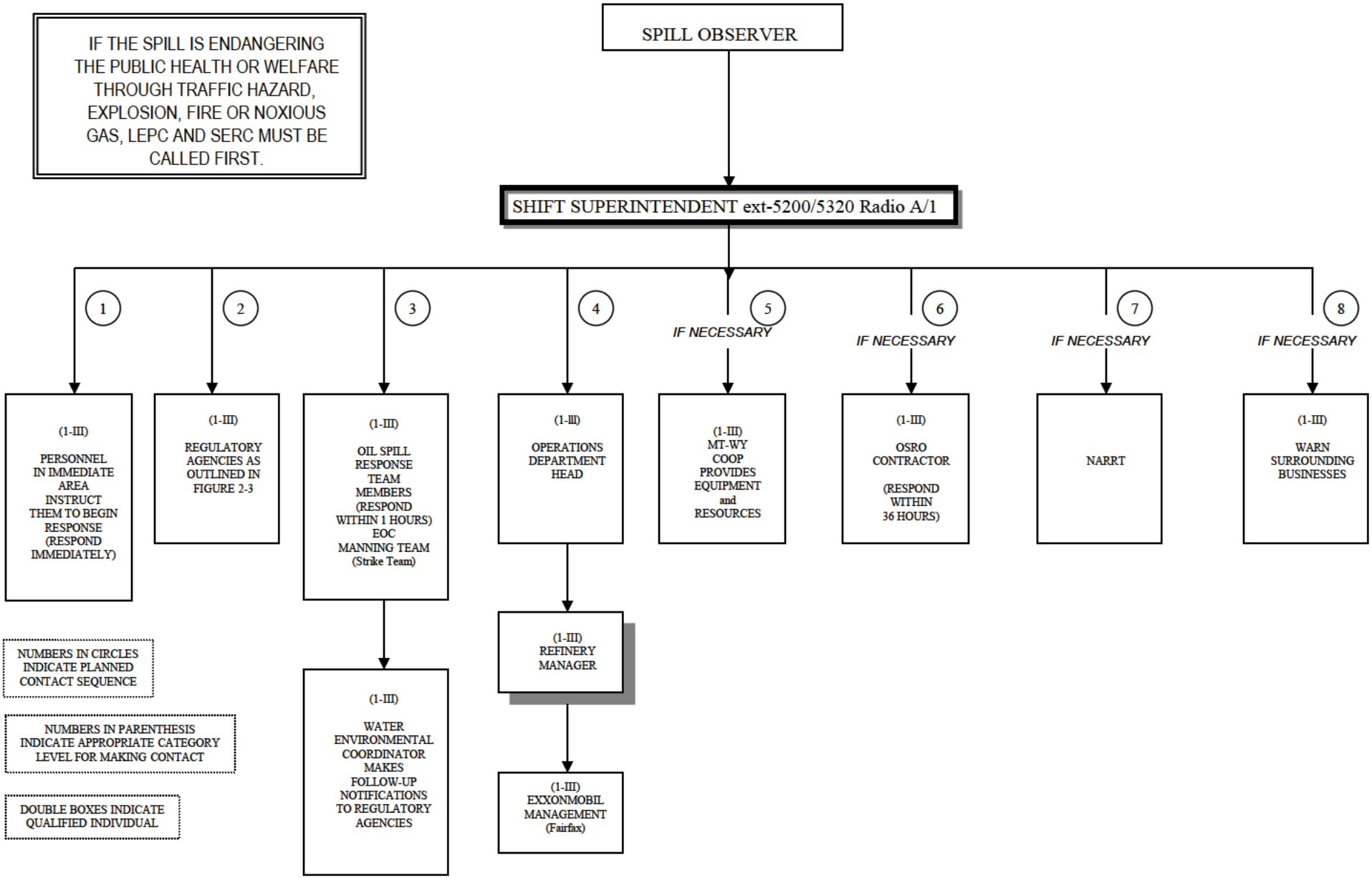
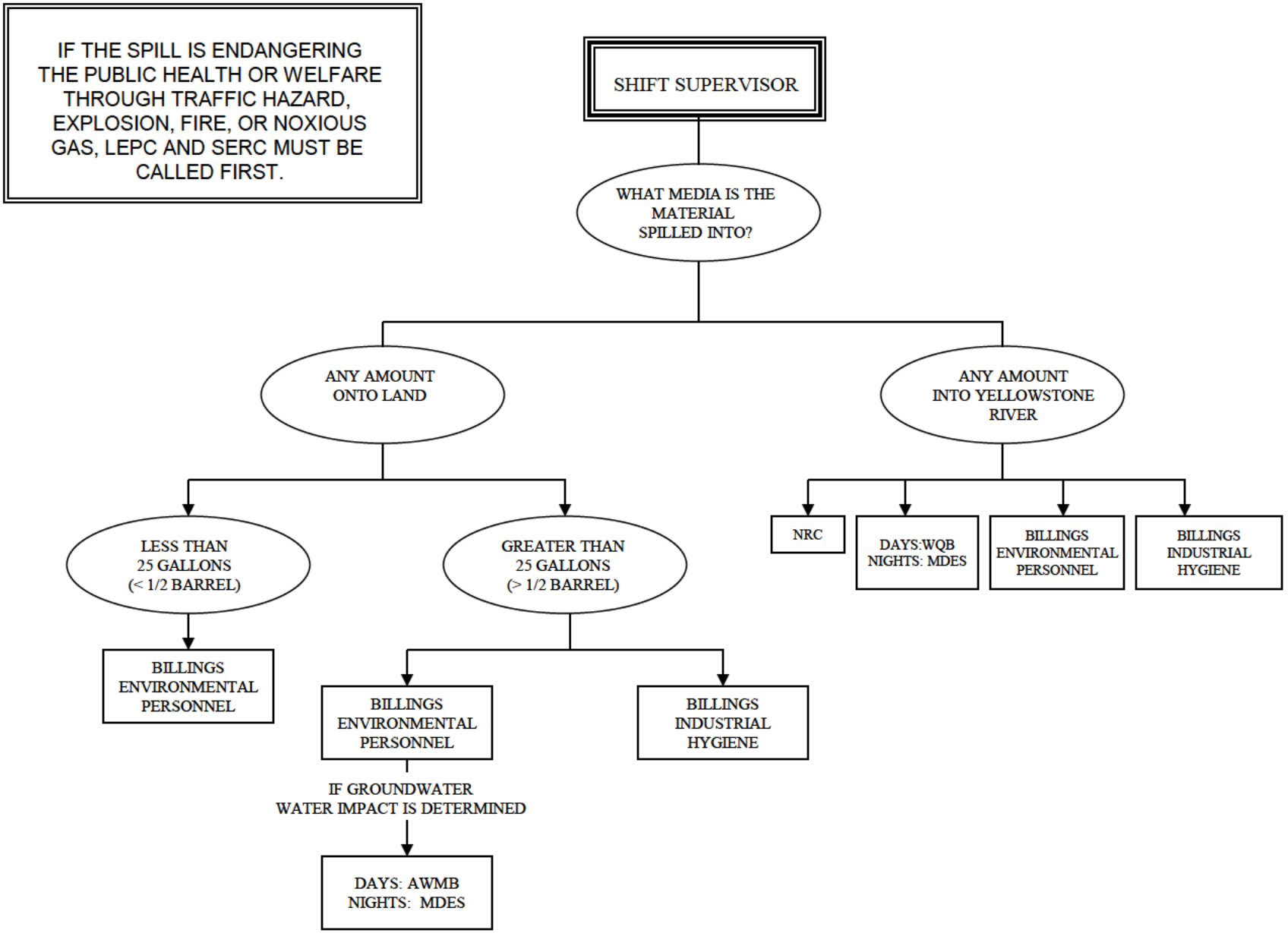


FIGURE 2.2

NOTIFICATION SEQUENCE - REGULATORY AGENCIES



IT IS NOT NECESSARY TO GATHER ALL INFORMATION BEFORE MAKING INITIAL NOTIFICATION

FIGURE 2.5

SPILL RESPONSE ACTIVITY LOG

DATE: _____ FACILITY: _____

REPORTER: _____ INCIDENT: _____

		ACTIVITY/TELEPHONE CALL					
TIME	**ACTIVITY LOCATION**	**INBOUND/ OUTBOUND**	**NAME AND AFFILIATION OF OTHER PARTY**	**ACTIVITY/CALL DESCRIPTION/CONTENT**			**INITIALS**

FIGURE 7.1
EXXONMOBIL BILLINGS REFINERY RESPONSE EQUIPMENT INSPECTION LIST
Page 1 of 4

1. Date the Inspection was performed date: _____

2. Name of the person(s) conducting Inspection: _____

3. Complete the following table: **Semi-annually**

Description	**Equipment Specifications**	**YEAR PURCHASED**	**Response Plan Quantity**	**Actual Quantity During Inspection**	**Storage Location**	**Accessibility** (Time to access and respond)	**Actual Use/Testing** (Last test date and frequency of testing)	**Operational Status/Condition** (If equipment needs maintenance, give a brief description of the required maintenance)
Containment Boom	4" x 4", Universal Connectors	2007	300'		OSR Building	15-30 minutes	Semi-annual	Standby
	Acme OK Corral, 6" x 6", Jaton Top tension, Heavy ballast, Universal Connectors	2011	1000'		OSR Building	15-30 minutes	Semi-annual	Standby
Skimmers	Acme Model FSV-5, vacuum skimmer, 1-1/2"	Unknown	1		OSR Building	15-30 minutes	Semi-annual	Standby
	Megator Alpha S.S., vacuum skimmer, 1-1/2", Not rated by Megator - except ~ 10 gpm - dependent upon oil layer thickness and pump capacity	Unknown	2		OSR Building	15-30 minutes	Semi-annual	Standby
Tanks	Fimco, 1050 gallon, translucent polypropylene	2007	3		OSR Building Area	15-30 minutes	Semi-annual	Standby
	Fimco, 300 gallon, translucent polypropylene	2007	3		OSR Building Area	15-30 minutes	Semi-annual	Standby

FIGURE 7.1
EXXONMOBIL BILLINGS REFINERY RESPONSE EQUIPMENT INSPECTION LIST
Page 2 of 4

Description	Equipment Specifications	YEAR PURCHASED	Response Plan Quantity	Actual Quantity During Inspection	Storage Location	Accessibility (Time to access and respond)	Actual Use/Testing (Last test date and frequency of testing)	Operational Status/Condition (If equipment needs maintenance, give a brief description of the required maintenance)
Pumps	Yamaha YP20GA, 2" centrifugal, 23' total head 80' 175 gpm (1200 BPD @ 20% effective rate)	Unknown	3		OSR Building	15-30 minutes	Semi-annual	Standby / Document date the fuel was last changed.
	Monarch JAG53, 3" diaphragm, 25' head 50 gpm (342 BPD @ 20% effective rate)	Unknown	3		OSR Building	15-30 minutes	Semi-annual	Standby / Document date the fuel was last changed.
Vacuum Truck	60 barrel capacity, 867.8 gpm rated @ 15" Hg	Unknown	1		Mechanical Department Garage	15-30 minutes	Semi-annual	Standby
	25 barrel capacity, 867.8 gpm rated @ 15" Hg	Unknown	1		Mechanical Department Garage	15-30 minutes	Semi-annual	Standby
Absorbent Boom	8" x 10', absorbent boom, 40' per bag, Ergon, Industrial Cleanup, Sorbent Product Co	2011	60 bags		Marketing	15-30 minutes	Not Applicable	Standby
	8" x 10', absorbent boom, 40' per bag, Ergon, Industrial Cleanup, Sorbent Product Co	2011	10 bags		OSRT Building	15-30 minutes	Not Applicable	Standby
Absorbent Rolls	36" x 150' absorbent rolls, 3M, Ergon, Matarah, Sorbent Product Co.	2011	15 rolls		Marketing	30-60 minutes	Not Applicable	Standby
Viscous Sweep	100' per bag, Oil Mop Inc.	Unknown	60 bags		Marketing	30-60 minutes	Not Applicable	Standby

FIGURE 7.1
EXXONMOBIL BILLINGS REFINERY RESPONSE EQUIPMENT INSPECTION LIST
Page 3 of 4

Description	Equipment Specifications	YEAR PURCHASED	Response Plan Quantity	Actual Quantity During Inspection	Storage Location	Accessibility (Time to access and respond)	Actual Use/Testing (Last test date and frequency of testing)	Operational Status/Condition (If equipment needs maintenance, give a brief description of the required maintenance)
Pom Poms	30# bags, Parker Systems, Oil Mop	Unknown	40 bags		Marketing	30-60 minutes	Not Applicable	Standby
Boat	21' ExxonMobil Jet boat RMX	2010	1		OSR Building	30-60 minutes	Not Applicable	Standby
Boat	18' MTWY Coop Jet boat MJG18209L989 with trailer	1989	1		OSR Building	30-60 minutes	Not Applicable	Standby
4-Wheeler	Kawasaki Mule	2003	1		OSR Building	30-60 minutes	Not Applicable	Standby
Plastic Bags	Geo bags, 30" x 60" x 6 mil, 50 bags per box, Poly America	2009	180 boxes		Marketing	30-60 minutes	Not Applicable	Standby
Anchors	Dansforth type, 18 pound	2010	10		OSR Building	30-60 minutes	Not Applicable	Standby
Buoys	Taylor Made, 15" diameter, vinyl white	2010	10		OSR Building	30-60 minutes	Not Applicable	Standby
Sorbents	Blankets, 32" x 150' roll	2011	2		Marketing	30-60 minutes	Not Applicable	Standby
	Sock, 3" x 8' box	Unknown	2		Marketing	30-60 minutes	Not Applicable	Standby
	Pom Poms, 30 per box	Unknown	10		Marketing	30-60 minutes	Not Applicable	Standby

4. Describe any assigned follow-up activities associated with this event:

What:	**Who:**	**Target Date:**
_____	_____	_____
_____	_____	_____
_____	_____	_____

5. _____
Certifying Signature

FIGURE 7.1
EXXONMOBIL BILLINGS REFINERY RESPONSE EQUIPMENT INSPECTION LIST
Page 4 of 4

Retain this form for a minimum of five (5) years.

(b) (7)(F), (b) (3)

NOTE: SEE TABLE C.1-C.3 FOR TANK VOLUMES AND CONTAINER STORAGE CAPACITIES

REVISIONS	NO	BY	DATE	DESCRIPTION

REVISIONS	NO	BY	DATE	

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Billings, Montana 59106
3602 Hesper Road
(406) 656-1172

EXXONMOBIL REFINERY BILLINGS, MT

SITE PLAN

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NORTH

SCALE
(In Feet)

200 0 200 400 600

(Approximate Only)

FIRE PREFIX SCHEDULE

LOCATION SYMBOL	AREA
BH	BOILERHOUSE
FC	CAT / SLEB / ULEB
HC	HYDROCRACKER / HYDROGEN
CR	CRUDE / COKER
CH	CHUB UNIT
PF	POWERFORMER
OM	ASPHALT / TANK CAR LOADING
AL	ALKY / TREATER
RW	RIVER PUMPHOUSE/FIRE TRAING/C.W.&D.W. SEPARATORS
NT	NORTH TANK FARM
WT	WEST TANK FARM
ST	SOUTH TANK FARM
WW	WATER-WALL MONITOR
MB	MOMENTUM-BREAKER MONITOR
AS	AIM-AND-SHOOT MONITOR
IDENTIFICATION SYMBOL	ITEM
V	BLOCK VALVE
H	HYDRANT
M	MONITOR
X	DOUBLE VALVE

EXAMPLE: BHV-1

LOCATION SYMBOL

SEQUENTIAL NUMBER

IDENTIFICATION SYMBOL

DRAWING LEGEND

HYDRANT

HYDRANT W/MONITOR

MONITOR

HOSE REEL

BASED ON EXXONMOBIL DWG# 0013010036

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REVISIONS

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FIRE WATER SYSTEM

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SHEET NUMBER **1.3**

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SITE SURFACE AND SEWER DRAINAGE PLAN

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SOUTH EVACUATION ROUTE

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EXXONMOBIL REFINERY BILLINGS, MT

WEST GATE EVACUATION ROUTE

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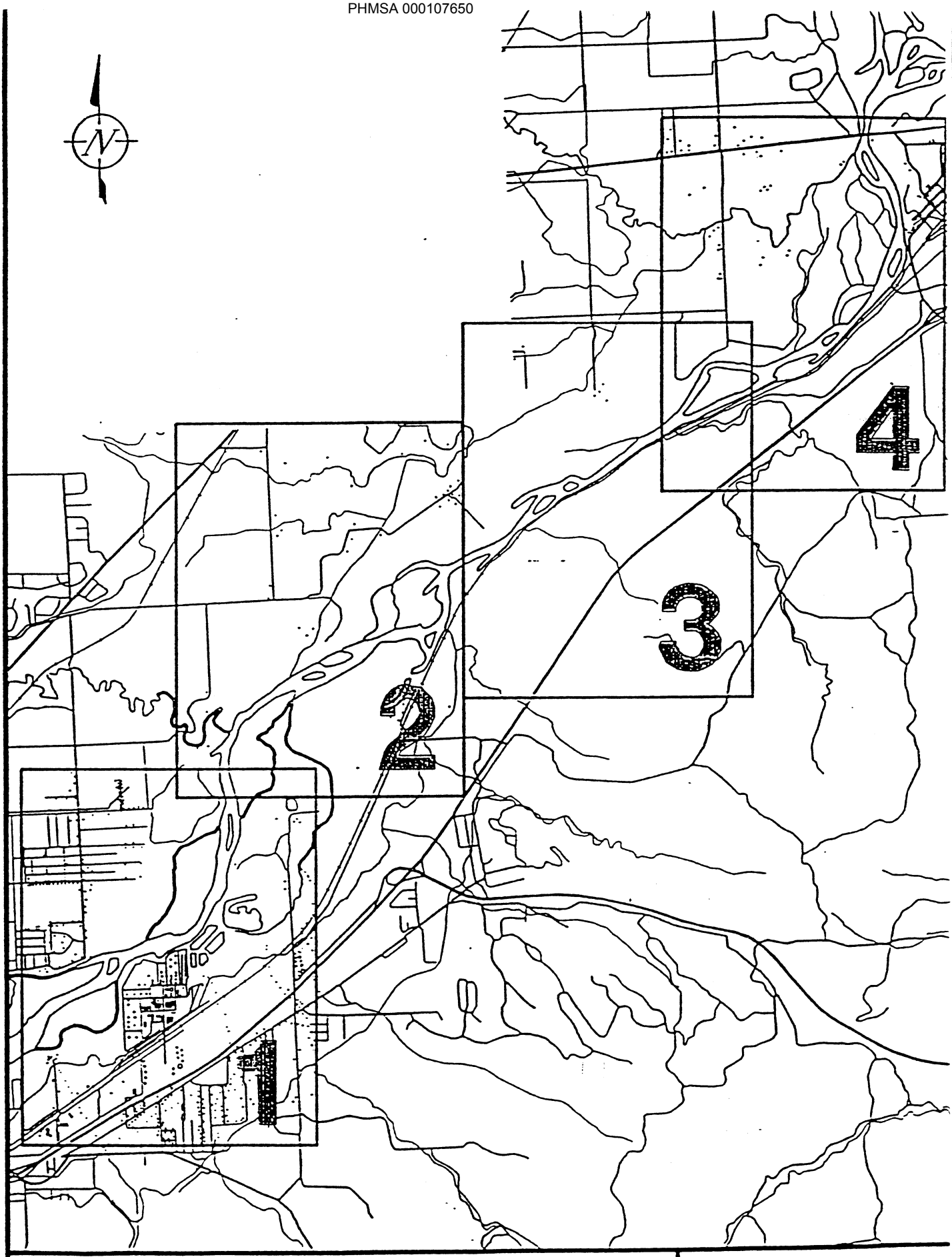

Exxon Billings Refinery
Response Map Index

Figure 9.1

Continued on Map 2

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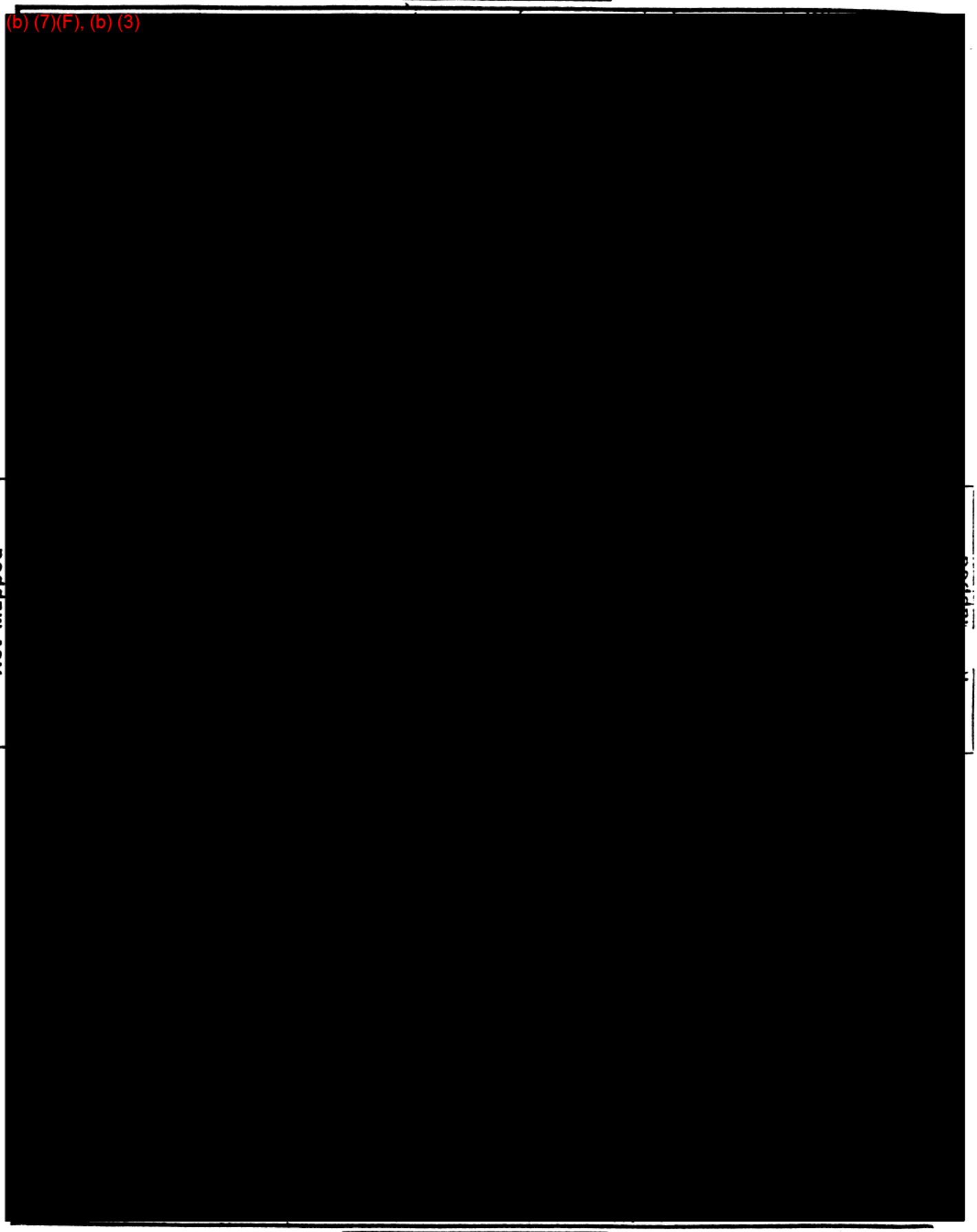


Not Mapped

Not Mapped

Not Mapped

YELLOWSTONE RIVER
Exxon Billings Refinery

Environmental Response Map
1

Critical Areas to Monitor and Protect

Recreational Areas

1 **Two Moon Park**
Yellowstone County Board of Parks Commission
Billings, Montana
(406) 245-5843

Industrial Water Intakes

2 **Exxon Company U.S.A. Billings Refinery**
Billings, Montana
(406) 657-5380

Shoreline Residential Properties

Shoreline residential properties within the City of Billings adjacent to the Yellowstone River along Lockwood Frontage Road, Klenck Lane, and Johnson Lane

Shoreline ranchland properties adjacent to the Yellowstone River within the Medina Ranch at the termination of Johnson Lane

Shoreline Access Sites & Equipment Staging Areas

Yellowstone River Shoreline Access

A **Exxon Company U.S.A. Billings Refinery Site**
Spill response equipment and small watercraft may be deployed along the banks of the Yellowstone River adjacent to the Exxon Company U.S.A. Billings Refinery property

B **Two Moon Park**
Yellowstone County Board of Parks Commission
Billings, Montana
(406) 245-5843
Large, unimproved dirt parking surface adjacent to the banks of the Yellowstone River
Accessible via Two Moon Park Road (steep, unimproved roadway) adjacent to Yellowstone Road

Yellowstone River Observation Site

O1 **Yellowstone Road**
Roadside Yellowstone River observation site atop a high-elevation river terrace adjacent to Yellowstone Road at the intersection with Bitterroot Drive

Boat Launching Facilities

Exxon Billings Refinery Site
There is no boat ramp at the facility, but rather a gently sloping embankment along the shoreline of the Yellowstone River suitable for small watercraft deployment

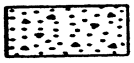
Cerise Road Fishing Access
State of Montana Fish Wildlife & Parks Department
(406) 252-4654
Asphalt-surfaced ramp accessible via unimproved roadway adjacent to Cerise Road

YELLOWSTONE RIVER
Exxon Billings Refinery

Environmental Response Map 1

Environmental Sensitivities

Shoreline Composition



Riparian Habitat
High-elevation river terraces and steep bluffs fronted by local fine and coarse-grained riparian sediment deposits

Sheltered Marshes & Wetland Areas

The Yellowstone River is a braided river composed of a series of multiple, relatively shallow intertwining channels and chutes separated by sediment bars. Banks are composed of unconsolidated sediments and sparse vegetative undergrowth facilitating the rapid lateral migration of the river channel. The Yellowstone River watershed in the vicinity of Billings, Montana is commonly referred to as the Middle Transitional Zone of the river. Within this zone, the upriver, clear, cold-water, salmonid habitat is being gradually replaced by a more silt-filled and turbidity-laden, warm-water environment.

Species Vulnerability

Riverine Fish Concentrations

The following species of fish are common within the Middle Transitional Zone of the Yellowstone River:
Mountain Whitefish, Rainbow Trout, Brown Trout, Mountain Sucker, White Sucker, Longnose Sucker, Shorthead Redhorse, Carp, Goldeye, Burbot, Stonecat, River Carpsucker, Sauger, Walleye, Freshwater Drum, Channel Catfish, Bigmouth Buffalo, Smallmouth Buffalo, Northern Pike

The following species of fish present within the Yellowstone River watershed have received special recognition and precautionary status within the State of Montana:
Paddlefish (Restricted Harvest), Shortnose Gar (Non Game), Sturgeon Chub (Non Game), Sicklefin Chub (Non Game), Pallid Sturgeon (Restricted Harvest)

Riverine Bird Concentrations

The following species of birds are common within the Middle Transitional Zone of the Yellowstone River:
Double-Crested Cormorant, Canada Goose, Mallard, Common Goldeneye, Common Mergansers, Ferruginous Hawks, American Kestrel, Osprey, Horned Owl, Ring-Necked Pheasant, Great Blue Heron, Belted Kingfisher, Gulls, Killdeer Sandpiper, Spotted Sandpiper, Various Species of Songbirds

The following species of birds present within the Yellowstone River watershed have received special recognition and precautionary status within the State of Montana:
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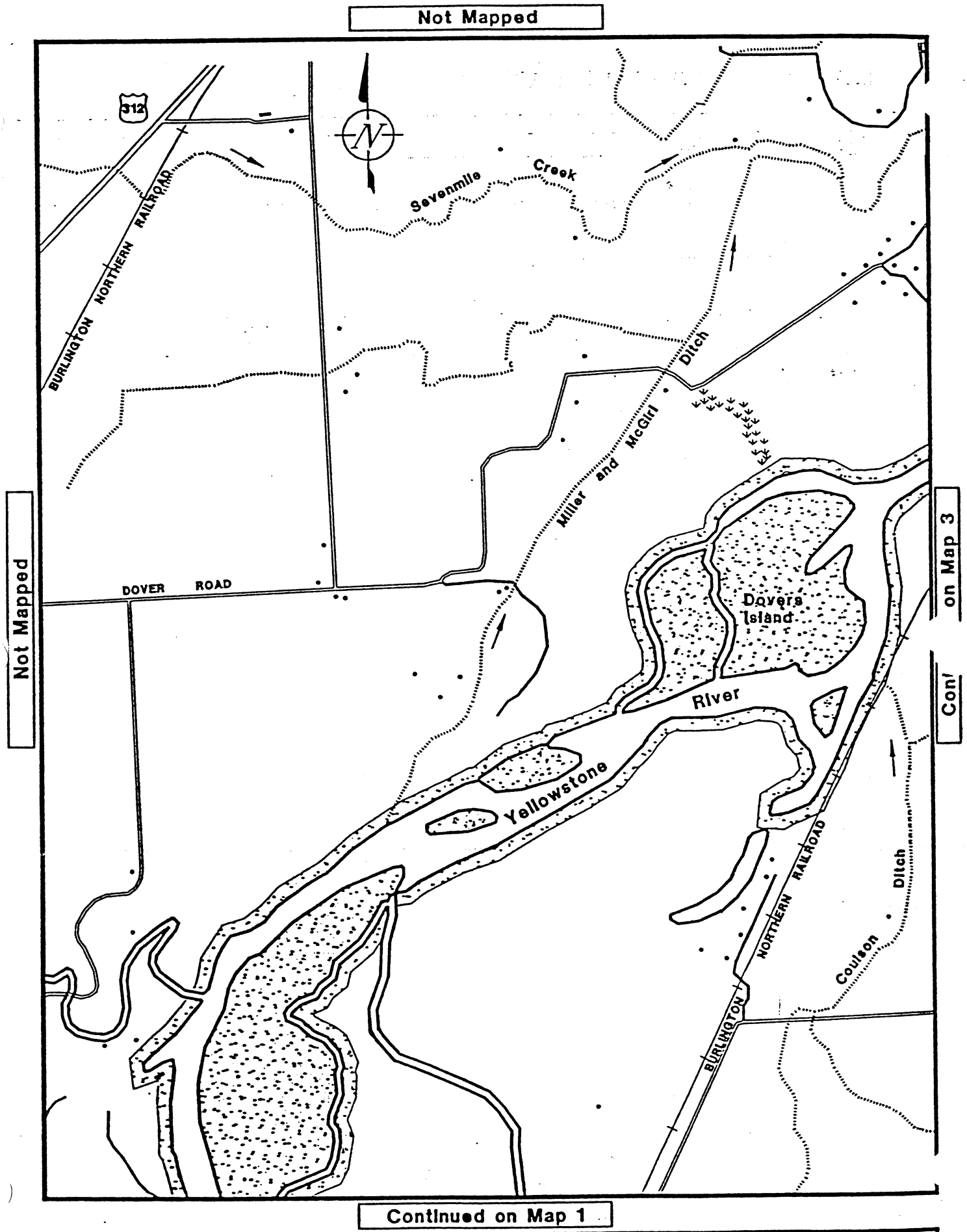
YELLOWSTONE RIVER
Exxon Billings Refinery

Environmental Response Map 1



YELLOWSTONE RIVER
Dovers Island

Environmental Response Map 2

Critical Areas to Monitor and Protect

Irrigation Canals

Miller & McGirl Ditch

Shoreline Residential Properties

Shoreline residential properties adjacent to the Yellowstone River along Coulson Road

Shoreline Access Sites & Equipment Staging Areas

Yellowstone River Shoreline Access

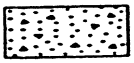
Vehicular access adjacent to the shorelines of the Yellowstone River in this area is extremely limited due to the lack of roads and the nature of the topography. Shoreline access is attainable upstream at the Exxon Company U.S.A. Refinery and the Cerise Road Fishing Access (Refer to Environmental Response Map 1) and downstream at the Huntley Dam (Refer to Environmental Response Map 3).

YELLOWSTONE RIVER
Dovers Island

Environmental Response Map 2

Environmental Sensitivities

Shoreline Composition



Riparian Habitat
High-elevation river terraces and steep bluffs fronted by local fine and coarse-grained riparian sediment deposits

Sheltered Marshes & Wetland Areas

The Yellowstone River is a braided river composed of a series of multiple, relatively shallow intertwining channels and chutes separated by sediment bars. Banks are composed of unconsolidated sediments and sparse vegetative undergrowth facilitating the rapid lateral migration of the river channel. The Yellowstone River watershed in the vicinity of Billings, Montana is commonly referred to as the Middle Transitional Zone of the river. Within this zone, the upriver, clear, cold-water, salmonid habitat is being gradually replaced by a more silt-filled and turbidity-laden, warm-water environment.

Species Vulnerability

Riverine Fish Concentrations

The following species of fish are common within the Middle Transitional Zone of the Yellowstone River:
Mountain Whitefish, Rainbow Trout, Brown Trout, Mountain Sucker, White Sucker, Longnose Sucker, Shorthead Redhorse, Carp, Goldeye, Burbot, Stonecat, River Carpsucker, Sauger, Walleye, Freshwater Drum, Channel Catfish, Bigmouth Buffalo, Smallmouth Buffalo, Northern Pike

The following species of fish present within the Yellowstone River watershed have received special recognition and precautionary status within the State of Montana:
Paddlefish (Restricted Harvest), Shortnose Gar (Non Game), Sturgeon Chub (Non Game), Sicklefin Chub (Non Game), Pallid Sturgeon (Restricted Harvest)

Riverine Bird Concentrations

The following species of birds are common within the Middle Transitional Zone of the Yellowstone River:
Double-Crested Cormorant, Canada Goose, Mallard, Common Goldeneye, Common Mergansers, Ferruginous Hawks, American Kestrel, Osprey, Horned Owl, Ring-Necked Pheasant, Great Blue Heron, Belted Kingfisher, Gulls, Killdeer Sandpiper, Spotted Sandpiper, Various Species of Songbirds

The following species of birds present within the Yellowstone River watershed have received special recognition and precautionary status within the State of Montana:
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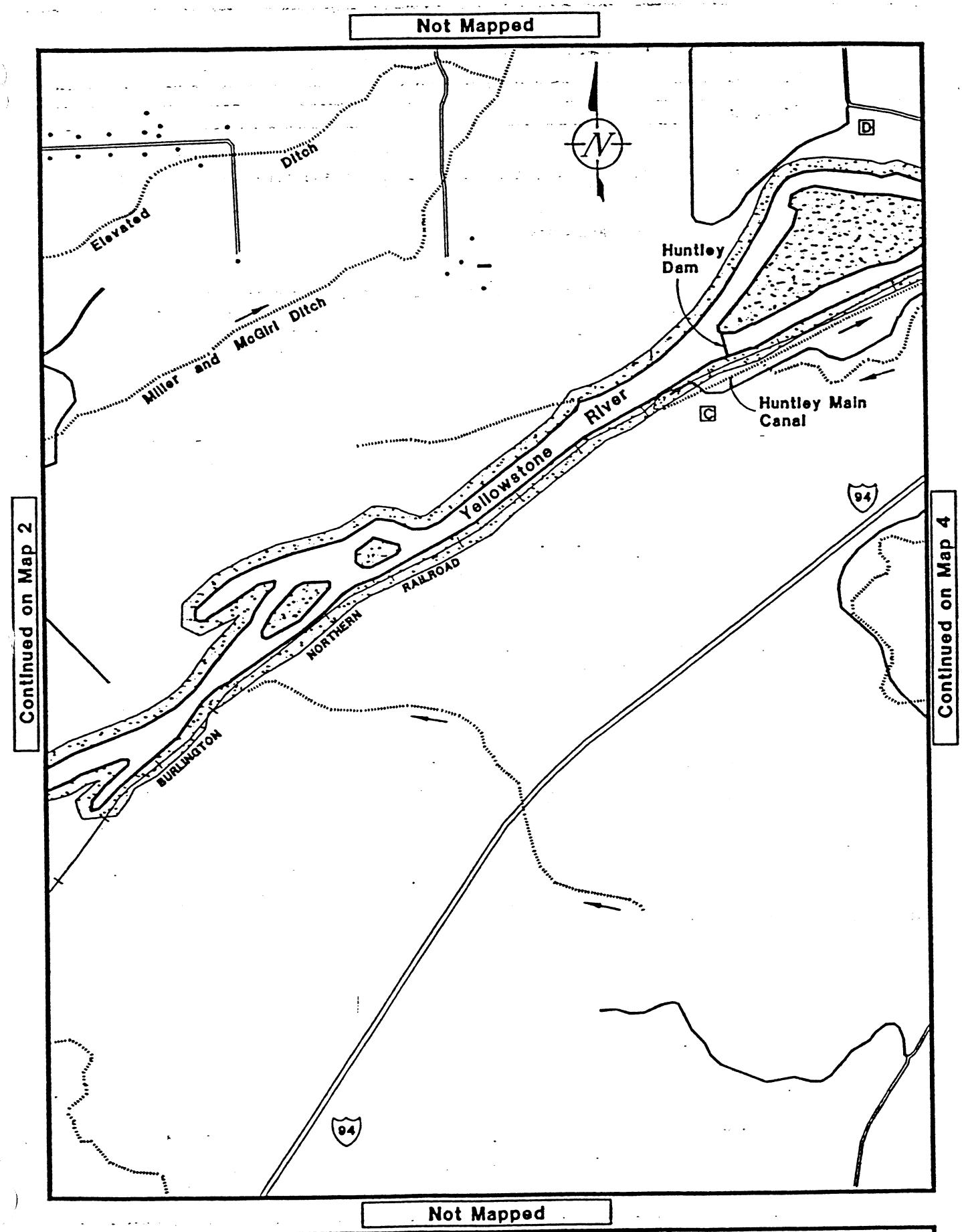
YELLOWSTONE RIVER Dovers Island	Environmental Response Map 2



YELLOWSTONE RIVER
Huntley Dam

Environmental Response Map 3

Critical Areas to Monitor and Protect

Irrigation Canals

Miller and McGirl Ditch

Huntley Main Canal
Huntley Project Irrigation District
(406) 967-3400

The intake to the Huntley Main Canal is delineated by a 24" diameter pipe culvert with a concrete-lined headwall parallel to the centerline of the railroad embankment and wings flared at 45 degrees with the axis of the pipe.

Low Head Irrigation Dam

Huntley Dam
Huntley Project Irrigation District
(406) 967-3400

Shoreline Residential Properties

Shoreline residential and ranchland properties adjacent to the Yellowstone River within the Vermillion Ranch

Shoreline Access Sites & Equipment Staging Areas

Yellowstone River Shoreline Access

C

Huntley Dam Site
Accessible via State Highway 522 and Creekmore Road (unimproved, dirt roadway)
Spill response equipment may be deployed at the termination of Creekmore Road, and the site may also serve as a spilled product recovery point

D

Vermillion Ranch Site
Accessible via U.S. Route 312
Suitable as a spilled product recovery point

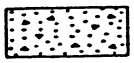
Note: Shoreline access via private residential and ranchland properties may be gained in most areas with the advance notification and permission of the property owner.

YELLOWSTONE RIVER
Huntley Dam

Environmental Response Map 3

Environmental Sensitivities

Shoreline Composition



Riparian Habitat
High-elevation river terraces and steep bluffs fronted by local fine and coarse-grained riparian sediment deposits

Sheltered Marshes & Wetland Areas

The Yellowstone River is a braided river composed of a series of multiple, relatively shallow intertwining channels and chutes separated by sediment bars. Banks are composed of unconsolidated sediments and sparse vegetative undergrowth facilitating the rapid lateral migration of the river channel. The Yellowstone River watershed in the vicinity of Billings, Montana is commonly referred to as the Middle Transitional Zone of the river. Within this zone, the upriver, clear, cold-water, salmonid habitat is being gradually replaced by a more silt-filled and turbidity-laden, warm-water environment.

Species Vulnerability

Riverine Fish Concentrations

The following species of fish are common within the Middle Transitional Zone of the Yellowstone River:
Mountain Whitefish, Rainbow Trout, Brown Trout, Mountain Sucker, White Sucker, Longnose Sucker, Shorthead Redhorse, Carp, Goldeye, Burbot, Stonecat, River Carpsucker, Sauger, Walleye, Freshwater Drum, Channel Catfish, Bigmouth Buffalo, Smallmouth Buffalo, Northern Pike

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Riverine Bird Concentrations

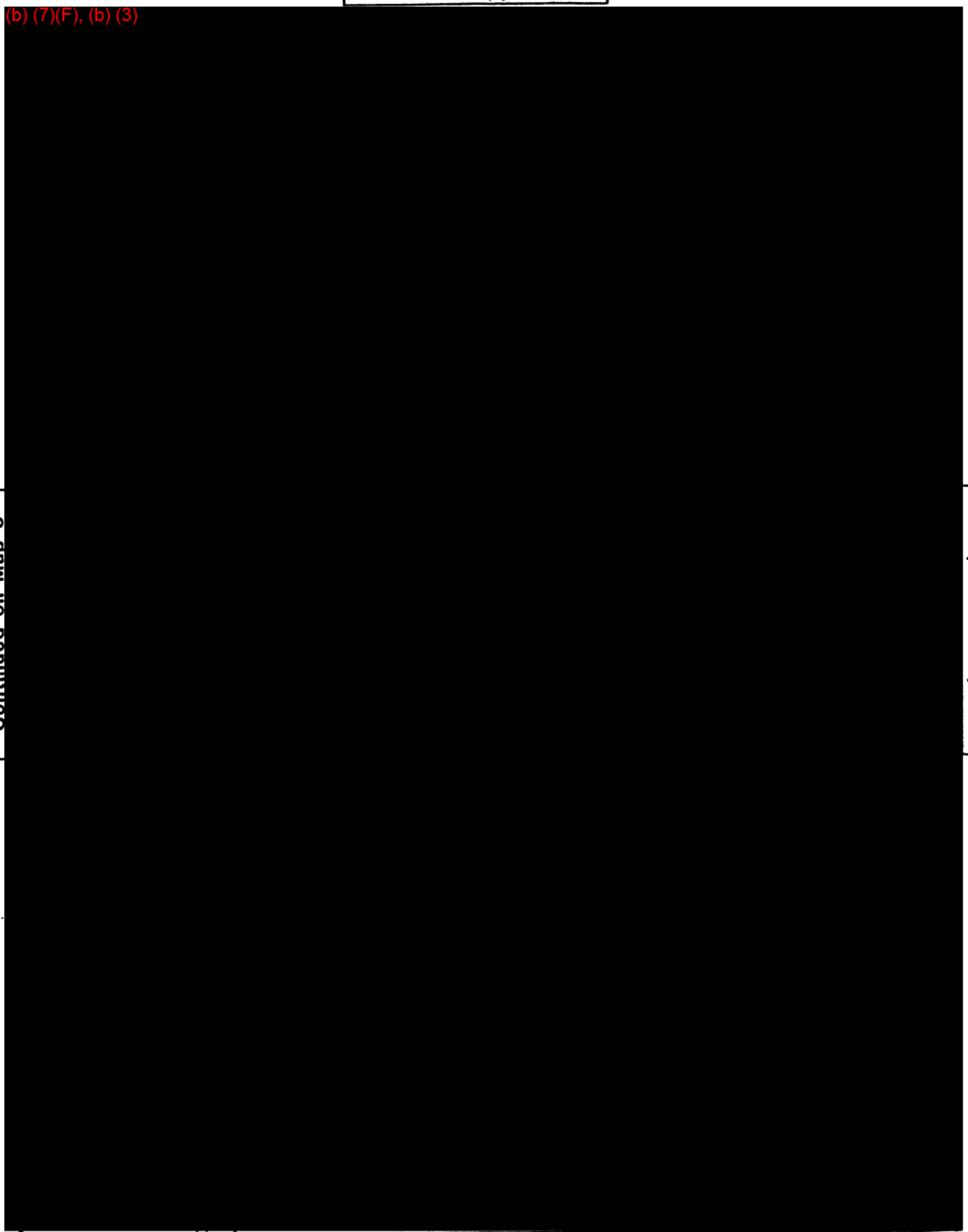
The following species of birds are common within the Middle Transitional Zone of the Yellowstone River:
Double-Crested Cormorant, Canada Goose, Mallard, Common Goldeneye, Common Mergansers, Ferruginous Hawks, American Kestrel, Osprey, Horned Owl, Ring-Necked Pheasant, Great Blue Heron, Belted Kingfisher, Gulls, Killdeer Sandpiper, Spotted Sandpiper, Various Species of Songbirds

The following species of birds present within the Yellowstone River watershed have received special recognition and precautionary status within the State of Montana:
Least Tern (Protected), Black Tern (Protected), American White Pelican (Protected), Bald Eagle (Protected),.Piping Plover (Protected), Peregrine Falcon (Endangered), Whooping Crane (Endangered)

YELLOWSTONE RIVER Huntley Dam	Environmental Response Map 3

Not Mapped

(b) (7)(F), (b) (3)



Continued on Map 3

Not Mapped

YELLOWSTONE RIVER
Huntley

Environmental Response Map
4

Critical Areas to Monitor and Protect

Recreational Area

3 **Huntley City Park**

Shoreline Residential Properties

Shoreline residential and ranchland properties adjacent to the Yellowstone River within the Vermillion Ranch

Shoreline residential properties adjacent to the Yellowstone River within the Town of Huntley along State Highway 522 and U.S. Route 312

Irrigation Canals

Huntley Main Canal
Huntley Project Irrigation District
(406) 967-3400

Low Head Irrigation Dam

Huntley Dam
Huntley Project Irrigation District
(406) 967-3400

Shoreline Access Sites & Equipment Staging Areas

Yellowstone River Shoreline Access

C **Huntley Dam Site**
Accessible via State Highway 522 and Creekmore Road (unimproved, dirt roadway)
Spill response equipment may be deployed at the termination of Creekmore Road, and the site may also serve as a spilled product recovery point

D **Vermillion Ranch Site**
Accessible via U.S. Route 312
Suitable as a spilled product recovery point

E **Roadside shoreline access adjacent to State Highway 522**
Suitable as a spilled product recovery point

F **Via Shoreline Residential Properties within the Town of Huntley**
Accessible via State Highway 522
Suitable as a spilled product recovery point

U.S. Route 312 Bridge Crossing
Suitable as a spilled product recovery point

Note: Shoreline access via private residential properties may be gained in most areas with the advance notification and permission of the property owner.

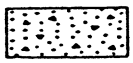
Yellowstone River Observation Site

O2 **Creekmore Road**
Roadside Yellowstone River observation site atop a high-elevation river terrace adjacent to Creekmore Road

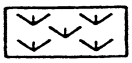
YELLOWSTONE RIVER Huntley	Environmental Response Map 4

Environmental Sensitivities

Shoreline Composition



Riparian Habitat
High-elevation river terraces and steep bluffs fronted by local fine and coarse-grained riparian sediment deposits



Sheltered Marshes & Wetland Areas

The Yellowstone River is a braided river composed of a series of multiple, relatively shallow intertwining channels and chutes separated by sediment bars. Banks are composed of unconsolidated sediments and sparse vegetative undergrowth facilitating the rapid lateral migration of the river channel. The Yellowstone River watershed in the vicinity of Billings, Montana is commonly referred to as the Middle Transitional Zone of the river. Within this zone, the upriver, clear, cold-water, salmonid habitat is being gradually replaced by a more silt-filled and turbidity-laden, warm-water environment.

Species Vulnerability

Riverine Fish Concentrations

The following species of fish are common within the Middle Transitional Zone of the Yellowstone River:
Mountain Whitefish, Rainbow Trout, Brown Trout, Mountain Sucker, White Sucker, Longnose Sucker, Shorthead Redhorse, Carp, Goldeye, Burbot, Stonecat, River Carpsucker, Sauger, Walleye, Freshwater Drum, Channel Catfish, Bigmouth Buffalo, Smallmouth Buffalo, Northern Pike

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Riverine Bird Concentrations

The following species of birds are common within the Middle Transitional Zone of the Yellowstone River:
Double-Crested Cormorant, Canada Goose, Mallard, Common Goldeneye, Common Mergansers, Ferruginous Hawks, American Kestrel, Osprey, Horned Owl, Ring-Necked Pheasant, Great Blue Heron, Belted Kingfisher, Gulls, Killdeer Sandpiper, Spotted Sandpiper, Various Species of Songbirds

The following species of birds present within the Yellowstone River watershed have received special recognition and precautionary status within the State of Montana:
Least Tern (Protected), Black Tern (Protected), American White Pelican (Protected), Bald Eagle (Protected), Piping Plover (Protected), Peregrine Falcon (Endangered), Whooping Crane (Endangered)

YELLOWSTONE RIVER Huntley	Environmental Response Map 4

FIGURE 9.2
PLANNING DISTANCE ENVIRONMENTAL AND LOGISTICAL INFORMATION

The following information pertains to the planning distance along the Yellowstone River between Huntley, MT and approximately Myers, MT. Refer to Figure 9.1 for information between the refinery and Huntley, MT.

Critical Areas to Monitor and Protect

Irrigation Canals and Dams

Waco Diversion Dam
Approximately 3 miles downstream of Pompeys Pillar

Waco Custer Canal
Parallels Frontage Road between Waco and Custer

Rancher Ditch
Parallels north shoreline of Yellowstone River between Bighorn and Myers

Shoreline Residential Properties

Numerous shoreline residential and ranchland properties adjacent to the Yellowstone River between Huntley and Pompeys Pillar. Shoreline between Pompeys Pillar and Myers sparsely populated with ranchland properties.

Recreational Areas

Pompeys Pillar Recreational Area

Shoreline Access Sites & Equipment Staging Areas

Yellowstone River Shoreline Access

Spill response equipment and small watercraft may be deployed along the banks of the Yellowstone River at the following locations. The accesses have unimproved dirt parking surfaces adjacent to the river. Sites may be suitable for spilled product recovery point.

Arrow Island
Located east of Shepherd

Voyager's Rest
Located between Worden and Pompeys Pillar

Manuel Lisa
Accessible via Frontage Road 6 miles east of Custer

Gritty Stone
Located between Huntley and Worden

Captain Clark
Accessible via Frontage Road 8 miles west of Custer

Note: Shoreline access via private residential and ranchland properties may be gained in most areas with the advance notification and permission of the property owner.

Yellowstone River Observation Site

Roadside observation sites adjacent to Yellowstone River may be available from the following locations.

Pompey Pillar Bridge
Bundy Road, between Nibbe and Pompeys Pillar

Myer's Bridge
North of Myers

Musselshell Trail Road Bridge
State Highway 310, north of Custer

Boat Launching Facilities

There are no boat ramps at the following facilities, but rather gently sloping embankments along the shoreline of the river suitable for small watercraft deployment.

Captain Clark Fishing Access

Manuel Lisa Fishing Access

State of Montana Fish Wildlife & Parks Department
406-252-4654

Environmental Sensitivites

Shoreline Compostition

The Yellowtsone River is a braided river composed of a series of multiple, relatively shallow interwining channels and chutes separated by sediment bars. Banks are composed of unconsolidated sediments and sparse vegetative undergrowth facilitating the rapid lateral migration of the river channel. The Yellowstone River watershed in the vicinity of Billings, Montana is commonly referred to as the Middle Transitional Zone of the river. Within this zone, the upriver, clear, cold-water, salmonid habitat is being gradually replaced by a more silt-filled and turbidity-laden, warm-water environment. Shoreline compostion includes high-elevation river terraces and steep bluffs fronted by local fine and coarse-grained riparian sediment deposits, and sheltered marshes and wetland areas.

Species Vulnerability

Riverine Fish Concentrations

The following species of fish are common within the Middle Transitional Zone of the Yellowstone River:
Mountain Whitefish, Rainbow Trout, Brown Trout, Mountain Sucker, Longnose Sucker, Shorthead Redhorse, Carp, Goldeye, Burbot, Stonecat, River Carpsucker, Sauger, Walleye, Freshwater Drum, Channel Catfish, Bigmouth Buffalo, Smallmouth Buffalo, Northern Pike

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Riverine Bird Concentrations

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(b) (7)(F), (b) (3)

REVISIONS	NO	BY	DATE	DESCRIPTION

REVISIONS	NO	BY	DATE	

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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

Project No.: 11137		
DRAWN BY	JAB	12/7/11
CHECKED BY	KA	12/27/11
APPROVED BY	TS	
SCALE: AS NOTED		

Hydrometrics, Inc.
Consulting Scientists and Engineers
Billings, Montana 59106
3602 Hesper Road
(406) 656-1172

EXXONMOBIL REFINERY BILLINGS, MT

NORTH GATE EVACUATION ROUTE

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Table C.1 - Fixed Aboveground Storage Tanks (Atmospheric Tanks)

Tank Number	Service	Tank Shell Capacity (BBL) See Notes 7 and 10.	Tank Age	Tank Type	Containment (Dike ID) See Note 9.
1	Heavy Naphtha	(b) (7)(F), (b) (3)	1948	Cone	4
2	Crude		1958	Open Floater	3
3	Heavy Naphtha		1948	Cone	4
4	Crude		1948	Cone / IF	6
5	Crude		1952	Open Floater	6
6	Crude		1948	Cone / IF	6
7	Resid		1948	Cone	5
8	Resid		1948	Cone	5
9	Heavy Naphtha		1948	Cone	4
10	Heavy Naphtha		1948	Cone	4
11	Crude		1961	Open Floater	7
13	Resid		1948	Cone	7
14	Resid		1948	Cone	7
15	Heavy Naphtha		1948	Cone	7
16	Gasoline Blending		1952	Cone / IF	7
17	Crude / Heavy Naphtha		1969	Open Floater	3
19	Sour Water		1948	Cone / IF	2
21	Sour Water		1948	Cone / IF	2
22	Slop Oils		1948	Cone	18
23	Slop Oils		1948	Cone	18
24	Slop Oils		1948	Cone	18
26	Light Naphtha		1970	Open Floater	1
27	Heavy Naphtha		1948	Cone / IF	2
28	Gasoline		1948	Cone / IF	2
31	Gasoline / Light Naphtha		1958	Open Floater	1
33	Distillate		1948	Cone	12

Tank Number	Service	Tank Shell Capacity (BBL) See Notes 7 and 10.	Tank Age	Tank Type	Containment (Dike ID) See Note 9.
34	Distillate	(b) (7)(F), (b) (3)	1948	Cone	12
35	Heavy Naphtha		1952	Cone / IF	1
36	Light Naphtha		1948	Cone / IF	11
37	Heavy Naphtha		1948	Cone / IF	12
38	Heavy Naphtha		1948	Cone / IF	12
40	Additive		1987	Cone	19
41	Resid		1948	Cone	11
42	Heavy Naphtha		1960	Cone	15
43	Gasoline		1953	Cone / IF	12
44	Slop Oils		1948	Dome / IF	15
45	Slop Oils		1948	Cone / IF	15
46	Aromatics		1948	Cone / IF	15
47	Slop Oils		1948	Cone / IF	15
48	Distillate		1948	Cone	14
49	Distillate		1948	Cone	14
50	Distillate		1948	Cone	16
51	Distillate		1948	Cone	16
52	Distillate		1948	Cone	16
53	Distillate		1948	Cone	16
54	Distillate		1948	Cone	14
55	Distillate		1948	Cone	14
58	Heavy Naphtha		1948	Cone	13
59	Heavy Naphtha		1948	Cone	13
66	Dedust Oil		1948	Cone	17
72	Resid		1959	Cone	21
73	Resid		1959	Cone	21
74	Resid		1948	Cone	21
75	Resid		1948	Cone	21

(b) (7)(F), (b) (3)

Tank Number	Service	Tank Age	Tank Type	Containment (Dike ID) See Note 9.
76	Resid	1948	Cone	21
77	Resid	1948	Cone	21
78	Additive	1948	Cone	22
79	Resid	1972	Cone	23
82	Crude	1948	Cone / IF	24
83	Crude	1948	Cone / IF	24
86	Slop Oils	1948	Cone / IF	24
101	Ethanol	1961	Cone / IF	25
102	Gasoline	1962	Cone / IF	25
108	Heavy Naphtha	1948	Cone / IF	11
280	Distillate	1967	Cone	10
300	Gasoline	1959	Open Floater	9
301	Gasoline	1953	Open Floater	8
302	Distillate	1967	Dome / IF	10
303	Gasoline	1954	Open Floater	10
304	Gasoline	1955	Open Floater	10
305	Distillate	1955	Cone	10
306	Distillate	1954	Cone	10
307	Distillate	1955	Cone	10
308	Gasoline	1957	Open Floater	10
309	Gasoline	1959	Open Floater	9

Total # of tanks = 75; Total Aboveground bulk oil storage tank Capacity (b) (3), (b) (7)(F)

Notes:
(1) Average volume of material stored on any given day is approximately 50 percent of shell capacity.
(2) The following tanks are not in oil service:
Tanks D60 - D67 are spheres storing Liquefied Petroleum Gas
Tank 12 is in solid coke service
Tanks 93 and 109 are in potable or raw water service
Tanks 110, 111, 112, and 117 are in utility water service
Tank 350 is in wastewater service. Exempted under 40 CFR 112.1(d)(6)
Tanks TR-1, TR-2, TR-5, TR-7, TR-15, TR-16, TR-17, TR-18, and 410 are not in oil service (caustic, spent caustic)

(3) Tanks that are identified in the refinery's Tankage Data Sheet as 'out of service' or "OOS' are emptied, blinded (disconnected), and labeled OOS. These tanks include 32, 57, 68, 69, 84, 87, and 103 as of 03/09/2011. These tanks are permanently closed and are exempt under 40 CFR 112.1(d)(2)(ii).
(4) All aboveground tanks are constructed of steel except where noted. Tanks are welded steel construction.
(5) Tank Type = Cone - Cone Roof; Open Floater – External Floating Roof; IF – Internal Floating Roof; Dome – Geodome over floating roof.
(6) All the tanks are USEPA jurisdiction only except Tank 2 which is dual jurisdiction (DOT & USEPA).
(7) Shell Capacity is at the point of overfill according to the tank's strapping charts.
(8) For Failure / Cause, there are no failures or any tanks which resulted in a loss of tank contents.
(9) For secondary containment volumes, see referenced dike number in Table C.6.
(10) To determine shell capacity in terms of gallons, multiply barrels by 42.

Table C.2 - Fixed Aboveground Storage Tanks (Misc. Atmospheric Tanks)

Tank Number	Service	Tank Shell Capacity (BBL) See Notes 3 and 5	Tank Age	Tank Type	Containment (Dike ID)
D43a (Proto Fuel)	Gasoline	(b) (7)(F), (b) (3)	1979	Vertical on legs	>110 (see note 1)
D43b (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43c (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43d (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43e (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43f (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43g (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43h (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43i (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D43j (Proto Fuel)	Gasoline		1979	Vertical on legs	>110 (see note 1)
D53 (Fire Training)	Transmix (Gasoline / Distillate)		1948	Horizontal on supports	>103 (see note 1)
D965	Red Dye (Kerosene/Naphtha)		2005	Horizontal on supports	124
FT-001 (RWPH)	Gasoline		Approx. 1995	Horizontal on supports	142
FT-002 (Pond 6)	Distillate		1991	Horizontal on supports	123
FT-003 (Cooling Twr North)	Distillate		1998	Horizontal on supports	114

Tank Number	Service	(b) (7)(F), (b) (3)	Tank Age	Tank Type	Containment (Dike ID)
FT-004 (Cooling Twr South)	Distillate		1998	Horizontal on supports	114
FT-005 (Whs East)	Gasoline		Approx. 1985	Horizontal on supports	>110 (see note 1)
FT-006 (Whs West)	Distillate		Approx. 1985	Horizontal on supports	>110 (see note 1)
FT-007 Pilot Bldg)	Gasoline		Approx. 2000	Horizontal on supports	>110 (see note 1)
FT-008 (HCBL)	Distillate		1986	Vertical on Concrete Pad	>110 (see note 1)
FT-009 (Crude)	Distillate		2002	Vertical on Concrete Pad	>110 (see note 1)
Tk-910 (LCO flush)	Distillate		2000	Horizontal on supports	>110 (see note 1)

Total # of tanks = 22; Total Aboveground bulk oil storage tank Capacity = (b) (3), (b) (7)(F)

Key: Vertical – fixed roof, H – Horizontal

Notes:
(1) Additional containment is provided by site wide drainage (oily water sewer system, oily water separator, and Tank 350).
(2) All aboveground tanks are constructed of steel except where noted.
(3) SHELL capacity is at the point of overflow per the strapping charts or rated capacity from manufacturer.
(4) For Failure / Cause, there are no failures or any tanks which resulted in a loss of tank contents.
(5) To determine shell capacity in terms of gallons, multiply barrels by 42.

Table C.3 - Portable Container (Drums, Totes, Roll-off Bins) Storage Areas

Storage Area and Type of Containers	Substance Stored *(Oil)*	Maximum Number and Largest Shell Capacity *(gals)*	Containment System(s) Description
Approx. (20) Satellite Accumulation Areas located throughout refinery	Waste Oils	(b) (7)(F), (b) (3)	Sited on concrete or asphalt area. Area draining to site wide drainage.
Waste Staging Area (RCRA Drum Storage Area)	Waste Oils		Curbed and concrete area with manual drain valve draining to site wide drainage.
Catalyst Staging Area	Waste Oils		Curbed and concrete area with manual drain valve draining to site wide drainage
Container Storage Area in mechanical shop	Additives Lube Oils		Inside building. Spill pallets and/or concrete floor, allowing the spill material to be captured and cleaned up using active measures. Area is in site wide drainage.
Container Storage Area in garage	Additives Lube Oils		Inside building. Spill pallets and/or concrete floor, allowing the spill material to be captured and cleaned up using active measures. Area is in site wide drainage.
Container Storage Area outside of warehouse	Additives Toluene Naphthalene Solvents		Outside building. Asphalt and/or concrete floor with manual drains allowing the spill material to be drained into site wide drainage.
Container Storage Area inside warehouse	Additives Lube Oils Used Oil		Inside building. Concrete floor, allowing the spill material to be captured and cleaned up using active measures. Area is in site wide drainage.
Container Storage Area inside river water pump house	Additives Lube Oils Used Oil		Inside building. Concrete floor, allowing the spill material to be captured and cleaned up using active measures. Area is in site wide drainage.
Used solvent tote outside of mechanical shop	Used Solvents		Outside building. Asphalt area draining into site wide drainage.
Container Storage Area at Laboratory	Asphalt Solvents (iso-octane / toluene / xylene)		Outside building. Asphalt area draining into site wide drainage.
Container Storage Area at Asphalt Area	Asphalt		Sited on asphalt area at the loading rack draining to paved roads. Active response measures.

Containers in-use or in-transit within process units or through-out plant (see Note 2.)	Various	(b) (7)(F), (b) (3)	Sited on concrete or asphalt area. Area draining to site wide drainage.
Temporary portable fuel tanks for use by contractors throughout plant	Distillate Gasoline	(Various) Various	Placed in integral steel containment areas or double wall tanks. Clean-up supplies are maintained on-site, if needed.

Approximate Portable Container Oil Storage Capacity = (b) (3), (b) (7)(F)

Notes:
(1) Containers <55 gallons are not included as part of this Plan.
(2) Containers in and adjacent to process units and throughout the plant are in use or in transit and are not listed separately in this plan.
(3) Temporary portable fuel tanks for use by contractors may be located within plant. These tanks have integral steel containment tanks or double wall tanks. Clean-up supplies are maintained on-site, if needed. These tanks are owned and operated by contractors and thus, are the responsibility of the contractor.
(4) Assume 4,040 gallons for roll-off bin capacity.

(b) (7)(F), (b) (3)

Table C.4 - Mobile Containers

Storage Area and Type of Containers	Substance Stored *(Oil)*		Containment System(s) Description
Tank cars on Track 7 (former coke loading rack)	Distillates Resid		Track 7 is within site wide drainage. Spills will be contained by contour of soil.
Tank cars on Tracks 4, 5, or 6 at south siding (exclusive lease from MRL)	Resid		Spills would remain in the rail siding area or be captured in underflow/overflow retention baffles.
Vacuum trucks	Product Water Mixtures		Typically located in asphalt or concrete area. Flat terrain allowing the spill to be captured and cleaned up using active measures, as needed. Stored emptied inside garage when not in use. Areas are in site wide drainage.
Fuel Tenders FT-010 FT-011 FT-012 FT-013 FT-014 (2 compartments) FT-015	 Distillate Distillate Distillate Distillate Gasoline Distillate Gasoline		Typically located in asphalt or concrete area. Flat terrain allowing the spill to be captured and cleaned up using active measures, as needed. Stored emptied in fuel tender storage area when not in use. Areas are in site wide drainage.
Fueling truck in transit (contractor)	Distillate Gasoline		Typically located adjacent to fuel dispensers. Not stored overnight.
Baker tanks and roll-off bins used for maintenance operations	Product Water Mixtures		Placed in existing containment areas depending on safety considerations. Clean-up supplies are maintained on-site, if needed. Areas are in site wide drainage.
Temporary mobile generators, compressors and pumps with integral fuel tanks	Distillate Gasoline		Placed in existing containment areas depending on safety considerations. Clean-up supplies are maintained on-site, if needed. Areas are in site wide drainage.

Approximate Mobile Container Oil Storage Capacity = (b) (3), (b) (7)(F)

Notes:
(1) Assume 4,040 gallons for roll-off bin capacity.
(2) Assume quantity of 10 where ‘various’ is used to estimate Approximate Mobile Container Oil Storage Capacity.

Table C-5. Oil Filled Operational and Manufacturing Equipment (excluding Electrical)

Location and Type of Equipment	Substance *(Oil)*	Capacity *(gals)*	Containment System(s) Description
Process Units - Crude, Hydro Treating, Semi-Regen Reformer, HF Alkylation, FCC, Hydrocracker, Hydrotreating, Fluid Coker, Utilities, Flares, LS Mogas. (see Note 1)	Various	Various	Process Units are located on concrete pads with curbing and catch basins that drains to site oily water sewer / oil water separator. Area is in site wide drainage.
Mechanical Shop - Part Cleaning Solvent Baths	Solvents	Various	Inside building. Spill pallets and/or concrete floor, allowing the spill material to be captured and cleaned up using sorbent materials. Area is in site wide drainage.

Approximate Oil Filled Operational and Manufacturing Equipment (excluding Electrical) Oil Storage Capacity (b) (3), (b) (7)(F)

Notes:
(1) These process units include process vessels (e.g., towers, reactors, drums, furnaces, exchangers, additive tanks, hot oil systems, flares, etc.), operational equipment (e.g., compressors, pumps, hydraulic systems, gear boxes, heaters, hot oil systems, etc.), portable containers, day tanks, lubricating equipment, heat exchangers, packaging equipment, pumping and piping necessary for manufacturing of products. No attempt is made in this Plan to itemize this equipment due to the quantity of equipment, complexity of the equipment, and the impracticability of illustrating the layouts. See SPCC Appendix C for more details.

Table C.6a - Oil Filled Electrical Equipment in Service (Transformers, breakers, etc.) [1]

Circuit No.	Service	Rating KVA	Manufacturer	Size (gallons)	Year Built
47	350 East	10,000	Square D	(b) (7)(F), (b) (3)	1993
48	350 West	10,000	Square D		1993
21	EDC South	7500	Square D		1993
20	EDC North	7500	Square D		1993
15	HCBL Primary	7500	Square D		1993
18	ULEB Primary	5000	Square D		1993
43	150 North	3750	Square D		1993
44	150 South	3750	Square D		1993
7	Coker East	1500	RTE		1985
13	Crude West	1500	RTE		1985
13	BOHO North	750	Spokane		1976
32	BOHO South	750	Spokane		1976
14	Cat	1000	Square D		2000
9	Cooling Tower North	750	Spokane		1978
17	Cooling Tower South	750	Spokane		1978
11	Crude Booster	750	Balteau Standard		1988
51	HCBL East	750	GE		Prior to 65
16	HCBL West	750	GE		Prior to 65
49	Hydrofiner	750	Square D		1980
2	LC-23	750	Square D		1995
	Load Center #23	750	T&R		2006
29	Patch #1 (Alky) East	750	Spokane		1978
17	Patch #1 (Alky) West	750	Sierra		Prior to 79
8	Patch #2	750	T&R		Unknown
25	POFO North	750	Niagara		1971
17	POFO South	750	Niagara		1971
22	ULEB East	750	Westinghouse		1969
33	ULEB West	750	Westinghouse		1969
	Contractor Lot	500	Square D		1984
28	Fire Pump (Pond 6)	300	Westinghouse		1970
41	Lab Rack	500	Balteau Standard		1983
	OCC	500	Square D		1983
27	Pond Aerators	500	Westinghouse		1978

				(b) (7)(F), (b) (3)
45	River Pump House	500	Weaver	Prior to 79
	Shop	500	Square D	1993
3	Asphalt Truck Loading	300	Westinghouse	Unknown
12	West Tank Farm	300	Westinghouse	1981
4	Coke Tank Rack	225	GE	1966
5	LPG	150	GE	1984
1	South Tank Farm	112	Square D	1983
	OCC Temp	750	Sunbelt	2000
	CHUB MDLST1	3000	Cooper	2002
	CHUB MDLST2	3000	Cooper	2002
	CHUB MDLST3	1500	Cooper	2002
	CHUB MDLST4	1500	Cooper	2002
	Hydro Finer	750	Square D	Unknown
	New CAT	1,000	Square D	2001

Approximate Oil Filled Electrical Equipment (including Tables C.5a and C.5b) Oil Storage Capacity = 20,121 gallons

Notes:
(1) Transformers that contain oil at capacities of 55 gallons or greater.
(2) Concrete pad with either gravel bed surrounding the pad area will serve as localized containment until clean-up measures can be used, if needed or area drains to site wide drainage.
(3) Transformers are located throughout Refinery. Locations of transformers are delineated in the Key Map for Electrical Switchhouse and Motor Control Centers.

Table C.6b - Oil Filled Electrical Equipment - Other (Transformers, breakers, etc.) (1)

Circuit No.	Service	Rating KVA(4)	Manufacturer	Size (gallons)	Serial No.	Year Built
	SPARE TRANSFORMERS					
	Spare in fenced area	1000	GE	250	E-692129	Unknown
	Spare in fenced area	750	Pennsylvania	283	C-26690-1-1	Unknown
	Spare (West Qhanset)	750	T&R	540	071222-2	Unknown

Notes:
(1) Transformers that contain oil at capacities of 55 gallons or greater.
(2) Concrete pad with either gravel bed surrounding the pad area will serve as localized containment until clean-up measures can be used, if needed or area drains to site wide drainage.
(3) Transformers are located throughout Refinery. Locations of transformers are delineated in the Key Map for Electrical Switchhouse and Motor Control Centers.
(4) Spare transformers are stored in areas with either local containment or within site wide drainage.

Table C.7 – Secondary Containment Volumes for Product Tankage

Tank Dike ID	Tanks	Largest Shell Capacity, BBL	Dike Volume, BBL*	Containment Capacity, %	Comments
1	26^, 31, 35	(b) (7)(F), (b) (3)			Earthen dike and floor.
2	19, 21, 27^, 28, 32				Earthen dike and floor.
3	2, 17^				Earthen dike and floor. Manual drain valves to oily water sewer.
4	1, 3^, 9, 10				Earthen dike and floor. Manual drain valves to oily water sewer.
5	7, 8^				Earthen dike and floor. Manual drain valves to oily water sewer.
6	4, 5^, 6				Earthen dike and floor.
7	11, 13, 14, 15, 16^				Earthen dike and floor. Manual drain valve to oily water sewer.
8	301				Earthen dike and floor
9	300, 309				Earthen dike and floor.
10	280, 302, 303, 304, 305, 306, 307^, 308				Earthen dike and floor.
11	36, 41^, 108				Earthen dike and floor.
12	33, 34, 37, 38, 43^				Earthen dike and floor.
13	58, 59				Earthen dike and floor.
14	48, 49, 54, 55^				Earthen dike and floor.
15	42^, 44, 45, 46, 47				Earthen dike and floor.
16	50, 51, 52, 53^				Earthen dike and floor.
17	66				Earthen dike and floor.
18	22, 23, 24^				Concrete floor and curbing. Gravity drains to site wide drainage.
19	40				Earthen dike and floor.
20	68^, 69				Earthen/concrete dike and earthen floor.
21	72^, 73, 74, 75, 76, 77				Earthen/concrete dike and earthen floor. Gravity drains to site wide drainage.
22	78				Gravity drains to site wide drainage.
23	79				Earthen/concrete dike and earthen floor. Gravity drains to site wide drainage.
24	82, 83, 84^, 86, 87				Earthen dike and floor.
25	101^, 102, 103, 104, 105				Earthen dike and floor.
26	57				Earthen dike and floor.

(1) Additional containment is pr site wide drainage).
(2) A release of the entire cont ntained within the secondary containment structures surroun halt tank volumes would be diverted and contained using a combina ds 3, 4, 5 and 6. Diversionary structures include: catch basin ow piping.

(3) Tank 44 and Tank 45 are equipped with water draw piping leading to an external pump system that is automatically started when a sump fills up. This water is pumped to the sour water strippers in the process area.
^ Largest tank in tank dike
* Based on Containment Capacity Worksheet prepared by Retec, Project EN-12-001-EG-R, 1997 and revised by ATC Associates, Inc. 2003.

EXXONMOBIL REFINING AND SUPPLY COMPANY

OIL SPILL RESPONSE PLAN
FRP 08A0020

ExxonMobil Billings Refinery

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.

APPENDICES

LIST OF FIGURES

DISTRIBUTION LIST

PLAN NUMBER	NAME	RESPONSE TEAM JOB TITLE
1	US EPA Region 8	OPA Program Coordinator (8EPR-ER) EPA Region VIII 1595 Wynkoop Street Denver, CO 80202-1129 Contact: Melissa Payan, FRP Coordinator Phone: 303-312-6511
2	Kelly E. Drain	Emergency Response Coordinator (Alternate Qualified Individual)
3	Operations Control Center	Shift Superintendent (Incident Commander / Qualified Individual)
4	Environmental Supervisor	FRP Coordinator
5	US DOT Office of Pipeline Safety	Response Plans Officer (PHP-80) US DOT Office of Pipeline Safety Room 2103 400 Seventh Street SW Washington, DC 20590 Contact: L. E. Herrick Phone: 202-366-5523

RECORD OF CHANGES

CHANGE NUMBER	DATE OF CHANGE	DESCRIPTION OF CHANGES
1 (Meyers & Associates)	July 1993	Pages: II thru vi, viii, 1-2 thru 1-5, 1-13, 1-14, 2-6, 3-1, 3-6 thru 3-37, 4-4, 4-21, 5-1, 7-3 thru 7-6, 8-2 thru 8-4, 9-1, 9-2, 10-1 thru 10-3, 10-5, Appendix A, B-2, B-3, B-5 thru B-12, Appendix D, Appendix E
2 (Meyers & Associates)	August 1993	Page 4-8
3 (Unifield Engineering, Inc.)	October 1994	Pages I thru ix, 1-1 thru 1-11, 2-1 thru 2-14, 3-5, 3-13 thru 3-22, 3-28, 3-29, 4-1 thru 4-18, 6-2, 7-1 thru 7-6, 8-1 thru 8-5, 9-1, 9-2, 9-5 thru 9-7, 9-17 thru 9-19, 10-1 thru 10-4, 11-2, Appendices A, B, C, D, and deleted Appendix E
4 (ThermoRetec)	April 1999	i - viii, 1-2 through 1-4; Fig. 1.1, 1-9, 2-1, 2-2 through 2-13, 3-1 through 3-6, 3-8, 3-19, 3-20, 3-23 through 3-27, Section 4, Section 6, Section 7, Section 8, Section 10 App. B-1 through B-8, B-11, B-13 through B-16, App. C, App. E (partial), added App. F
5 (ThermoRetec)	July 1999	iii, iv, vi; viii; 1-3; Figure 1.2; 2-9 through 2-11; 3-6; 3-12; 3-14; 3-15; 4-1 through 4-41; 7-3; 7-5; 7-6; 8-3; 8-4; 9-6; 10-1; 10-2; B-9 through B-14; C-9; D-3 through D-5; D-8 through D-10
6 (ExxonMobil)	July 2002	Exxon revised to ExxonMobil in all instances; i, ii, vii, ix,
7 (ATC Associates Inc.)	September 2003	Pages: i – ix, 1-2, 1-10, 3-5 through 3-8, 3-17, 3-19, 4-2, 4-3, 4-13, 4-14, 4-17, 4-18, 4-28, 4-34, 4-19 through 4-22, 6-1 through 6-3, 7-3, 8-3 through 8-5, 10-1, 10-2. Figures: 1.1, 2.3, 2.4, 7.1, 7.2, 9.4, 10.1 Appendix: App B (minor), App C, App D (minor), App E, App F
8 (ExxonMobil)	April 2006	Annual Review and Update of Plan. Significant rewrite to make plan more user friendly. Added US DOT requirements for breakout Tank 2.
9 (ExxonMobil)	March 2007	Annual Review and Update of Plan. ERAP and OSRP: Updated Figure 2.3. OSRP: Updated Appendix A Spill History: OSRP Appendix C Tank Data Sheet and filepath: Appendix E: Added ACTI Agreement Amendment 001, ACTI Equipment Deployment Report 2006 and NARRT 2006 Accomplishments
10 (ExxonMobil)	March 2008	Annual Review and Update of Plan. OSRP: Updated Distribution List, Figure 7.1. Appendix C: Updated Table C.2. Appendix E: Added 2007 ACTI Equipment Deployment Report, NARRT Accomplishments, MT/WY Coop Deployment

11 (ExxonMobil)	December 2009	Annual Review and Update of Plan. OSRP: Updated Distribution List, Figure 7.1. Appendix C: Updated Table C.1 and Tank Data Sheet. Appendix E: Added 2008 ACTI Equipment Deployment Report, NARRT Accomplishments
12 (ExxonMobil)	July 2011	Updated communications Radio, cell, texting doc. Radio section page 7, addition of security channel.
13 (ExxonMobil)	February 2012	Extensive update due to comments from EPA's letter dated Oct 24 2011 (ref: 8EPR-ER). Changes include: revised Response Plan Cover Sheet; revised Figures 1.1, 1.2, 3.7 and 7.1; added Figures 1.3, 1.4, 4.1 and 10.1; revised Appendix C, Tables C-1 and C-2; Appendix A and E revisions; and revisions to multiple section in the ERAP and OSRP addressing needed enhancements.

1.0 INTRODUCTION

1.1 PURPOSE/OBJECTIVES

Except for the required notifications, this Plan does not provide a "how to" approach. That is, it does not provide rigid step by step actions to be taken or procedures to be followed. Experience shows that each spill is different, calling for divergent responses. The purposes of this Plan are to:

- help refinery personnel prepare for spills.
- ensure an effective, comprehensive response.
- prevent injury or damage to company employees, the public, and the environment.
- define notification procedures to be followed when a spill, or the threat of one, occurs.
- document equipment, personnel, and other resources available to assist with the spill response.
- establish a response team, assign individuals to fill the positions on the team, and define the roles and responsibilities of team members.
- define organizational lines of responsibility to be adhered to during a response.
- outline response procedures and techniques for combating the spill.
- satisfy the requirements of the Oil Pollution Act of 1990.

Nothing contained herein replaces good judgment or prudent operating practices.

The combination of the Emergency Response Action Plan and Oil Spill Response Plan makes up the Facility Response Plan as required by OPA 90 regulations. The "Emergency Response Action Plan" is a digest of Oil Spill Response Plan and is retained as a separate part of this document. It serves as ready reference for those on duty at the time of an incident.

This Oil Spill Response Plan, with the resources and equipment listed herein, is a planning document to demonstrate the potential response capability available to respond to an oil spill from the ExxonMobil Billings Refinery. It is not a guarantee of what will occur or the equipment/resource deployment sequencing that will be used in an actual spill event. Nothing in this Plan is intended to limit the discretion of persons in charge of an actual spill response to select any sequence, and to take whatever time they deem necessary to maximize the effectiveness of the response, consistent with safety considerations. This Plan represents a planning approach but is not and should not be regarded as a performance guarantee. Response operations in any spill event will be tailored to meet the actual circumstances of the event.

1.2 FACILITY DESCRIPTION

Facility Name:	ExxonMobil Billings Refinery
Street Address:	700 ExxonMobil Road Billings, Montana 59101
Mailing Address:	Post Office Box 1163 Billings, Montana 59103
Telephone Number:	(406) 657-5380
Facsimile Number:	(406) 657-5374
Facility Location:	(b) (3), (b) (7)(F) [redacted]
NAICS/SIC Code:	324110 / 2911, onshore non-transportation-related petroleum refining
Date of Initial Operation:	1949
Response Plan Number:	FRP 08A0020
Facility Owner/Operator:	ExxonMobil Refining and Supply Company
FRP Coordinator:	Environmental Coordinator, 406-657-5380
Qualified Individual (QI):	Shift Superintendent In-plant Emergency Line: 5200 Backup: 406-657-5320 Radio: A/1
Alternate QI:	Emergency Response Coordinator Office: 406-657-5267 Backup: 406-325-1469 (cellular)

The term Qualified Individual and Incident Commander are used interchangeably throughout this document

The refinery began operation in July 1949 and consisted of crude unit, fluid catalytic cracking (FCC) unit, light ends absorber and stabilizer, and finishing and treating unit. Current high rate of the facility is 60,000 barrels per calendar day. The ExxonMobil Billings Refinery processes primarily heavy domestic crude (less than 28° API) with varying quantities of Canadian Crude (varying gravity, 25-40 ° API) to produce a complete fuel products slate. The crude oil arrives on the west side of the refinery via pipeline. Products leave the refinery by pipeline, truck and railcar. The connections to the product pipelines are between the refinery and the south tank farm. Gasoline and diesel are also shipped by truck from ExxonMobil Oil Corporation's Billings Terminal adjacent to the refinery (Note: the Terminal is not part of this Plan). Appendix C provides a detailed listing of oil storage tanks. Figure (Sheet Number) 1.1 provides a Site Plan of the refinery. Figure (Sheet Number) 1.2, entitled Site Surface and Sewer Drainage Plan, shows the site drainage features. Figure (Sheet

Number) 1.3, entitled Fire Water System, shows the site fire water system features. Currently the refinery employs approximately 275 personnel.

Substantial expansions to the refinery include:
1953 - Installed a polymerization unit
1954 - Expanded FCC unit and installed fluid coking unit
1956 - Installed a hydrofiner unit and a powerformer
1958 - Increased crude capacity
1959 - Installed hydrofluoric acid alkylation unit
1962 - Increased fluid coking unit capacity
1964 - Increased hydrofiner capacity
1965 - Installed sour water stripper, hydrocracking, hydrogen units and biological oxidation system
1967 - Increased crude and powerformer capacities
1968 - Increased hydrogen and hydrocracker capacities
1971 - Installed powerformer and hydrofiner units
1973 - Installed alkylation unit
1977 - Increased fluid coking capacity
1980 - Installed diene hydrogenation unit
1993 - Upgrade of diesel hydrofining unit to low sulfur diesel hydrofining unit
1993 - Upgrade of HF alkylation unit from Stratco reactor to UOP designed reactor
2004 - Installed low sulfur mogas unit
2006 - Upgrade of low sulfur diesel unit to ultra low sulfur diesel unit

The largest tank (Tank 17) was constructed in 1969 and since that time, there has been no substantial expansions requiring the facility to re-evaluate and increase the response equipment necessary to adequately respond to a worst case discharge from the facility. Minor expansions have occurred that changed the throughputs, added different product lines and additional storage capacity but the expansions did not impact the worst case discharge scenario.

The refinery is situated on the south bank of the Yellowstone River, about 2 miles northeast of Billings, Montana. The refinery covers most of the south half of Section 24 and the north half of Section 25, Township 1 North, Range 26 East, in Yellowstone County. The refinery is bounded by the Yellowstone River to the north, and greenbelts to the east and west. Montana Rail Link railroad track extends along the south side of the refinery. Developments south of the railroad track include a Resource Conservation and Recovery Act (RCRA) permitted land treatment unit owned and operated by ExxonMobil Billings Refinery, an ExxonMobil Oil Corporation Terminal, ExxonMobil's South Tank Farm, the Yellowstone Energy Limited Partnership (YELP) co-generation power plant, the Montana Sulphur and Chemical Company plant, and other off-site commercial facilities. The refinery's active land use can be divided into five general areas: 1) the refinery process area; 2) the area inside tank storage dikes; 3) coke storage area; 4) South Tank Farm area; and 5) south refinery drainage area. The process area is the largest single area within the refinery (about 92 acres). The active portion of the site is approximately 118 acres.

The Yellowstone River is the receiving body of water with an annual minimum flow of 1,500 cubic feet per second. From the headwaters down to 40 miles above Billings, the Yellowstone is considered a prime recreational stream and fishery. Downstream it is used primarily for irrigation, drinking, industry, and recreation and fishing.

Although there are numerous DOT pipelines coming into and leaving the Billings Refinery, these lines are operated and maintained by ExxonMobil Pipeline and are not included in this plan. This plan does cover the breakout tank (Tank 2). Tank 2 accepts pressure surges

from ExxonMobil's crude pipeline and is therefore a regulated DOT breakout tank. However, day to day operation of the tank is crude storage for refinery use. If necessary, Tank 5 can service as a temporary back-up breakout tank when Tank 2 is out-of-service.

1.3 PLAN DISTRIBUTION

A copy of this Plan is distributed to company personnel who may provide assistance during spill response activities (See Distribution List). The FRP Coordinator is responsible for distributing the Plan.

If the person holding this copy is reassigned, this copy would be transferred to that person's replacement and the FRP Coordinator would be notified.

1.4 UPDATE PROCEDURES

This Plan will be updated as necessary by the FRP Coordinator. At least once each calendar year, the FRP Coordinator and Emergency Response Coordinator will also conduct a complete review of the Plan. The plan will also be revised within 60 days of each facility change that materially may affect the ability to respond to a worst case discharge. Revisions or amendments to the response plan will be made under any of the following conditions and documented in the Record of Changes sheet:

- There is a change in the facility's configuration that significantly affects the information included in the response plan.
- There is a change in the type of oil handled, stored, or transported that affects the required resources.
- There is a change in the name(s) and/or capabilities in the required oil spill removal organization (OSRO).
- There is a change in the facility's spill response equipment or emergency response procedures.
- There is a change in personnel and/or telephone numbers.
- There is a change in ownership.
- There is a change that significantly affects the implementation of the plan.
- There is a change in the regulations.

Relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and applicable Area Contingency Plan (ACP) will be reviewed annually by the FRP and Emergency Response Coordinators. If necessary, this plan will be revised to remain consistent and compatible with the other plans.

The DOT portions of this Plan will also be updated as necessary by the FRP Coordinator. At least once each calendar year, the FRP Coordinator will also conduct a complete review of the Plan. Revisions or amendments to the response plan will be made under any of the following conditions and documented in the Record of Changes sheet:

- There is an extension of the existing pipeline (related to the pipeline surge relief tank) or construction of a new pipeline in a response zone not covered by the previously approved plans.

- There is a relocation or replacement of the pipeline (related to the pipeline surge relief tank) in a way that substantially affects the information included in the response plan, such as a change to the worst case discharge volume.
- There is a change in the regulations.

Upon each revision, the Plan holders shall add or replace pages as directed. Revisions or amendments to the plan will be submitted to responsible agencies for information or approval. The **FRP Coordinator** will distribute the revisions to holders of the plan.

ExxonMobil has established post-spill review procedures to evaluate the effectiveness of the plan and the need for plan amendments. A post spill process may consist of the following two components:

1. Causal Factor Why Tree (CFWT) Analysis
2. Critique of the incident.

Within a reasonable time period after the incident, an analysis will be conducted in order to reconstruct the incident. The objective of the analysis is to establish a clear picture of the events that took place during the emergency. Such information may be used to conduct an incident critique, to determine how much the response cost, or as part of a formal accident investigation.

All major emergency responses will be formally critiqued. Such incidents may include situations where persons were exposed to hazardous materials, working incidents involving significant ExxonMobil resources, time commitments, or any situation deemed appropriate by the Incident Commander.

EPA is required to review and approve the Plan every five (5) years. The FRP **Coordinator** will provide the agency a copy of the most recent Plan within five years from the date of last approval. Agency approval letters are maintained in the appropriate file.

1.5 COMPANY POLICY/PHILOSOPHY

It is ExxonMobil's policy to exercise diligence in preventing spills. If a spill occurs within the facility, action should be taken promptly to contain and clean up the released substance and make the necessary environmental notifications. Further, if any spill caused by another party occurs at the ExxonMobil Billings Refinery, prompt containment should be provided; however, cleanup and environmental notifications will be the responsibility of the party causing the spill. ExxonMobil may perform cleanup if the responsible party's failure to do so is interfering with safe and proper functioning of the company's business.

1.6 SCOPE OF PLAN/GEOGRAPHIC AREA

This Plan covers land and water spills that could occur at ExxonMobil's operations at the ExxonMobil Billings Refinery. Techniques and response procedures are included for spills that could enter the Yellowstone River.

The refinery's geographic location boundaries have been defined as the area occupied by the facilities extending down the Yellowstone River approximately 56 river miles. The planning distance calculations are presented in Appendix D.

The Plan provides for response to spills for which ExxonMobil assumes the responsibility and that may occur within the refinery's geographic location boundaries.

1.7 INTERFACE WITH OTHER PLANS

Major spill response operations may require support from many parts of ExxonMobil. This assistance can include:

- Management/supervisory support.
- Technical support.
- Certain administrative services support when the incident is of a major proportion.

The nature of this support, and how it can be obtained, is outlined in Section 4.0 of this Plan.

Numerous other response manuals and plans exist which apply to spills within the geographic area of this plan. This Plan is designed to interface with the other plans. Priority of these plans will be adhered to pursuant to the federal, state, and local laws and regulations. The Incident Commander, working through team members, will interface with the State and Federal On-Scene Coordinators. Additional ExxonMobil manuals specific to the Billings Refinery, include:

- ExxonMobil Emergency Manual, Billings Refinery; and
- ExxonMobil Oil Spill Response Field Manual.

Copies of the manuals are maintained at the refinery for use during a spill response as needed.

1.8 CROSS REFERENCE FOR OPA 90 FORMAT

This Plan was formatted to incorporate EPA’s final rule under 40 CFR Part 112.20 and Appendix F. Figures 1.4 and 1.5 provide a cross reference between the plan and the final rule.

Figures 1.6 provide a cross reference between the plan and the DOT requirements in 49 CFR Part 195, Appendix A.

FIGURE 1.1

SITE PLAN

(See Figure 1.1 in ERAP)

FIGURE 1.2

SITE SURFACE AND SEWER DRAINAGE PLAN

(See Figure 1.2 in ERAP)

FIGURE 1.3

FIRE WATER SYSTEM

(See Figure 1.3 in ERAP)

FIGURE 1.4

EPA Final Rule
40 CFR Part 112.20, Facility-Specific Response Plans

PART 112.20 SECTION	ITEM	PLAN LOCATION
112.20(d)	Plan Amendments	Section 1.4
112.20(f)(1)	Substantial Harm Determination	Response Plan Cover Sheet
112.20(g)	NCP and ACP Consistency	Sections 1.4 and 1.7
112.20(h)	Emergency Response Action Plan (i) Qualified individual (ii) Emergency notifications (iii) Notification checklist/form (iv) Facility response equipment (v) Response personnel (vi) Evacuation plans (vii) Immediate response measures (viii) Facility diagram	Emergency Response Action Plan
112.20(h)(2)	Facility Information	Section 1.2
112.20(h)(3)(i)	Private response resources	Section 7.2
112.20(h)(3)(ii)	Contracts with response organizations	Appendix E
112.20(h)(3)(iii)	Notifications	Section 2.0
112.20(h)(3)(iv)	Notification checklist	Figure 2.4
112.20(h)(3)(v)	Response personnel	Section 4.0
112.20(h)(3)(vi)	Facility response equipment	Section 7.2.1 and Figure 7.1
112.20(h)(3)(vii)	Evacuation plans	Section 3.9
112.20(h)(3)(viii)	Diagram of evacuation	Figure 3.7
112.20(h)(3)(ix)	Qualified individual responsibilities	Section 4.2, Figure 4.1
112.20(h)(4)	Hazard evaluation	Appendices C and D
112.20(h)(5)	Response planning levels	Appendix B
112.20(h)(6)	Discharge detection systems	Section 3.7

FIGURE 1.4 (Continued)

EPA Final Rule
40 CFR Part 112.20, Facility-Specific Response Plans

PART 112.20 SECTION	ITEM	PLAN LOCATION
112.20 (h)(7)(i)	Response actions	Section 3.0
112.20(h)(7)(ii)	Equipment for each scenario	Section 4.0, Appendix B
112.20(h)(7)(iii)	Disposal plan	Section 3.6
112.20(h)(7)(iv)	Containment and drainage	Section 8.5
112.20(h)(8)(i)	Inspection records	Section 7.4
112.20(h)(8)(ii)	Drill program description	Section 10.2
112.20(h)(8)(iii)	Training program description	Section 10.1
112.20(h)(8)(iv)	Training and drill logs	Section 10.3
112.20(h)(9)	Site plan and drainage diagram	Figures 1.1 and 1.2
112.20(h)(10)	Facility security systems	Section 3.11
112.20(h)(11)	Response plan cover sheet	Response plan cover sheet

FIGURE 1.5

EPA Final Rule
40 CFR Part 112, Appendix F, Facility-Specific Response Plan

PART 112.20, APPENDIX F SECTION	ITEM	LOCATION
1.1	Emergency response action plan	Emergency Response Action Plan
1.2	Facility information	Section 1.2
1.3.1	Notification	Section 2.0 and Figures 2.1 thru 2.4
1.3.2	Facility response equipment	Section 7.2.1 and Figure 7.1
1.3.3	Response equipment testing	Section 7.4
1.3.4	Response personnel and training	Sections 4.2 and 10.1 and Figure 2.3
1.3.5	Evacuation plans	Section 3.9 and Figure 3.7
1.3.6	Qualified individual responsibilities	Section 4.2, Figure 4.1
1.4	Hazard identification	Appendices C and D; and Figure 1.1
1.5	Discharge scenarios	Appendix B
1.6	Discharge detection systems	Section 3.7
1.7.1	Response resources	Section 7.0 and Appendix B
1.7.2	Disposal plans	Section 3.6
1.7.3	Containment and drainage planning	Section 8.5
1.8.1	Facility self-inspection	Section 7.4
1.8.2	Facility drills/exercises	Section 10.2
1.8.3	Response training	Section 10.1
1.9	Diagrams	Figures 1.1, 1.2 and 1.3
1.10	Security	Section 3.11
2.0	Response plan cover sheet	Response plan cover sheet

FIGURE 1.6

US DOT RSPA
49 CFR Part 194, Appendix A - Cross Reference Index

Section	Description	Oil Spill Response Plan (sec. no.)
1	**Information Summary**	
1(a)(1)	Name and address of Operator	1.2
1(a)(2)	Response zone list and descriptions	NA – one zone
1(b)(1)	Core plan information summary	1.2
1(b)(2)	Qualified Individual	1.2
1(b)(3)	Response zone description	NA
1(b)(4)	Line sections	NA
1(b)(5)	Substantial harm determination	RSPA Response Plan Cover Sheet
1(b)(6)	Oil type and worst case volume	Appendix D
1(c)	Certification	RSPA Cover Sheet
2	**Notification Procedures**	
2(a)	State and local requirements	2.1.2, Figure 2.3
2(b)	Prioritized notification checklist	2.1.2, Figure 2.3
2(c)	Notification list	Figure 2.3
2(d)	QI notification procedures	2.1.1
2(e)	Primary/ secondary communication	2.1.1
2(f)	Notification information	Figure 2.3
3	**Spill Detection and On-Scene Spill Mitigation Procedures**	
3(a)	Initial discharge detection	3.1
3(b)	Prioritized response procedures	3.0
3(c)	Response equipment list	7.2
3(d)	24-hour equipment availability	7.2.1
3(e)	24-hour response personnel	4.2
4	**Response Activities**	
4(a)	Initial response action and supervision	4.1
4(b)	QI responsibility and authority	Figure 4.1
4(c)	QI coordination with FOSC	4.2
4(d)	Available response organizations	4.1
4(e)	Available personnel and equipment	4.3, 4.4

FIGURE 1.6 (con't)

US DOT RSPA
49 CFR Part 194, Appendix A - Cross Reference Index

Section	Description	Oil Spill Response Plan
5	**List of Contacts**	
5(a)	List of contacts/ contact information	Figure 2.3
5(b)	QI contact information	1.2, Figure 2.3
5(c)	Insurance and survey contacts	n/a
5(d)	Response resources	3.0
6	**Training Procedures**	
6	2.0 Training programs and procedures	10.1
7	**Drill Procedures**	
7(a)	Announced and unannounced drills	10.2
7(b)	Type and frequency of drills	10.2, Figure 10.1
8	**Response Plan Review and Update Procedures**	
8(a)	Periodic review/ substantial revision	1.4
8(b)	Post discharge review	1.4
9	**Appendix**	
9(i)	Area map	Figure 1.1
9(j)	Piping plan and profile	NA

2.0 NOTIFICATION PROCEDURES/WRITTEN REPORTS

2.1 NOTIFICATION PROCEDURES

2.1.1 Notification Sequence

An oil spill incident or a substantial threat of an incident at the ExxonMobil Billings Refinery will trigger a set of prioritized internal and external notifications. Figure 2.1 provides the logical sequence for alerting personnel of a spill. All notifications must be made immediately. The notification procedures must be followed to completion. If the responsible person (see Figure 2.1) is unable to notify a person listed, then the responsible person must make the notifications (if any) for that person.

Figure 2.3 provides telephone numbers needed to perform this task.

The primary method of making notifications is by telephone. If this is not available, the radio should be used.

NOTE: "Spill" means the release of oil onto the land or water by any manner. This includes by leaking, discharging, pumping, pouring, emitting, emptying, and/or dumping. **Any visible oil sheen in the water must be reported to regulatory agencies.**

2.1.2 Regulatory Notifications

Figure 2.2 provides a decision tree for alerting regulatory agencies. The Qualified Individual or his alternate will work with the Environmental/Regulatory Advisor to determine who should be called and who will do the notifications. Initial notifications will not be delayed pending collection of all information on the form. All required government agency notifications will be made as soon as possible after the discovery of the spill. Follow-up notifications will be made by the Environmental/Regulatory Advisor as directed by the Shift Superintendent (Incident Commander). The organizations, agencies and individuals called will depend on the type and size of the spill, the time of day, day of the week, and other circumstances regarding the spill.

The following guidelines should be observed when reporting information to regulatory agencies.

- Never include information that has not been verified.
- Never speculate as to cause of the incident or make any acknowledgment of liability.
- Document persons/agencies notified and content of message.
- **Do not delay reporting due to incomplete information.**
- Provide as much information as possible.
- It is not necessary to gather all the information prior to making the initial notification to the regulatory agencies.
- Be as precise as possible as to quantities spilled.
- Be concise.

The individual making the notifications should complete the Spill Response Activity Log in Figure 2.5 by listing the time each agency was notified and the name(s) of the

agency personnel contacted. The individual should immediately notify the Shift Superintendent (Incident Commander) of any written follow-up report(s) by an Agency.

2.2 WRITTEN REPORTS

Figure 2.4, UNIVERSAL ENVIRONMENTAL EMERGENCY NOTIFICATION FORM, provides the initial, internal written report that the Shift Superintendent is to complete in the event of spill or release situations. The form will be used to provide accurate oil spill incident information for the initial and follow-up notifications to federal, state, and local agencies. As mentioned previously, do not delay reporting due to incomplete information.

Within 30 days of a incident related to the Breakout Tank 2, the RSPA Form 700-1 must be submitted to US DOT Office of Pipeline Safety in accordance with 49 CFR Part 195.50. The form and instructions are located in the “O&M Procedures Manual & Operator Qualification Program” for Tank 2.

FIGURE 2.1

NOTIFICATION SEQUENCE - OVERVIEW

(see Figure 2.1 in ERAP)

FIGURE 2.2

NOTIFICATION SEQUENCE - REGULATORY AGENCIES

(see Figure 2.2 in ERAP)

FIGURE 2.3

NOTIFICATION LIST

(see Figure 2.3 in ERAP)

FIGURE 2.4

UNIVERSAL ENVIRONMENTAL EMERGENCY NOTIFICATION FORM

(see Figure 2.4 in ERAP)

FIGURE 2.5

SPILL RESPONSE ACTIVITY LOG

(see Figure 2.5 in ERAP)

3.0 RESPONSE ACTIONS

This section is a guide for response actions to be taken when a spill is first observed.

The first ExxonMobil individual who discovers a spill will be responsible for initiating response procedures. Figure 3.1 provides a flowchart showing the logical steps to be followed by the response team.

3.1 IMMEDIATE RESPONSE STEPS

Immediate steps to be taken by the spill observer include the following:

1. Make an immediate assessment of the incident. If uncertain about the safety of an area, approach area wearing protective gear, including breathing apparatus.
2. Report nature and location of incident to Shift Superintendent (Qualified Individual). Shift Superintendent will activate Oil Spill Response Team, as appropriate, and will make arrangements to have spill reported to the appropriate agencies.
3. Take any steps deemed necessary to minimize threat to public health and safety and to reduce the severity of the incident. (For example, shutdown any hotwork or motorized equipment in the area.)
   - **Until confirmed otherwise, the spill environment must be presumed to be hazardous. That presumption remains until the characteristics of the spilled material have been determined and the area has been tested.**
   - **If the responder does not have data and equipment to make that determination, an immediate request for this specific need should be made.**
4. If possible, take immediate steps to secure the source. Refer to Section 3.2 for recommended actions.
5. The Shift Superintendent functions as the Incident Commander until relieved of this task under the Incident Command System.

3.2 SECURING THE SOURCE

Securing the source is an extremely important step in spill response actions. However, a **source should only be secured if it can be performed safely and poses no threat to human health.** Steps taken to secure the source include the following.

- **For Transfer Equipment**

  1. If manifold fails, shut down upstream pumps, close upstream valves.
  2. If a hose failure is encountered, shut down upstream pumps, close upstream valves and drain hose in catch basin, if feasible.

- **For Tank Overflow**

  1. If the source of the spill is identified as a tank leaking or overflowing, divert oil to alternative tank or shut down upstream pump, close fill line valve and overflow valve (if necessary).
  2. Make every effort to contain the spill so as to limit affected area.

- **For Tank Failure**

  1. If the source of the spill is identified as a catastrophic tank failure (i.e., collapse) and safety conditions permit, divert oil to alternative tank and shut in all valves associated with the tank. If this is not possible, shut in the nearest upstream valve possible and all tandem lines associated with the failed tank to eliminate the possibility of additional product being discharged. Consider pumping contents to planned recovery tanks.
  2. Make every effort to contain the spill so as to limit the affected area.

- **For Piping Rupture**

  1. If the source originates from a pipe failure, shut down pumps, close pipe section block valves on both sides of spill, construct or obtain temporary containment, and bleed pressure off of pipeline into containment.
  2. Make every effort to contain the spill so as to limit the affected area.

- **For Explosion or Fire**

  Liquids
  1. Control or disperse vapors.
  2. Cool heated structures.
  3. Divert/control runoff.
  4. Recover products.

  Gases
  1. Disperse vapors.
  2. Isolate source of gas.
  3. Protect exposures.
  4. **If practical**, allow fire to burn itself out.

- **For Equipment Failure**

  1. For all equipment failures, upstream valves will be closed and the appropriate lines or vessels will be drained or, if pressurized, will be bled down into containment structures.
  2. Make every effort to contain the spill so as to limit the affected area.

3.3 GENERAL RESPONSE CONSIDERATIONS

Given below are general considerations that should be kept in mind when responding to a spill.

- Fire and explosion potential always exist.
- If uncertain about the safety of an area, approach wearing protective gear, including breathing apparatus.
- Approach spilled material from an upwind direction, if possible.
- Keep non-essential personnel away from scene.
- Toxic gases may be released by some spills.
- Do not walk into or touch any spilled material. Avoid inhaling fumes, smoke, and vapors, even if no hazardous materials are involved.

- Do not assume that gases or vapors are harmless because of lack of odor. Use air sampling equipment to ensure areas are safe to enter for continued response operations.
- Check the MSDS to determine the flammable and toxic characteristics of the spilled material.
- Speed is essential in recovery efforts, especially during the initial response.
- Determine strategic objectives at the beginning of a spill.

3.4 SPILL CONTAINMENT AND RECOVERY

After initial response actions have been taken to stop further spillage and required agencies notified, ExxonMobil will begin spill containment, recovery, and disposal operations.

The Incident Commander will make an assessment of the size and hazards of the spill. The type of oil plus its location and predicted movement will be considered. Figure 1.2 contains details regarding the predicted drainage of the spill.

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed to control and contain the spill. Containment booms may be used to contain the spill. If the spill reaches Yellowstone River, booms may be used to deflect or guide the spill to locations where it can more effectively be cleaned up using vacuum trucks or sorbent materials. Equipment and material will be used in the manner most effective for rapid and complete cleanup of the spill.

Figures 3.2, 3.3, and 3.4 contain guidelines for responses to spills on water, based on the type of product involved. Section 8.5, Drainage and Containment Conditions also contain detailed drainage and containment descriptions.

The spill response teams will interface and regularly communicate with the Federal On-Scene Coordinator (FOSC) if one is appointed. The FOSC and the Incident Commander will monitor and coordinate the clean-up activities to ensure satisfactory progress.

Guideline 1: Flash point over 100^{o} F (see Figure 8.1 of the ERAP)

These materials are not extremely hazardous and in most cases will float on the water. Although evaporation of these products can be significant, **the preferred response is containment and recovery.** Extreme caution should be exercised in order to assure that the area is safe and free of explosive vapors prior to commencement of containment and recovery activities. For crude spills, use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

Guideline 2: Flash point lower than 100^{o} F (see Figure 8.2 of the ERAP)

These materials float on the water and are extremely flammable. **Containment of these products may be extremely hazardous** as containment may allow explosive concentrations to form. **The preferred response is to knock down any vapors; then protect shorelines and marshes by diversionary booming and allowing the remaining product to evaporate.** Use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

Guideline 3: Asphalt (see Figure 8.3 of the ERAP)

Asphalt's main components are heavier than water. This material will therefore sink, leaving a sheen from its lighter components. **The preferred response is channel the asphalt to shallow water and recover as soon as possible.**

Guideline 4: Figure 8.4 of the ERAP provides guidelines for responding to spills on land.

The refinery will utilize all of the personnel and materials available locally. If more response is required, then it will be brought in from other locations as necessary. Response and cleanup will continue until all of the recoverable oil is recovered, the environment is restored, and/or the unified command of the Incident Commander, Federal On-Scene Coordinator, and State On-Scene Coordinator have determined that further response and cleanup is either no longer necessary or advisable.

3.5 RIVER BOOMING STRATEGIES

Should oil with a flash point greater than 100^{o} F reach the Yellowstone River, responders should bear in mind the following points.

- If oil is discharged into the channel adjacent to the refinery, and can be safely contained/recovered, this should be done to prevent oil from reaching the main river channel.
- The Cerise Road Fishing Access, Billings Refinery, and Worden Fishing Access provide places from which to launch boats.
- The first boom deployed should be placed in the area of the Huntley low head irrigation dam so as to divert the oil ashore and thereby prevent it from going further downstream.
- Once booming has been deployed near the Huntley low head irrigation dam, additional booms in the vicinity should be considered for secondary coverage/collection.
- After the oil's spread has been stopped, additional booms may be deployed to contain any pockets of oil along the river bank.

3.6 STORAGE/DECONTAMINATION/DISPOSAL

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

Storage

Any recovered oil picked up during a small spill (i.e., Tier 1 response) could be recycled through the refinery slop oil system. Approximately 70,000 barrels of capacity are available at the refinery for storage of recovered oil. Recovered oil would likely be transferred to one or more of the wet slop tanks (Tanks 22, 23, and 24). These tanks have the capability to dewater the recovered oil and send it to the dry slops tanks (Tanks 11 and 86). If additional tankage is needed, the recovered oil can be transferred to Tanks 1, 4, 5 and 6. The location of these tanks is shown on Figure 1.1. Spilled oil would be recovered using one or two vacuum trucks maintained at the refinery. Capacities of the trucks are 25 and 60 barrels with a pumpage rate of 867.8 gpm. In addition, refinery-owned skimming pumps and contractor vacuum trucks are available within the refinery vicinity. Recovered oil would be transferred to a storage tank by

connecting the truck discharge to the tank with a cam-lock type connection and pumping the oil to the tank.

Recovered materials from a Tier 2 or 3 spill in excess of what could be handled by the refinery would be managed by the oil spill response contractor.

Waste materials will be drummed or placed in bins and sent to the waste storage pad for further management or be managed by the oil spill response contractor.

Decontamination

The following table provides decontamination wash solution options for contaminated personal protective (PPE) and response equipment. The solutions and procedures represented within this table are suggestions, and do not represent all of the options available. In an actual response event, all decontamination steps would be directed through the Environmental / Regulatory Advisor.

CONTAMINANT	INITIAL STEP	SECONDARY STEP	FINAL STEP
Hydrocarbons	Remove excess contamination using rags/towels.	Using a mixture of laundry detergent and warm water wash/brush contaminated PPE/equipment.	Rinse equipment with warm water to remove soap solution.

Disposal

Oil impacted soil and sediments would be managed under current practices in accordance with local, state and federal regulations. Impacted response materials, equipment and debris, determined to be hazardous waste (through generator knowledge or laboratory analytical procedures), will be profiled and properly manifested/shipped through contracted services to a permitted treatment or disposal facility. Hazardous waste shipments will follow all appropriate EPA/DOT shipping and reporting regulations. Shipments of any hazardous materials (hazardous and non-hazardous waste), will be conducted by a DOT Certified contractor.

The Environmental / Regulatory Advisor will coordinate all activities and obtain necessary permits to ensure proper offsite disposal or recycling of recovered product and debris.

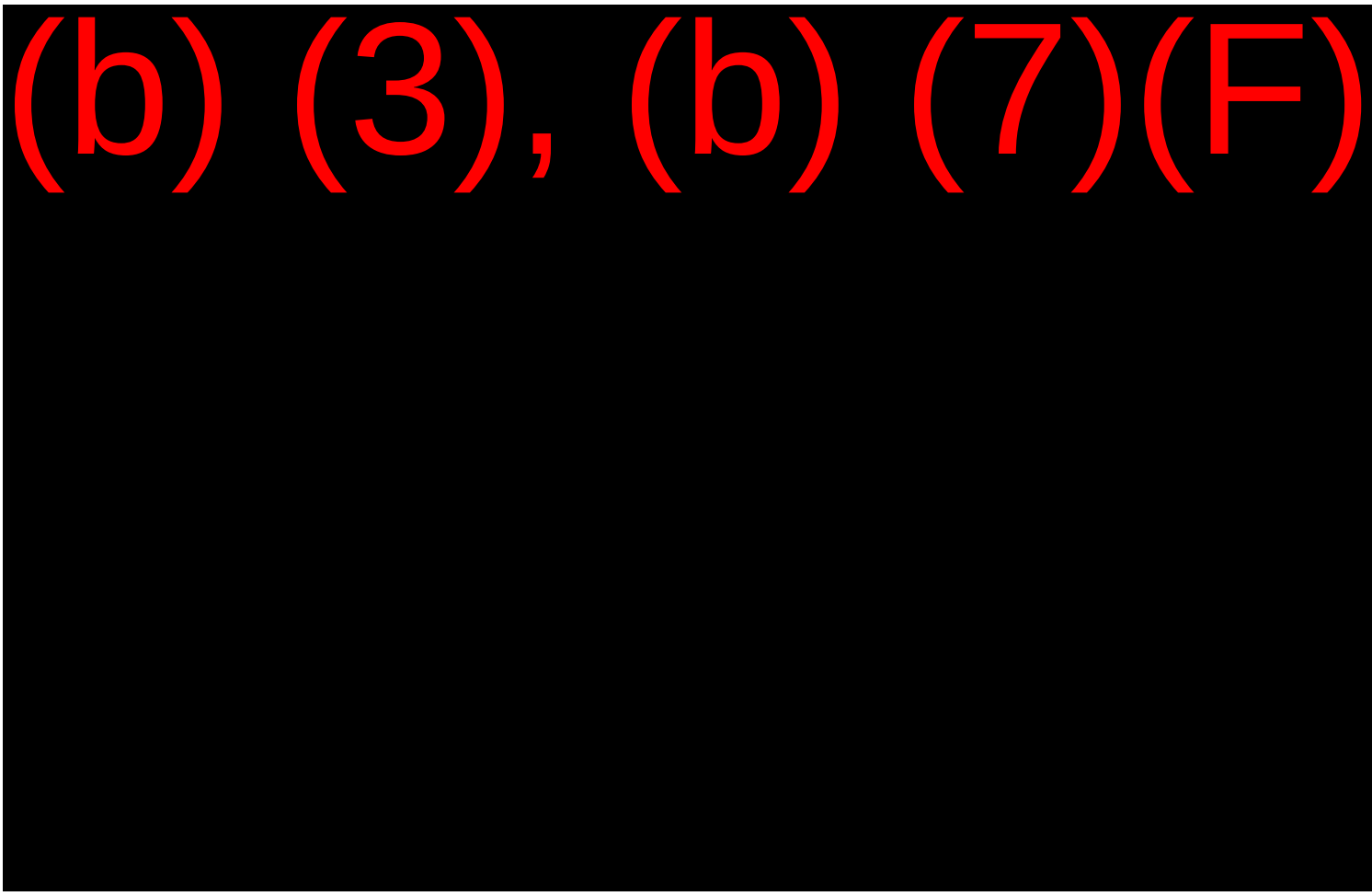
3.7 DISCHARGE DETECTION SYSTEMS

The ExxonMobil Billings Refinery has operational procedures in place to detect discharges of oil throughout the facility.

Detection By Personnel

- Inspection Frequency - At a minimum of once per day, Oil Movements and Utilities (OMU) Operators and Gate Guards are required to inspect specific areas of the refinery.
- Inspection Areas - OMU Operators are required to conduct routine inspections of the following facilities: Clean Water Ditch Outfall, Pond 6 Outfall, Coulson Ditch and Dry Creek. In addition, the Gate Guards conduct routine checks of storm water conveyance system.

- Initial Response - If inspections reveal that an oil discharge has or is occurring, immediately notify nature and location of incident to Shift Superintendent (Qualified Individual). Shift Superintendent will activate response resources, as appropriate, and will make arrangements to have spill reported to the appropriate agencies.
- Operation Personnel are on duty at all times and are continuously watching for leaks and spills.



3.8 SAFETY AND HEALTH

It is the corporate policy to provide a safe workplace for all workers. All employees and contractors are responsible for maintaining the safety and health of all workers in ExxonMobil owned/operated facilities in accordance with ExxonMobil Billings Refinery Safety Manual. The Site Safety and Health Plan (see Figure 3.6) should be prepared in order to be able to rapidly plan a response to an oil release and to inform interested parties of the clean-up approach.

In all situations . . . **SAFETY FIRST!**

Employee and Contractor Orientation

Prior to engaging in any spill response activity, all employees/ contractors must have received orientation to the Safety Manual. All contractor personnel involved with clean-up operations must have completed a training course in handling hazardous materials. All other personnel

will have completed appropriate training for their position. No employee/contractor shall engage in activities that place him/her at risk without the appropriate protective equipment.

Site Control

Site control is to be established as soon as practical. Establish “Exclusion”, “Decontamination”, and “Support” zones as required.

Entry to the contaminated area is to be limited to authorized and necessary personnel. The entry and Exit Log must be maintained to oversee personnel movement. Site control measures should include (as practical) single point entry/exit to facilitate personnel safety. Exit must be through decontamination facilities as required. It is the intent of this site control plan to prevent the removal of contaminants from the containment area and unauthorized entry into contaminated areas.

Safety Manual

Operations during a spill shall be conducted in accordance with the Safety Manual.

General Response Safety

Prior to exposure to contaminants, **positive** identification of the contaminant must be gained. Until positive identification is made, no entry in less than “Level B” protective devices shall be allowed.

Protective Clothing

Level A ensemble consists of:

- pressure demand (positive pressure), full face SCBA or airline unit with escape SCBA.
- fully encapsulated chemical resistant suit.
- inner chemical resistant gloves.
- chemical resistant safety shoes/boots.
- full time two way communications.

Level B ensemble consists of:

- pressure demand (positive pressure), full face SCBA or airline unit with escape SCBA.
- chemical resistant clothing such as overalls and long sleeved jacket, hooded one or two piece chemical splash suit, or disposable chemical resistant clothing.
- Nomex clothing.
- inner and outer chemical resistant gloves.
- chemical resistant safety shoes and boots.
- hard hat.
- two way radio communications.

Level C ensemble consists of:

- half face piece, air purifying respirator with **appropriate** canister or cartridges.
- chemical resistant clothing such as overalls and long sleeved jacket, hooded one or two piece chemical splash suit, or disposable chemical resistant clothing.
- Nomex clothing.
- inner and outer chemical resistant gloves.
- chemical resistant safety shoes and boots.
- hard hat.

Level D ensemble consists of:

- Nomex clothing.
- coveralls.
- safety shoes.
- safety glasses or chemical splash goggles.
- hard hat.
- dust mask.

Note: Level D is appropriate only if there is NO KNOWN OR SUSPECTED hazardous air contaminants and NO POTENTIAL for skin contact with hazardous materials!

After identifying contaminant(s), select appropriate protective devices based on the hazard.

No employee/contractor shall conduct any operations in areas not directly visible to other personnel. Operations requiring entry to such areas shall be conducted using the “Buddy-System” and the Shift Superintendent shall be notified. Any personnel conducting operations in such areas will establish and maintain communications with their supervisor for the duration of such activities.

An employee alarm system shall be put in place to notify employees/ contractors at the spill site of an emergency, work stoppage, or any other condition requiring site wide notification.

Spill developments affecting safety may change frequently. Continual monitoring of conditions is required.

Attempt to anticipate changes, for example:

- oil spilled during extremely cold weather may not generate vapors in quantities that will support combustion. Even a slight warming trend could cause concentrations of vapors that are flammable. Be aware of conditions affecting safety at all times.
- wind changes could cause harmful accumulations of vapors to occur in previously safe areas. Downwind, low lying areas should be particularly suspect. All personnel should remember that sense of smell **is not** an adequate indication of the presence of harmful gases or vapors.

Ambient temperatures can substantially affect work conditions and worker safety. All personnel shall remain alert to changing conditions affecting their safety. Some example of temperature concerns are:

- heat stress – Operations requiring protective clothing require constant surveillance to ensure personnel are not affected adversely by high temperatures or humidity. Work/rest regimens should be adjusted to accommodate temperature extremes.

Signs and symptoms of heat stress (in order of increasing severity) are: heat rash, cramps, heat exhaustion, and heat stroke.

- heat rash – Not only a nuisance, but can affect the body's ability to tolerate heat. Treat with drying lotions and keep area clean.
- heat cramps – Generally occur after prolonged exposure to high temperatures coupled with profuse sweating, and inadequate re-placement of salt.
- heat exhaustion – Signs include dizziness, profuse sweating, cool moist skin.
- heat stroke – An extremely serious medical condition! Symptoms may include dizziness, nausea, severe headaches, hot **dry** skin, high body temperature. If cooling of the victims body is not begun immediately, irreversible damage or death may result.

During each break or rest period, all workers are encouraged to remove protective clothing to facilitate cooling as needed.

Appropriate supplies of electrolyte replacing fluids and water must be readily available for all personnel. Fluids should be taken regularly while conducting operations in protective clothing. Thirst does not serve as an adequate indicator of the need for fluids.

Hypothermia

If properly protected, cold temperatures pose no problem for response personnel. Hypothermia occurs when the body loses heat faster than it can produce it.

The onset of hypothermia is indicated by: involuntary shivering, stinging sensation on skin, and speech difficulty. Further heat loss results in forgetfulness and loss of motor skills, leading to collapse, and finally death.

No one type of clothing is best for all weather conditions. "Layered" clothing is generally the best approach to protecting against cold climates. Numerous layers of relatively light clothing with an outer shell of windproof material maintain body temperature much better than a single heavy garment.

Victims of hypothermia should be treated immediately. Affected persons should be warmed using blankets or warm water as available.

Any concern regarding health or safety issues should be addressed.

All injuries, no matter how minor, must be reported to a supervisor in a timely fashion.

Water Safety

All personnel performing tasks on boats must wear an approved personal flotation device (PFD) for the duration of those tasks.

- In the event that any person falls into the water:
  - ☐ stop the operation and sound the "man overboard" alarm immediately.
  - ☐ approach the person from downstream or downwind.
  - ☐ approach at low speed and hover in current.
  - ☐ use boarding ladder if possible. If no ladder is available, use area of lowest freeboard.
  - ☐ keep boat balanced.

- ☐ do not go into the water to help unless the person is unconscious.
- ☐ bring the person on board via stomach to gunnel.

- During boom deployment operations, the following safety practices should be considered.
  - ☐ Adequate radio communications between the boat operator and personnel at the boom storage site is imperative to allow the operator to be informed immediately of any problems that may cause injuries to personnel or damage to boom.
  - ☐ Stay clear of tow lines as they may exhibit a whipping action if they break. The tow line should be attached to the tow vessel in such a way that it can be cast loose if necessary. Always have a knife on board in the event that it becomes necessary to free the boom from the boat due to strong currents, entanglement, or other factors.
  - ☐ Avoid tying the tow line to an off-center cleat as it can cause difficult steering or the vessel to take on water.
  - ☐ When taking up slack on the tow line ensure that all personnel stay clear to avoid the potential of getting a limb tangled in the line. Never allow anyone to hold a tow line during boom deployment.
  - ☐ Pull the boom at a reasonable, steady speed. Excessive speed can exert strain on the vessel, boat, and boom.
  - ☐ Ensure that the boat has sufficient strength for existing currents, winds, and length of boom being towed.
  - ☐ When deploying anchors, do not hold them by the shank or flukes.
  - ☐ Ensure that the following safety equipment is on board the boat:
    - life preservers, spare paddles
    - extra towing rope (100 ft.)
    - flashlight, horn, knife
    - bailing apparatus, spotlight
    - anchor, radio, life ring

Respiratory Protection

All workers shall observe and follow the Respiratory Protection Program.

Only NIOSH approved devices shall be used.

Personnel having any facial characteristics which prevent obtaining an effective seal with the respirator (including facial hair) shall not be allowed entry into areas which do, or may require the use of respirators per OSHA 29 CFR 1910.134.

Emergency Medical Treatment – Rescue Squad

The refinery's Rescue Squad is trained in emergency response and advanced first aid. The squad is available as described under Rescue Squad Notification in the Fire/Emergency tab of the ExxonMobil Billings Refinery Emergency Manual.

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

- The potential for contamination of the patient, responders, and equipment should be addressed. Responders should arrange to treat all patients **after** the injured party has been decontaminated according to the Safety Manual.
- Site personnel should make the initial assessment of the patient and determine the severity of the injury/illness.
- If critical care or "life saving" treatment is needed, rapid decontamination of the injured/ill party should be started. Refer to the site safety plan for steps to be taken in an "abbreviated" decontamination for medical treatment.
- **The need for full decontamination should be carefully weighed against the need for prompt medical treatment.**
- The ambulance responding to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the injury.
- MSDS information will be available and should be provided to medical personnel to alert them to decontamination requirements.
- If emergency medical treatment is needed, it must be provided by trained medical personnel.

Decontamination

Decontamination facilities shall be designed to allow effective, efficient removal, and containment of contaminants. Decontamination facilities should be in place prior to employee/contractor entrance to areas where potential for exposure to contaminants exists.

Regardless of the decontamination facilities, all efforts to minimize personnel exposure should be taken.

Particular attention shall be paid to personal hygiene, i.e., wash hands prior to eating, drinking, or smoking, etc.

A separate decontamination area should be established to allow only for emergency decontamination of personnel requiring life saving medical attention. Appropriate MSDS's shall be stored at this area at all times and be provided to health professionals involved in the care of injured workers.

Decontamination facilities shall be designed to prevent further contamination of the environment and allow efficient movement of workers through the area.

Incorporated into the decontamination area will be a "tool drop" area to serve as a temporary storage area for items that will be reused in the contaminated area such as rakes, shovels, brooms, etc.

3.9 EVACUATION

In the event an evacuation of the refinery is necessary, the Incident Commander would direct individuals in the refinery to leave the site by the most direct and safe route away from the incident. Figure 3.7 (three drawings) provides detailed evacuation routes (i.e., south, west gate and north gate) for the ExxonMobil Billings Refinery. Figure 3.7 also includes response equipment transportation routes.

It is not practical to identify specific spill flow directions because a release will be dependent on the equipment, location, weather conditions (precipitation, wind), sewer locations, material

released, etc. and thus, cannot be delineated in Figure 3.7. Egress of individuals and ingress of response personnel will be directed from the Emergency Operations Center.

The Operations Control Center (OCC), Main Office Building, Laboratory, OPS Shelter, and Analyzer Bottle Building are designated as "Safe Havens", and are intended to provide immediate temporary protection. The vapor release siren (located on the OCC building) would be activated with appropriate follow-up transmission to signal an evacuation. In the event of an evacuation, individuals would be instructed to assemble in the nearest refinery evacuation staging area. Six staging areas have been designated: the south staging area is located south of the office; the west staging area is west of the Garage and Mechanical Shop; the east staging area is in the contractor lot south of the asphalt area; the north staging area is located north of Tank 28; staging area is in adjacent to Tank 117; and the staging area adjacent to the Analyzer Bottle Building.

Evacuation procedures are contained in the Vapor Release/Evacuation Manual located in each Safe Haven. The procedures include head count procedures.

Depending upon incident specifics, including spill location, hazards imposed by spilled materials and wind direction/speed, individuals would be directed from the Incident Commander to exit the refinery from one of the three gates. Egress can be achieved through the south, west or north gates. The Incident Commander is responsible for accounting for all individuals required to evacuate the property and arranging for the safe transportation of injured personnel to the nearest emergency medical facility.

In the event that a community evacuation is required, the oil spill response team in conjunction with local fire and police departments, will utilize the efforts of the Local Emergency Planning Committee (LEPC) to evacuate necessary parts of the community. The community evacuation will be conducted as outlined in the LEPC's "Hazardous Material Response and Evacuation Plan".

3.10 SITE SECURITY AND CONTROL

(b) (7)(F), (b) (3)

(b) (7)(F), (b) (7)(F), (b) (3)

3.11 FACILITY SECURITY

(b) (7)(F), (b) (3)

3.12 DOCUMENTATION OF RESPONSE ACTIONS

All involved individuals should become familiar with required documentation procedures. Noted below are guidelines for effective documentation practices.

One of the most important tasks of the clean-up operation is to accurately record the history of the oil spill. The purpose of documentation is to accurately record events and monitor expenses, and use the log as a basis for critiquing the spill prevention and clean-up programs. It is important to record the extent of the spill, orders that were received from the Federal On-Scene Coordinator, major orders given to others, and an assessment of the clean-up activities each day. Because one does not know what may be important at the time, it is necessary to take many more pictures, take more samples, and record much more written information than one may believe necessary.

A daily log should be kept showing the history of the events and communications that occur during a spill. When recording information, remember it may be used in legal proceedings.

Therefore:

- use bound volumes with consecutively numbered pages.
- record only facts, not speculation. If you do not know, do not guess.
- do not criticize other peoples' efforts and/or methods.
- do not speculate on the spill's cause.
- do not relate opinions.
- do not skip lines between entries or make erasures. If you make an error, draw a line through it, add the correct entry above or below it, and initial the change.
- each entry should record the date, time, place, action, and signature of the witness(es).
- logs must be kept in a secure place.
- if documentation includes information from someone else, state the source of information.

Any information that could be of importance should be recorded while the spill is in progress. Small, portable tape recorders allow an individual to verbally document operations as he views them from the air, water, or land. Tapes should be transcribed daily. Large spills may necessitate each individual to keep a personal log. Entries from such logs should be consolidated and recorded in the headquarters log. Information should be as complete as possible.

Some of the more important points to document include:

- the limits of the spill (did the oil reach a certain point in the river, irrigation ditches, etc.).
- damages resulting from the spill (were warnings issued?) to:
  - ☐ property.
    - personal.
    - real estate.
    - other.
  - ☐ life.
    - human injury or death – names, addresses, extent of injuries.
    - drinking water intakes downstream.
    - livestock – number of, owner(s), address(es).
    - wildlife – number of oiled birds collected, number cleaned, number surviving.
    - fish – river ecology.
  - ☐ prior condition of the area and property if known.
  - ☐ clean-up operations.
    - equipment and manpower available (cooperatives, contractors).
    - actions taken (equipment and technicians employed, chemicals used, etc.).
    - assessment of effectiveness/recommendations.

Because the responsible party (RP) is officially responsible to the Federal On-Scene Coordinator (FOSC), the RP should be careful to record all orders and direction from the FOSC, along with any actions taken by the FOSC. After recording the information in the log, the FOSC should be asked to sign the log book next to the RP's signature to ensure that both parties understand what has been said. This can be particularly important when a representative of regulatory agencies approves a clean-up area, but another overrides the subordinate's decision. This procedure will also help ensure that orders from the FOSC are clear. However, in some cases, this procedure might be impractical or may not work for a specific clean-up operation.

Contractors and ExxonMobil personnel should be required to submit logs each day listing manpower, equipment, and materials used. These documents should be signed after the close of each working day by a representative of the company and the contractor. The contractors should understand that only charges so verified and authorized will be accepted for payment. This will help to avoid disagreements at the completion of the job.

Oil sampling is an important part of documenting a spill. The FOSC or SOSC will sample the oil, and the party presumed responsible for the spill will want to verify the analyses by also taking samples. The spilled oil should be documented by taking samples of unspilled oil for reference and spilled oil for comparison. The sampling program and arrangements for sample shipping and chemical analyses should be preplanned. All sampling shall be conducted by a qualified individual using acceptable procedures.

FIGURE 3.1

(insert SPILL RESPONSE FLOWCHART)

FIGURE 3.2

GUIDELINE 1 - CONSIDERATIONS FOR DISCHARGES OF HIGH FLASH OIL INTO WATER

(see Figure 8.1 in ERAP)

FIGURE 3.3

GUIDELINE 2 - CONSIDERATIONS FOR DISCHARGES OF LOW FLASH OIL INTO WATER

(see Figure 8.2 in ERAP)

FIGURE 3.4

GUIDELINE 3 - CONSIDERATIONS FOR DISCHARGES OF ASPHALT INTO WATER

(see Figure 8.3 in ERAP)

FIGURE 3.5

GUIDELINE 4 - CONSIDERATIONS FOR SPILLS ON LAND

(see Figure 8.4 in ERAP)

FIGURE 3.6

EXXONMOBIL BILLINGS REFINERY
SITE SAFETY AND HEALTH PLAN

The purpose of this plan is to be able to rapidly plan a response to an oil release and to inform interested parties of ExxonMobil's approach. It is not all inclusive and should only be used as a guide when planning for a particular incident. (Additional safety considerations are found in the Safety Manual.)

This plan will cover all clean-up operations and all employees working on this project including contractors and sub-contractors.

A. Site Description

Date: _____ Location: ____
Safety Hazards: _____
_____
_____

Area Affected: _____
_____

Weather Conditions: _____
_____

Additional Information: _____
_____
_____

B. On-site Organization and Coordination

The following personnel are designated to carry out the stated job functions on-site. (Note: One person may carry out more than one job junction.)

INCIDENT COMMANDER_____
EMERGENCY RESPONSE COORDINATOR_____
PROCESS COMMAND_____
INCIDENT LOGISTICS MANAGER_____
SAFETY_____
EXXONMOBIL MANPOWER_____
_____
CRISIS MANAGER_____
TECHNICAL/LEGAL MANAGER_____
REGULATORY/ENVIRONMENTAL ADVISOR_____
INDUSTRIAL HYGIENIST_____
PUBLIC AFFAIRS ADVISOR_____

FIGURE 3.6 (Continued)

EXXONMOBIL BILLINGS REFINERY
SITE SAFETY AND HEALTH PLAN

C. Command Post - On-Site

Location: _____
Telephone: _____
Radio Communications Channel(s): _____

D. Hazard Evaluation/MSDS

The following substance(s) are known or suspected to be on site. The primary hazards of each are identified.

Substance Involved (Chemical Name)	Concentrations (If Known)	Primary Hazards (e.g., toxic on inhalation)

The following additional hazards are expected on site: (i.e., slippery ground, uneven terrain, etc.)

_____
_____
_____

Hazardous substance information form(s) for the involved substance(s) have been completed and are attached.

E. Personal Protective Equipment

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

Location	Job Function	Level of Protection
Spill Site	_____	A B C D Other
	_____	A B C D Other
	_____	A B C D Other
	_____	A B C D Other
	_____	A B C D Other

FIGURE 3.6 (Continued)

EXXONMOBIL BILLINGS REFINERY
SITE SAFETY AND HEALTH PLAN

_____	A	B	C	D	Other
_____	A	B	C	D	Other
_____	A	B	C	D	Other

Specific protective equipment for each level of protection is as follows:

Level A:	Fully-encapsulating suite SCBA (disposable coveralls)	Level C:	Splash gear (type) Full-face canister resp.
Level B:	Splash gear (type) SCBA	Level D:	_____ _____

Other: _____
_____
_____

F. Marine Safety

All marine vessels and equipment shall meet USCG regulations. All personnel shall wear USCG PFD's while aboard any boat or barge.

G. Decontamination Procedures

Personnel and equipment leaving the spill site shall be thoroughly decontaminated.

H. Emergency Medical Care

(names of qualified personnel) are the qualified EMTs on site.

(medical facility names), at (address), phone _____ is located ____ minutes from this location. _____(name of person) was contacted at _____(time) and briefed on the situation, the potential hazards, and the substances involved. A map of alternative routes to this facility is available at _____ (normally Command Post).

FIGURE 3.6 (Continued)

EXXONMOBIL BILLINGS REFINERY
SITE SAFETY AND HEALTH PLAN

Local ambulance service is available from _____ at phone _____. Their response time is ____ minutes. Whenever possible, arrangements should be made for on-site standby.

First aid equipment is available on site at the following locations:

First aid kit
Emergency eye wash
Emergency shower
Other

Emergency medical information for substances present:

Substance	Exposure Symptoms	First Aid Instructions

List of emergency phone numbers:

Agency/Facility	Phone Number	Contact
Police		
Fire		
Hospital		
Airport		
Public Health Advisor		

I. Environmental Monitoring

The following environmental monitoring instruments shall be used on site (cross out if not applicable) at the specified intervals.

Combustible Gas Indicator - continuous/hourly/daily/other _____
O_2 Monitor - continuous/hourly/daily/other _____
Colorimetric Tubes - continuous/hourly/daily/other _____
(type) _____
_____
HNU/OVA - continuous/hourly/daily/other _____
Other - continuous/hourly/daily/other _____
continuous/hourly/daily/other _____

FIGURE 3.6 (Continued)

EXXONMOBIL BILLINGS REFINERY
SITE SAFETY AND HEALTH PLAN

All site personnel have read the above plan and are familiar with its provisions.

Title	Name	Signature

FIGURE 3.6 (Continued)

EXXONMOBIL BILLINGS REFINERY
SITE SAFETY AND HEALTH PLAN

SITE SPECIFIC PROCEDURES

Anyone handling spilled material will wear as a minimum the following protective:

- rubber, neoprene, or nitrile gloves
- rain suits or disposable coveralls where clothing contamination is likely to occur

Anyone who handles spilled material and gets a small amount of spilled material on their skin or clothing will decontaminate at the end of the work period/shift. Areas of gross contamination should be decontaminated immediately.

Decontamination will include a shower where any significant contamination occurs.

Equipment which comes in contact with spilled material will be cleaned before it leaves the site. Where it is not possible to completely clean equipment before it leaves the site, steps will be taken as needed to prevent the spread of spilled material. This equipment will be cleaned as soon as possible.

All containers of spilled material will be labeled. The label will include the identity of the spilled material and appropriate hazard warnings.

Anyone handling or likely to come in contact with the spilled material must receive a review of the MSDS for the spilled material. This review must take place prior to the employee handling or contacting the spilled material.

Log(s) of workers on site must be kept by the workers' supervisors. The purpose of these logs is to account for everyone on site at all times.

ALL CLEAN-UP CONTRACTORS MUST HAVE HAZWOPER TRAINING (24 HOURS INITIAL AND 8 HOURS ANNUAL REFRESHER).

FIGURE 3.7

EVACUATION ROUTES AND TRAFFIC CONTROL POINTS

(see Figure 3.7 in ERAP)

4.0 RESPONSE TEAM

This section describes organizational features of ExxonMobil's response management system, including the duties of the Qualified Individual and the structure of the refinery's Incident Command System (ICS).

The ExxonMobil Billings Refinery's ICS is based upon the National Incident Management System and is consistent with the ICS procedures utilized by many agencies and the oil industry around the world.

4.1 OVERVIEW OF EXXONMOBIL'S RESPONSE MANAGEMENT SYSTEM

ExxonMobil's response management system consists of multiple oil spill response teams. Response to a spill will use a tiered approach – that is, first utilizing resources and manpower available locally. Then increasing the level of response by bringing in materials and resources from outlying areas as required by the size of the incident, the ability to control it, and the gravity of the situation. As subsequent tiers are activated, they absorb the lower tiers and assume responsibility for managing of the response. **[Note: The tiered approach included herein is used for internal planning purposes. These tiers do not correlate with the tiers associated with the worst case discharge planning response times and recovery volumes in Appendix E of 40 CFR 112.]**

The key to an effective emergency response is a rapid, coordinated, tiered response by the affected facility, Strike Teams, Montana - Wyoming Oil Spill Cooperative Organization (COOP), Oil Spill Response Organizations (OSROs), and the North American Regional Response Team (personnel that participate as part of the ERT are known collectively as the NARRT), consistent with the magnitude of an incident. First, there is a local Oil Spill Response Team (OSRT) whose task is to manage the on scene tactical response to a small scale incident (Tier I). In the event of a significant incident, first response to an incident at the facility will be provided by the OSRT. If additional resources are needed, the Strike Team and COOP can be activated. The exact composition of the response resources depends on the size and significance of the incident. If the refinery does not have sufficient resources to maintain an effective spill response (i.e., Tier II), the OSRO and NARRT can be mobilized. In the event of a major incident (Tier III), ExxonMobil may rely on the NARRT and OSRO which can provide resources and staff support to the tactical team and the can address high level strategic and business issues.

Tier I Incidents:

For a minor spill within the refinery, unit personnel will generally handle all containment, recovery and cleanup activities without additional assistance. For small spills (Tier I incidents), the unit personnel will be relieved by the OSRT, who has authority to ensure an effective and efficient response. These spills generally require no additional response beyond the capabilities of the facility. For these incidents, the OSRT will be composed of facility personnel. Other local area resources (e.g., Fire Department/Hazmat, local contractors), the Strike Team and COOP can be activated if needed.

Tier II Incidents:

Tier II incidents are events that require a level of response that exceeds the resources of the local facility. For Tier II incidents, the response resources will be composed of the facility

personnel (OSRT) supplemented by (1) personnel from other ExxonMobil facilities and offices (e.g. Strike Teams), (2) industry mutual aid personnel (COOP), and/or (3) government response personnel. The COOP can to provide additional response capabilities (equipment and personnel) as necessary. The COOP consists of trained personnel and equipment to execute an effective response. The COOP can be mobilized in its entirety or in modular components as dictated by the situation. If additional resources are needed, the OSRO and NARRT can be activated.

Tier III Incidents:

Tier III incidents are events that exceed significantly the resources of ExxonMobil's regional resources. The responders will likely include equipment and trained personnel from a specific geographic area or region and may require the combined resources from other regions for specialized or technical services. The response operation will likely be subject to governmental control or direction. For Tier III Incidents, the response resources will be composed of (1) ExxonMobil personnel from many locations (includes Strike Team and NARRT personnel), led by an ExxonMobil IC, (2) OSRO contractors, and (3) governmental officials.

It is important to note that these response teams do not operate independently but will successively supplement the capabilities of the previous team with personnel of higher authority and generally greater experience. All teams have similar organizational structures to facilitate transfers of command and to ensure a "seamless response."

4.2 EXXONMOBIL RESPONSE RESOURCES

ExxonMobil Oil Spill Response Team:

ExxonMobil's OSRT and ICS team members will manage the on scene tactical response to an incident. The response will be organized in accordance with the Incident Command System (ICS). The composition of the response team will vary depending on the size and significance of the Incident. The "Emergency Manual" provides more details of the organization and the roles and responsibilities of each ICS member.

The OSRT is made of personnel with oil spill response skills. Additional resources are available (e.g., Fire Brigade, Rescue, and Medical) to assist in handling emergencies within the refinery. The OSRT members are in the call out list. The OSRT will respond to Tier I spills. The OSRT is a specialized group of personnel trained to respond to spills. This team is on site during normal working hours (e.g., personnel assigned various positions) and can provide immediate response as necessary (usually within less than 60 minutes). Additional OSRT members are on call during off hours to assist in responding to small spills exceeding the onsite OSRT's capabilities.

The Incident Command System provides supervisory levels that will make up the "Emergency Operations Center (EOC) Manning" Team (Incident Commander, Operations, Logistics, Process, etc.) that are available to create a command structure that can accommodate the emergency incident. Descriptions of each ICS position, the primary responsibilities, and pre-emergency planning activities are provided in the Emergency Manual.

The OSRT and ICS members are identified in the Text Messaging System list entitled "Emergency Operations Center (EOC) Manning" which is used to contact the OSRT and ICS team members. The list is updated weekly and is maintained in the refinery intranet system

and a hard copy is posted in the OCC. The list includes the cellular and / or home phone numbers of each member of the OSRT and ISC. The Text Messaging System is activated by the Shift Superintendents or their designees as needed to call out the OSRT and ICS members. In addition, the refinery has contracted Answer net Network to provide this follow-up emergency call-out service. Answer net will call the people on the lists by priority and then fax the responses to their calls to the refinery.

The OSRT and ICS members will receive training in accordance with their position as specified in Section 10.

The number of positions/personnel required to staff the OSRT will depend on the size and complexity of the incident. The OSRT is an integral part of the ICS and performs the following duties and responsibilities:

- Obtain initial briefing.
- Perform tasks as requested. Representative tasks may include:
    - Helping deploy containment boom from both land and boat.
    - Operating a response boat.
    - Providing equipment for use in containing a spill.
    - Beginning skimming and recovery operations.

Emergency Support Group (ESG):

If activated, the Emergency Support Group (ESG) can provide strategic support to the refinery's ICS Team. The ESG, which is led by the head of the most impacted business unit, has positions for pre-assigned representatives from Public Affairs, Human Resources, Government Affairs, Finance, Safety, Health and Environmental (SH&E) and Legal. Other staff services such as Technical, Aviation, Medical and Salvage will also be represented, if appropriate. The ESG's objectives include:

- Support the refinery ICS Team;
- Maintaining communications between the ICS Team and ExxonMobil senior management;
- Providing information or services to the refinery ICS Team upon request;
- Identifying issues of overall strategic importance to ExxonMobil arising out of the incident or the response;
- Establishing a high-level external communications strategy; and
- Advising senior management on issues of strategic importance.

The Emergency Support Group will typically operate from the Fairfax, Virginia Emergency Response Center.

Strike Teams:

The Strike Teams' primary mission is to ensure quick, competent and caring response to any incident at the request of the ExxonMobil Business unit. The Strike Teams will also provide the core oil spill technical skills to the North American Regional Response Team (NARRT). The Strike Teams will provide the field support for the NARRT and oversee contractors and OSROs in the field for larger incidents. Strike Team personnel are trained to handle oil spills and meet regulatory requirements and will function according to the National Incident Management System (NIMS). Oil spill response equipment is strategically located at the 7 US refineries and 4 other Upstream and Pipeline sites. All equipment is stored in trailers capable of being towed by heavy duty pickups. Five (5) of the trailers will provide command and communications support. Response resources are documented in equipment inventories and can be made available upon request.

North America Regional Response Team (NARRT):

For spill response operations outside the capabilities of the Emergency Response Team (ERT), the QI/AQI or IC will determine the need for mobilization of the NARRT. The main responsibility of the NARRT is to respond to incidents that are beyond local and regional capability to manage. The NARRT is capable of providing resources from other business units in addition to a complete emergency response management and support team of approximately 40 functional groups to work affiliate/facility personnel and government officials in response to a major spill release or other emergency. Each position has several primary and alternates assigned to provide 24-hour incident management. The NARRT is designed to be rapidly deployed and can be partially or fully activated to bring whatever resources are needed. Members are geographically distributed to minimize the time required to have trained personnel on scene. Upon activation members will be en route to the spill to arrive on scene within 8 to 12 hours depending upon transportation schedules, connections, weather and other variables. The NARRT will integrate with facility, affiliate and personnel with local knowledge and to assist in the response; thereby, combining local expertise with trained professional emergency responders. This combination of local and imported capability provides effective response to minimize environmental and economic. The NAART will remain on scene until the emergency response concludes or can be managed effectively by the facility or affiliate.

The NARRT is organized according to the Incident Command System (ICS), with standard roles and responsibilities, which provides flexibility for expansion, and facilitates integration with government and commercial response organizations to form a unified command and response team. The NARRT Incident Commander is charged with and responsible for managing all NARRT incident response activities. The Incident Commander represents ExxonMobil in the "Responsible Party" position within Unified Command, and coordinates incident response activity with senior management in the affiliate or division accountable for management of the oil emergency response.

The NARRT also conducts annual training and exercises in conformance with PREP guidelines.

4.3 OTHER RESPONSE RESOURCES

Montana - Wyoming Oil Spill Cooperative Organization (COOP):

This is an industry supported regional oil spill response cooperative, of which ExxonMobil is a member. The COOP's oil spill response trailers and jet boat would be accessible within 2 hours. A complete list of available equipment is contained in the Agreement which is located in Appendix E. Additional equipment is stored at member facilities, accessible within approximately 2 to 12 hours.

Clean Harbors Environmental Services, Inc. (CHES):

Clean Harbors Environmental Services, Inc. (CHES) is contracted as the facility's Oil Spill Response Organization (OSRO) contractor. CHES can respond to a spill in the Billings area within 36 hours as required for Tier 2 response. CHES has several offices with personnel and equipment in Billings, Montana as the local Rocky Mountain ER Operations office. Copies of response contracts are included in Appendix E.

4.4 RESPONSE STRUCTURE

The U.S. Occupational Safety and Health Administration (OSHA) requires that organizations which respond to emergencies involving hazardous materials adopt a nationally recognized Incident Command System [29 CFR 1910.120(q)(3)(i)]. The Incident Management System (IMS) is based upon The National Incident Management System (NIMS), as developed by the Department of Homeland Security. Personnel assigned specific positions on response teams are thoroughly familiar with their roles and responsibilities, and participate in specified training programs and exercises simulating oil spill events.

The NIMS Incident Command System (ICS) is used to manage emergency response activities. Because ICS is a management tool that is readily adaptable to incidents of varying magnitude, it will typically be used for all emergency incidents. Staffing levels will be adjusted to meet specific response team needs based on incident size, severity, and type of emergency.

The USCG Incident Management Handbook (IMH) contains an in-depth description of all ICS positions, ICS development, response objectives and strategies, command responsibilities, ICS specific glossary/acronyms, resource typing, the Incident Action Plan (IAP) process, and meetings.

For larger incidents where governmental authorities also participate in the response, ExxonMobil's response resources will merge with the government's Team(s) to form a Unified Command pursuant to the National Incident Management System (NIMS) Incident Command System (ICS). ExxonMobil ICS members and NARRT members are trained in the Unified Command System and practice forming the unified command during tabletop drills.

4.5 QUALIFIED INDIVIDUAL

The Qualified Individual (QI) is responsible for the full implementation of the Facility Response Plan and is trained for these responsibilities. The designated Alternate Qualified Individuals (AQI) may provide relief to the QI as needed to ensure that at least one QI is available to respond on a 24 hour basis. The QI/AQI is responsible for implementing response plans, directing response operations, and resolving internal conflicts that arise during response operations either directly or through the use of qualified designees.

The Qualified Individuals for the refinery are the shift superintendents, who are on-site and available 24 hours a day. The refinery has four operating shift teams that rotate on a 12 hour shift to continually fill these positions. The home numbers and addresses for each designated individual have not been provided since a QI is available 24 hours a day, seven days a week. The Shift Superintendents are identified in the Text Messaging System list entitled “Emergency Operations Center (EOC) Manning”. The QIs will receive training in accordance with their position as specified in Section 10.1. See Figure 4.1 for a description of the QI/AQI duties.

If the Incident escalates to a level outside the scope of the Shift Superintendent, command may be transferred to the Incident Commander associated with the NARRT. The Federal On-Scene Commander (FOSC) will be advised in advance of any additional management support or QI change. However, at no time shall the authorization for or expenditure of funds in excess of the liability limits allowed by the Oil Pollution Act of 1990 be regarded as a waiver of any rights that ExxonMobil may have in claiming such liability limit or defenses under federal law.

FIGURE 4.1

DUTIES OF THE QUALIFIED INDIVIDUAL / ALTERNATE QUALIFIED INDIVIDUAL

It is the responsibility of the Qualified Individual (QI) or his/her designee to coordinate with the Federal On-Scene Coordinator (FOSC) and State On-Scene Coordinator (SOSC) throughout the response. Vital duties of the Qualified Individual (QI) include:

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

The AQI shall replace the QI in the event of his/her absence and have the same responsibilities and authority.

5.0 COMMAND POSTS/STAGING AREAS

5.1 COMMAND POST

During a spill event, it is important to establish and maintain a command center to facilitate:

- the creation of a tightly structured chain-of-command.
- the flow of information needed for informed and coherent decision making and planning.
- the flow of accurate and timely information to government agencies and the news media.
- centralized accounting and documentation procedures.

Key issues to be addressed at the Command Post include:

- establishment of meeting schedules, participants, and responsibilities for reporting.
- definition of casualty control interface.
- identification of roles for interface with the public, government, and media.
- development of public relations plan, initial press statements/briefings.
- establishment of strategic objectives and response priorities.
- establishment of a communications network. (Refer to Section 6.0 for specifics on communications equipment.)
- establishment of procedure for handling questions/requests from the public.

5.1.1 Location

The Incident Commander will designate the Incident Command Post and communicate that location to the oil spill response organization.

5.1.2 Equipment

Equipment to be accessible at the Command Post includes the following:

- status boards.
- facsimile machines.
- portable radios.
- copying machines.
- office supplies and other materials that may be needed for clerical support.

Reference material accessible at the Command Post includes the following:

- charts/maps of the area.
- facility plan(s).
- phone directories of the local area.
- vendor contact phone numbers.

5.2 ACCESS/STAGING AREAS

The access/staging areas for personnel and equipment are the:

- boat ramp section of the ExxonMobil Billings Refinery.
- the Huntley Dam, the first direct access to the riverbank downstream from the Refinery.
- Worden boat access area.
- area near firehouse inside the refinery.

Outside Responders to the refinery will usually enter from Frontage Road south of the refinery and approach the refinery on ExxonMobil Road. A staging area inside the refinery gate near the firehouse will be set up and the Emergency Response Coordinator will assign an Oil Spill Response Team member to coordinate the staging area. Outside Responders will usually leave the area heading south on ExxonMobil Road and will turn either east or west on Frontage Road.

6.0 COMMUNICATIONS

6.1 LINES OF COMMUNICATION

Lines of communication between the Incident Commander and Oil Spill Response Team members are shown in Figure 2.1.

Overall response and planning communications between ExxonMobil personnel and responsible government agencies in the Federal Regional Response Team (RRT) will occur formally between the Incident Commander and the Federal On-Scene Coordinator (if one is appointed).

6.2 COMMUNICATIONS EQUIPMENT

6.2.1 Radio System

The ExxonMobil Billings Refinery operates on an 800 MHz radio system to enhance communications both within and between departments. Repeaters are located on the cliffs above the City of Billings, and on refinery property to improve the coverage of the radio system.

The Refinery is licensed to use the frequencies as listed below.

Base Stations:	854.7625 MHz.
Mobile Units:	854.7625, 809.7625 MHz.

Additional information is available in the Radios tab of the Communications Section in the Emergency Manual. Relevant sections are also included in Appendix F of this OSRP.

6.2.2 Telephone System

Almost all of the refinery telephone extensions are connected to a central switchboard located in the Main Office Building. This switchboard is a CISCO Unity Telephone system and allows refinery extensions to be connected to outside lines entering the U.S. West System. The CISCO Unity Telecom Telephone system switchboard normally receives power through the regular Main Office 440 V feeder from the Lab Rack. The CISCO Unity Telecom Telephone system also has a battery backup power supply.

Telephone communication information is available in the Telephone tab of the Communications Section in the Emergency Manual. Relevant sections are also included in Appendix F of this OSRP.

6.2.3 Text Messaging System

The refinery has four emergency pager systems and depending on the particular incident, each will bring a different response. **The Text Messaging System is activated by the Shift Superintendents or Supervisors as needed to call out Emergency Response Teams, Management team, and Business Team members.** The refinery has contracted

Answer net Network to provide an emergency call-out service. Answer net will call the people on the lists by priority and then fax the responses to their calls to the refinery.

Text messaging communications information is available in the Test Messing tab of the Communications Section in the Emergency Manual. Relevant sections are also included in Appendix F of this OSRP.

7.0 RESPONSE TOOLS/SUPPORT/EQUIPMENT

7.1 SPILL RESPONSE TOOLS

This section addresses the location and description of all response tools, and equipment used to contain, recover, and dispose of the spilled oil.

7.1.1 ExxonMobil Plans

ExxonMobil's Plans which might be consulted during a response include:

- Oil Spill Response Plan (this document)
- Emergency Response Action Plan
- Emergency Manual, ExxonMobil Billings Refinery
- ExxonMobil Vapor Release/Evacuation Manual, ExxonMobil Billings Refinery
- ExxonMobil Oil Spill Response Field Manual

7.1.2 Montana - Wyoming Oil Spill Cooperative Agreement

The agreement serves as a plan. Spill response resources available to the refinery include equipment mutually acquired by the cooperative and additional equipment which may be obtained from other members of the cooperative upon request. Copy of the agreement is contained in Appendix E.

7.1.3 Regional Oil and Hazardous Substances Contingency Plan

The following area contingency plans are available to use for planning purposes (these plans are maintained by the FRP Coordinator):

- Region 8 Regional Contingency Plan, updated 6/2010
- Fish and Wildlife and Sensitive Environments – Annex to the Region VIII Regional Contingency Plan, March 2001

These plans describe response protocol and assists in providing a coordinated response capability. It provides:

- identification of primary responsibilities among federal, state, and local government in response actions.
- information regarding contingency planning.
- synopsis of response actions in accordance with the CWA and CERCLA.
- information or useful facilities and responses from governmental, commercial, academic, and other commercial sources.

- recommended response techniques.

7.1.4 Maps and Charts

Maps and charts are stored at the OCC.

7.2 SPILL RESPONSE EQUIPMENT

This section addresses the location and description of equipment used by all the responders to contain, recover, and dispose of the spilled oil.

7.2.1 ExxonMobil Equipment

See Figure 7.1 for a listing of the refinery's spill response equipment, including the quantities, types, model numbers, and capacities. The equipment is located in the areas marked on Figure 1.1 and described in Figure 7.1. Most of the equipment is in the Oil Spill Response (OSR) Building near the firehouse.

The six pumps have a combined daily effective recovery rate of approximately 4,600 barrels per day using a 20% efficiency factor. The two vacuum trucks are each rated at 867.8 gpm at 15" Hg, which equates to a combined daily effective rate of 11,900 barrels per day using a 20% efficiency factor. The containment boom is constructed of PVC coated fabric with internal flotation for a freeboard height of six (6) inches. The boom has a six (6) inch skirt. The boom has universal connectors. The boom is rated for river usage, which is typical of significant wave heights of less than or equal to one and a sea state category of 1.

Communications equipment is discussed in Section 6.0.

Additional response equipment is stored onsite at the refinery, except for some sorbents which are stored at the ExxonMobil Billings Terminal Warehouse. This equipment includes sorbent materials (booms, rolls, pom poms, pads, socks, blankets, and viscous sweep), assorted tools, emergency vehicles, and radios. This equipment would be accessible immediately in the event of an oil spill.

7.2.2 Montana - Wyoming Oil Spill Cooperative

This is an industry supported oil spill response cooperative, of which ExxonMobil is a member. The cooperative oil spill response trailers and jet boat would be accessible within 2 hours. A complete list of available equipment is contained in the Agreement which is located in Appendix E. Additional equipment is stored at member facilities, accessible within approximately 2 to 12 hours.

7.2.3 OSRO Contractor

Clean Harbors Environmental Services, Inc. (CHES) may be used to support a response operation. A copy of ExxonMobil’s contract with CHES and a schedule to activate the required response equipment to meet the planning volumes for the worst case discharge within the required response times are located in Appendix E. CHES’s response time for the ExxonMobil Billings Refinery has been estimated to be 24-36 hours.

7.3 VOLUNTEERS

ExxonMobil understands that numerous individuals will want to volunteer their services to help reduce a spill's harmful impact to the environment. However, OSHA regulations restrict oil spill response to those individuals who have taken HAZWOPER training.

7.4 INSPECTIONS

The refinery's oil spill response equipment is inspected semi-annually. The inspections are conducted by the Oil Spill Response Team members. Records of the inspections, including the date of the inspection and actual findings are maintained in the Oil Spill Response Team Binder located in the Emergency Response Coordinator's office. A copy of the Equipment Inspection Form is shown in Figure 7.1. Equipment shelf life is not applicable for the equipment listed in Figure 7.1. Inspection records are maintained on file for a minimum of five (5) years. Fuel in the internal combustion motors of response equipment is changed semi-annually and a fuel stabilizer is added.

Inspection of tanks and secondary containment areas are conducted in accordance with the descriptions in the SPCC Plan. Records are also maintained as part of the SPCC Plan. The tanks and containers are inspection based on the following:

Field Erected Aboveground Storage Tanks - The field erected aboveground storage tanks will be inspected and non-destructive integrity tested in accordance with API Standard 653, Section 6 (API 653, 4th Edition, 2009). The facility will conduct external and internal inspections for the aboveground storage tanks as follows:

- Routine In-service Inspection (Section 6.3.1) - Visual inspections are performed by facility personnel at an interval not to exceed one month. The routine in-service visual inspection is documented using the checklist included in SPCC Appendix H or equivalent.
- External In-Service Inspection (Section 6.3.2) - Visual external inspections are performed by or under that direction of an API 653 Authorized Inspector at least every five years.
- Internal Inspections (Section 6.4) - All tanks are given an internal inspection by or under the direction of an API 653 Authorized Inspector at the intervals defined by API 653, Section 6.4.2 or 6.5.

Pressure Storage Vessels Inside of Process Units - The aboveground steel pressure storage vessels will be inspected and non-destructive integrity tested in accordance with API Standard 510 (9th Edition, 2006). The facility will conduct external and internal inspections for the pressure vessels as follows:

- External In-Service Inspection (Section 5.5.4.1)

- Visual external inspections are performed by an inspector or qualified person at the intervals described in Section 6.4.1. Internal Inspections (Section 5.5.2)
- All vessels are given an internal inspection by or under the direction of an inspector at the intervals defined in Section 6.5.1.1.

Shop Fabricated Aboveground Storage Tanks Outside of Process Units - The shop-fabricated bulk storage are visually inspected at an interval not to exceed one month. The periodic in-service visual inspections are based on the monthly inspection requirements from API 653, Section 6.3.1.3. These inspections meet the periodic inspection requirements of Section 6.3.1.2 from API Standard 653 (4th Edition). Tank D53 is > 5,000 gallons and is tested using the formal external inspection requirements per API Standard 653, Section 6.3.2.1 and 6.3.3.2.

Portable and Mobile Bulk Storage Containers - The portable bulk storage containers (drums, totes, etc.) in dedicated container storage areas are visually inspected at an interval not to exceed one month per the periodic inspection requirements of Paragraph 6.7 (monthly) from STI SP001 (4th Edition).

When conducting the tank inspections, facility personnel will be looking for the criteria similar to that listed in Figure 7.2.

Walk-around, visual observations of the tank secondary containment areas shall be conducted during monthly rounds to check for leaks and obvious problems. When conducting the inspections, facility personnel will be looking for the criteria similar to that listed in Figure 7.3.

FIGURE 7.1

EXXONMOBIL BILLINGS REFINERY RESPONSE EQUIPMENT INSPECTION LIST

(see Figure 7.1 in ERAP)

FIGURE 7.2

TANK INSPECTION CHECKLIST

The tanks are inspected against the following checklist at a minimum:

Check tanks for leaks, specifically looking for:
- Drip marks
- Discoloration of tanks
- Puddles containing spilled or leaked material
- Corrosion
- Cracks
- Localized dead vegetation

Check foundation for:
- Cracks
- Discoloration
- Puddles containing spilled or leaked material
- Settling
- Gaps between tank and foundations
- Damage caused by vegetation roots

Check piping for:
- Droplets of stored material
- Discoloration
- Corrosion
- Bowing of pipe between supports
- Evidence of stored material seepage from valves or seals
- Localized dead vegetation

Records of the inspections are maintained at the facility. These records are maintained for a period of five (5) years and are available for review at any time.

FIGURE 7.3

SECONDARY CONTAINMENT INSPECTION CHECKLIST

The Secondary Containment systems are inspected against the following checklist:

Dike or berm system
- Level of precipitation in dike/available capacity
- Operational status of drainage valves
- Dike or berm permeability
- Debris
- Erosion
- Permeability of the earthen floor of diked area
- Location/status of pipes, inlets, drainage beneath tanks, etc.

Secondary containment
- Cracks
- Discoloration
- Presence of spilled or leaked material (standing liquid)
- Corrosion
- Valve conditions

8.0 SPILL MOVEMENT ESTIMATES

8.1 OIL MOVEMENT

Immediate actions after a spill can minimize potential impact and damage since the spill will move with time and result in potential impact on a greater area. Oil moves across the surface of the water as a result of wind and current, therefore, it is important to have knowledge of these and other factors which will permit the prediction of where a slick will move.

8.2 SITE CONDITIONS

The ExxonMobil Billings Refinery is situated close to the Yellowstone River.

The shoreline of the Yellowstone River consists primarily of natural, undeveloped areas.

Figure 1.2 is a location map showing the facility/operation, including estimates of initial oil movement at the facility based on land contours and physical features at the facility. Figure 9.1 is a map index showing the response maps that cover the Yellowstone River from the refinery to Huntley.

Weather patterns in the area include the following.

- Thunderstorms predominantly in the summer months and light winter snows.
- Wind speeds average twelve (12) miles per hour, with prevailing winds from the south-west.
- Winter temperatures average 28.1 ^{o}F, with precipitation averaging 0.79 inches per month. Summer temperatures average 65.75 ^{o}F, with precipitation averaging 1.63 per month inches. Total yearly precipitation is 15.08 inches.
- The Yellowstone River flow varies from an average low of 1.6 miles per hour to an average high of 3.1 miles per hour based upon Chezy-Manning Equation calculations.

8.3 TRAJECTORY ANALYSIS

Assumptions:

1. When the wind velocity is low or wind is absent, the slick will tend to move with the current at about the same velocity and in the same direction as the current.
2. When the wind is blowing, the slick will be affected by both water and wind currents, and the movement of the slick will be a function of both forces.
3. When high rainfall creates fast currents in the Yellowstone River, wind will have little effect, if any, on slick movements. The slick will move at the same velocity and direction of the fast current.

8.4 WEATHER FORECAST

Accurate forecasts may be obtained from the National Weather Service (NWS). The NWS has provided the following guidelines when requesting their assistance in weather information.

- Identify yourself, organization, and the problem with which you are involved.
- Ask for the Duty Forecaster or Official-in-Charge.
- Identify your priority, i.e. life or death, routine, etc.
- Describe current on-site weather conditions.
- Define the weather parameters you need, i.e. wind direction, wind speed, temperature, general weather conditions, and whether you need present conditions or forecasted conditions.
- Discuss the best ways to update this information. When will you call back, how often, etc.
- Maintain a log of critical observed and forecasted conditions.
- The following phone number will reference the Billings area:
  National Weather Service - Billings Office 406-652-1916

8.5 DRAINAGE AND CONTAINMENT CONDITIONS

8.5.1 Facility Drainage

The facility is located in the Upper Yellowstone River Basin. The receiving surface water for discharges from the refinery is the Yellowstone River, adjacent to the north boundary of the facility. Product escaping secondary containment will travel in a direction towards the Yellowstone River.

All discharges from the plant's wastewater treatment plant and storm water outfalls are conducted in accordance with the plant's MPDES permits (MT0000477 and MT000104).

When the refinery was constructed, the entire site was leveled with a light pitch toward the river. The slope, side ditches, dikes, and area drains are laid out, so that the vast majority of water is collected before it reaches the river. Most of the offsite area, including the dike areas, depend upon evaporation for disposing of the runoff from the annual average rainfall of 15 inches. In 1990, a secondary concrete/earthen containment berm was installed along the refinery's perimeter in locations that are not currently protected by natural barriers.

Figure 1.2 shows drainage flow directions based on land contours and physical features at the facility.

Drainage from Diked Areas

The plant uses dike drain valves or vacuum trucks to handle precipitation that becomes impounded in diked areas. Precipitation is minimal because of the semi-arid climate. Each drain line has a separate block valve, which must be manually opened and closed, located outside the diked area. The valves are maintained in the closed position when not in use and secured by constant plant surveillance. The impounded water is discharged to the site wide drainage system and subsequently to the oil water separator. In the event that oil is observed within the diked area, the oil water mixture would be recovered by vacuum truck if significant or released to the site wide drainage system for recovery and treatment. For tank dikes without drain valves, spills are contained within the diked area and either portable pumps or vacuum trucks are used to recover any materials.

Drainage from Undiked Areas

Drainage from undiked areas is controlled using a series of storm water ditches, oily water sewers, diversion / retention basins, wastewater treatment system, and permitted outfalls that are inspected regularly for the presence of oil. In addition, an interceptor basin is used to manage drainage from undiked areas in the South Plant. Storm water runoff follows the natural contours of the property as shown in the Site Drainage Plan (Figure 1.2). The storm water gravity flows to the oil water separator. The drainage collected in the oily water system flows by gravity to the API oil water separator and the induced air flotation units for removal of oil. Wet weather flows and spills can be diverted to Tank 350 for impounding prior to treatment.

Two drainage areas have the potential to discharge water from undiked areas that is untreated. These areas are the south refinery area outside of the process area, and the south tank farm outside of the diked areas. These discharges are monitored in accordance with MDPES Stormwater Discharge Permit and accompanying Stormwater Pollution Prevention Plan. Currently, stormwater from the south tank farm is contained on-site and does not discharge. In the unlikely event of a spill, oil will be retained via two underflow/overflow baffles in the west drainage ditch or diverted into a larger sewer drain located at the northwest corner of Avenue G and 4th Street.

See Figure 1.2 for the location of the concrete containment berm, facility ditches, weirs, drain system, and other features at the refinery controlling drainage at the refinery. Two underflow/overflow weirs are located in the West Ditch (stormwater outfall) as noted on Figure 1.2.

8.5.2 Secondary Containment

8.5.2.1 Design

The plant is mostly contained within continuous dikes / berms.

Any released product from the aboveground bulk storage tanks would be captured in localized secondary containment areas (see Appendix C, Table C.6 for details and capacities of individual dikes). All released products from loading and unloading areas, process areas, mobile containers, container storage areas, and piping with in the plant would be captured and diverted into the site-wide drainage system. The site-wide drainage system is sized to contain and recover any releases that may occur in excess of the localized containment volume. The containment volume associated with the site-wide drainage system consists of Tank 350 (992,334 gallons), plus the capacity of the API oil water separator and induced air flotation units. In addition, biological oxidation ponds (ponds 3, 4, 5 and 6 that have approximately 25 million gallons of capacity) can be used as containment in extreme emergency situations. Thus, the combined secondary containment volume of localized containment and site wide drainage is greater than 110 percent of the plant's largest tank and/or any other potential releases.

8.5.2.2 Maintenance

The refinery has an ongoing inspection (see Section 7.4) and maintenance effort to maintain the structural integrity of the secondary containment facilities.

9.0 CRITICAL/SENSITIVE AREAS AND LOGISTICS

This section contains environmental and logistical information designed to assist in the initiation and development of spill response priorities and strategies prior to the deployment of spill response resources in/along the Yellowstone River. Figures 9.1 and 9.2 are designed to assist spill responders with rapid access to the following information:

- critical areas to monitor and protect, including; water intakes; recreational areas; historical and archeological sites; cemeteries; residentially and commercially developed areas; industrial port facilities; groundwater recharge basins; and educational institutions.
- shoreline composition.
- location of major streams, creeks, inlets, wetlands, etc. within the watershed.
- habitat description, including: native species identified within the location boundaries of each map, including the presence of rare, threatened, and endangered species; and the locations of migratory, nesting, spawning, and harvesting grounds of local species.
- water currents.
- location and description of shoreline access sites and equipment staging areas.
- location of boat launching facilities.
- potential containment booming locations.

The information represented on the following pages are suggestions only, and must be treated as such.

Figure 9.1 is an index illustrating the location boundaries of the Environmental and Logistical Response Maps covering the area downstream from the refinery. Determination of the actual location of the spill, in addition to the formulation of a spill trajectory analysis, must be made prior to the final determination of which Response Maps may be adopted towards the development of a response strategy or if additional mapping is necessary. Environmental and logistical information between Huntley, Montana and Myers, Montana (to the end of the planning distance of 56 miles) is presented in Figure 9.2.

Potential sources for spills at the refinery as well as a hazard evaluation are shown in Appendix D.

9.1 ENVIRONMENTAL AND LOGISTICAL RESPONSE MAPS

Descriptions of the environmental and logistical information presented are provided below:

9.1.1 Critical Areas to Monitor and Protect

- Critical areas may be defined as those areas which, if impacted by spilled oil or hydrocarbons, may result in threats to public safety and health, or incur severe liabilities associated with the pollution of privately or commercially-owned properties.

- Critical areas include commercial, municipal, and industrial water intakes; recreational areas and parks; historical sites; cemeteries; residentially,

commercially, and industrially developed areas; groundwater recharge basins; and educational institutions (schools).

Water Intakes

- (b) (7)(F), (b) (3) [redacted]

Recreational Areas

- Recreational areas, including state and city parks, etc., are subject to liabilities associated primarily with potential safety and health threats, in addition to those associated with aesthetics, visibility, and public relations.

- Information regarding the ownership of the park and their appropriate emergency notification telephone numbers is provided where available.

- Publicly accessible recreational areas typically possess adequate shoreline access and may be suited for logistical purposes as an equipment staging area and deployment site.

Historical Sites and Cemeteries

- Historical and archeological sites and cemeteries are particularly sensitive and vulnerable to claims associated with aesthetics and public relations, and should be recognized as a high priority when it comes to planning a spill response operation.

Residentially and Commercially Developed Areas

- Shoreline residentially developed areas should be recognized and closely monitored due to the concentrated presence of human beings, not to mention the issues which may be associated with the oiling of privately-owned property. Commercially developed areas should also be recognized from both a public safety and liability point of view.

- High costs may result in the restoration and remediation of these areas, and negative public relations claims may result from both a visibility and aesthetic standpoint.

Groundwater Recharge Basins

- Groundwater is recharged into the hydrogeologic system where permeable units, or aquifers, crop out at the surface. These sites generally have a higher infiltration capacity, and must be closely monitored in order to prevent contamination of the aquifer.

Educational Institutions

- Educational institutions, i.e. grade schools, colleges, universities, etc., in the vicinity of a navigable waterway should be precautionary monitored due to

the concentrated presence of grade school children and college students, alike.

- Plans designed for the evacuation of students should be incorporated should threats of personal safety arise with the impact of a spilled product along a neighboring coastline.

9.1.2 Environmental Sensitivities

Shoreline Composition

The environmental sensitivities of various shoreline compositions and habitats are prioritized within three categories (high, moderate, and low) which rank the specific shoreline type in order of their increasing potential for long term oil persistence and biological damage. This priority system is intended to assist the spill responder while allocating response resources during the initial stages of a spill response operation, with the knowledge that responsible federal and state resource agency representatives will arrive on site to further clarify priorities within each category.

Shoreline types are noted on the Environmental Response Maps as a narrow, hatch pattern paralleling the shoreline. The actual inland extent of a specific shoreline type (such as a marsh) is not illustrated for the practical purpose of representing the logistical spill response aids in a clarified manner.

Shoreline types are typically categorized as follows:

- **High Environmentally Sensitive Areas:**

  High environmentally sensitive areas are typically sheltered from wave energy and tend to retain oil over time. Highly sensitive shorelines are usually characterized as biologically productive environments, and remediation techniques can be difficult and extremely time consuming. Low-pressure flushing, the use of sorbent pads and booms, and natural cleaning techniques are viable clean-up methods in these environments.

- **Moderate Environmentally Sensitive Areas:**

  Moderate environmentally sensitive areas include shorelines which are somewhat resistant to the effects of oiling. Low-pressure flushing, manual removal, and the use of beach-cleaning machines are reasonably acceptable techniques in the cleansing of both fine and coarse-grained sediments, while substrate removal and/or displacement are also considered viable methods in the remediation of finer-grained sediments.

- **Low Environmentally Sensitive Areas:**

  Low environmentally sensitive shorelines are, for the most part, low ecologically productive environments. Manual removal and natural cleaning techniques are most often employed in the reclamation of these shoreline types.

Habitat Description

A narrative description of the species present along the Yellowstone River is presented in Figures 9.1 and 9.2 included with such relevant information as the following:

- presence of federally and state-protected species.
- presence of local, rare, threatened, and endangered species and candidate groups.
- seasonality of local inhabitants.
- habitat use, i.e. spawning ground, commercial harvesting area, overwintering area, migratory area, nesting area, sport hunting/fishing area, etc.

A vast inventory of marine life forms exist within the nearshore waters and along the shorelines of the Yellowstone River. However, only those species are identified which play an integral part in commercial and recreational importance, or are protected under federal and/or state legislation, or are restricted by their habitat to maintain a shoreline existence within these areas.

9.1.3 Shoreline Access Sites and Equipment Staging Areas

Pertinent logistical information designed to assist the spill responder in the deployment of equipment and manpower is listed in Figures 9.1 and 9.2.

The following information is typically presented:

Shoreline Access Sites

- Shoreline access sites are identified on the maps by a square, enclosed with a letter of the alphabet, in order to differentiate the various sites with the narrative on the adjacent Index Page.

- Information regarding the exact location of the site, as well as the directions on how to gain access to the site, is provided on the Index Page.

- A brief description and analysis of the facilities available, i.e. telephones, parking areas, restroom facilities, etc., at the site are referenced where available.

- Potential uses for a shoreline access site are also listed, and identified as one or more of the following:

    - equipment staging area
    - command post location
    - boom and/or equipment deployment site
    - observation point

- hand-crew clean-up site

- Should proper and/or advance notification become warranted prior to the use of a site for spill logistical purposes, appropriate contact names and telephone numbers are also listed.

Boat Launching Facilities

- Boat ramps and hoists are valuable from a logistical standpoint in the deployment of waterborne equipment.

Potential Containment Booming Locations

With the identification of the potential source of a spill and assuming certain conditions which would govern the movement of a spill on water, strategic containment booming locations may be generated. Locations for the strategic deployment of containment boom may also be based upon shoreline accessibility, proximity to sensitive resources, and areas of expected accumulations of spilled product. Figures 9.1 and 9.2 should be used to develop actual booming schemes and the amount of boom required to complete a specific booming objective.

9.2 ENDANGERED AND THREATENED SPECIES

Endangered and threatened species are classified by the U.S. Fish and Wildlife Service, the Montana Department of Fish, Wildlife and Parks and by the Montana Natural Heritage Program.

Definitions of classifications are as follows:

- **Endangered** Any species in danger of extinction throughout all or a significant portion of its range.

- **Threatened** Any species likely to become an endangered species within the foreseeable future through all or a significant portion of its range.

- **Candidate** Any species that the federal or state government is actively reviewing for possible inclusion in the endangered or threatened lists.

- **Protected** Any species under protection of a specific state law.

Figure 9.3 lists endangered and threatened species which may move into or migrate through the area or which usually reside in similar habitats. Figure 9.4 details government agencies and other resources to contact for assistance with wildlife issues or oiled wildlife rehabilitation.

FIGURE 9.1

RESPONSE MAP INDEX

(see Figure 9.1 in ERAP)

FIGURE 9.2

PLANNING DISTANCE ENVIRONMENTAL AND LOGISTICAL INFORMATION

(see Figure 9.2 in ERAP)

FIGURE 9.3

ENDANGERED AND THREATENED SPECIES

	STATE STATUS	USF&W SERVICE STATUS
BIRDS		
Least tern	P	T
Black tern	P	C2
American white pelican	P	
Bald eagle	P	E
Peregrine falcon	E	E
Piping plover	P	E
Whooping crane	E	E
REPTILES		
Snapping turtle	NG	
Spiny softshell turtle	NG	
FISH		
Paddlefish	GFRH	C2
Shortnose gar	NG	
Sturgeon chub	NG	C2
Sicklefin chub	NG	C2
Pallid sturgeon	GFRH	E

LEGEND

State Status:

GF	Game Fish	E	Endangered
RH	Restricted Harvest	P	Protected
NG	Non Game		

Federal Status:

E	Endangered	T	Threatened
C2	Candidate Species		

FIGURE 9.4

WILDLIFE REHABILITATION RESOURCES

GOVERNMENT AGENCIES

U.S. Fish and Wildlife Service
2900 4th Avenue North
Billings, MT 59102
406-247-7366 (Roger Parker)

Montana Department of Fish, Wildlife, and Parks
14 26th Ave. East
Helena, MT 59620
406-444-5334 (Glen Philips)

Montana Department of Fish, Wildlife, and Parks
2300 Lake Elmo Dr.
Billings, MT 59105
406-247-2940 (Jim Darling)

OUTSIDE RESOURCES

International Bird Rescue Center
699 Potter
Berkeley, CA 94710
510-841-9086

10.0 TRAINING AND DRILLS

10.1 TRAINING

10.1.1 Overview

The Training/Drill program is designed to reduce operational risks and comply with all applicable laws, regulations, and guidelines. The program is designed to ensure that an adequate number of trained personnel is available on site and prepared to respond to an incident.

The training of the refinery's response organization in the prompt and effective response to an oil spill/emergency incident is an integral part of the plant's environmental, health, and safety policies. The refinery has developed a multi-faceted training program for the members of its response organization. The program consists of classroom instruction, tabletop exercises of the Oil Spill Response Organization (i.e., Oil Spill Response Team), and equipment deployment drills involving its and the Co-op's response equipment.

The program of spill response drills is designed to comply with National Preparedness for Response Exercise Program (PREP) Guidelines, (USDOT/USEPA/USDOI, August 2002) and to test notification procedures, to exercise equipment, to practice response techniques, and to maintain a high level of readiness. These drills also serve to determine whether the response plan will function as intended and where modifications need to be made. All drills are evaluated by ExxonMobil management to verify that the exercise was completed, that the exercise met the required objectives, and that the exercise performance demonstrated the effectiveness of the plan.

10.1.2 Formal Training

The training criteria for individuals who may be involved in a spill incident are based on the duties and functions associated with the level of response or types of activities they may have to perform. ExxonMobil policy requires that training at all levels meet or exceed the standards set by the federal government.

10.1.2.1 HAZWOPER (Frequency: One time with annual refresher).

Employees are trained to the level of HAZWOPER necessary to perform their emergency response duties. Team members are required under state and federal regulations to have appropriate up-to-date training to function in their positions. Refresher training or a demonstration of competency is required annually to maintain qualification as a Responder. This HAZWOPER training will be accomplished by on site training. Current training records will be maintained for all team members at the ExxonMobil Billings Refinery.

First Responder – Employee Awareness Level: Training covers basic hazard and risk assessment techniques and HazMat terminology, how to select and use personal protective equipment, how to perform control, containment, and confinement operations, and how to implement basic decontamination measures. Personnel involved in the day to day operations within a specific unit receive continual

instruction and experience in the proper handling and potential hazards associated with the materials that could be spilled in their area.

First Responder –Operations Level: Employees also receive advanced, specialized training in order to aggressively respond to a hazardous material spill to contain and alleviate the condition. Training includes hazard recognition, respirator training, decontamination procedures, hydrocarbon chemistry, personal protective equipment, and operation of air monitoring equipment. Personnel are involved in protection and containment operations which do not involve contact with the spill.

Response support: Personnel whose skills are needed temporarily to perform immediate emergency support work (such as dump truck drivers and crane operators) are not required to meet the training requirements discussed above. However, these personnel must be briefed on the potential hazards and the duties to be performed at the site before participating in response operations. They must also receive instruction in the use of any safety and personal protective equipment needed and on all other appropriate safety and health precautions.

Specialist: Experts would provide technical advice or guidance during response to a spill incident. Examples of such specialists might include chemists, biologists, industrial hygienists, physicians, or others with skills useful during a spill response operation. Such persons must receive appropriate training or demonstrate competency in their specialty. There are no specific requirements on training content or hours of training for these persons. However, the training must be sufficient for the individuals to maintain competency in their specific area of expertise. Training and demonstration of competency for skilled support personnel and specialists should be documented.

10.1.2.2 Spill Training on OPA 90 Plan

Qualified Individual personnel are provided general information regarding the background and requirements of OPA 90 and the contents/purpose of the facility's response plan. The review covers how the plan is organized, what information it contains, and how it should be used. QI responsibilities emphasize notification and reporting procedures. The training is one-time with annual refresher during Tabletop Exercise.

All response personnel shall be trained in accordance with the roles and responsibilities in accordance with their position as specified in this Facility Response Plan. All response team members (QI, AQI, Response Team) should review the appropriate parts of the Facility Response Plan whenever their job position or responsibilities change under the Plan. A copy of this Plan will be available at all times to team members.

The QI and Oil Spill Response Team members may receive additional training. Other annual courses pertinent to furthering the practical understanding of the OPA 90 Plan include SPCC and RCRA training. Additional training may be accomplished by attending seminars, training classes, cooperative training classes, outside classes, and various response schools. Timing of this additional training will vary based on availability of classes.

Assigned IC team members will receive ICS training and may also receive supplemental training in other related general topics.

10.1.2.3 Spill Training for Contractors

If a spill response/clean-up operation is required and third party personnel are needed, ExxonMobil will use fully qualified response contractors to perform the work. If contractors sub-contract to labor pools, documentation as to the training of casual laborers will be required. ExxonMobil will require documentation from the contractor regarding the HAZWOPER qualifications of their personnel. The OSRO must provide a letter to the facility annually, which states that their personnel are properly trained.

10.2 DRILLS

10.2.1 Facility/Operation Drills

The refinery will conduct drills to further improve response personnel preparedness. The refinery intends to follow the drill requirements specified in the PREP Guidelines. PREP states that completion of the PREP exercises will satisfy all OPA 90 mandated federal oil pollution response exercise requirements. The drills will be designed to test all components of spill response. Figure 10.1 depicts the minimum triennial cycle of exercises at the facility, according to PREP guidelines. Each component of the plan must be exercised at least once in the triennial cycle. The accountability for drills lies with the Emergency Response Coordinator.

For this OSRP, PREP requires three types of drills: QI notification exercises, spill management team table top exercises (TTX), and equipment deployment exercises. These are summarized in Figure 10.1. The refinery may elect to exercise individual components of the plan at various times during a triennial cycle, with each component of the plan being exercised at least once. PREP lists 15 components of the response plan that must be exercised over the triennial period.

Qualified Individual Notification Exercises: The facility will conduct quarterly qualified individual notification exercises. The quarterly notification drill may be announced or unannounced. Generally the Emergency Response Coordinator contacts a randomly chosen individual in the refinery and instructs them to implement the internal notification sequence. The drill will normally be terminated when the appropriate QI is contacted.

Spill Management Team Tabletop Exercises (TTX): This drill is conducted annually and involves an activity in which key spill response personnel are presented with simulated emergency situations without time constraints. It is usually informal, in a conference room environment, and designed to stimulate constructive discussion by the participants as they attempt to examine and then resolve problems related to the emergency response using the Coop and other emergency and operations plans. The purpose is to resolve questions of coordination and assignment of responsibilities in a non-threatening format and under minimum stress. As described in Section 4, the Oil Spill Response Team responds to small, onsite spills. The QI staffs the crisis management team positions. All the components of the plan will be exercised during the triennial cycle, but not necessarily during a single exercise. The COOP may participate in the refinery drills. Even though the OSRP describes the

North American Regional Response Team (NARRT) and OSRO for major spills with significant impact (Section 4), this TTX does not contemplate using the NARRT and OSRO for the response exercise for the Worst Case Discharge at this facility.

A minimum of one Response Team Tabletop Exercise in a triennial cycle will involve a Worst-Case Discharge scenario.

Equipment Deployment Exercises: In accordance with PREP, the refinery conducts equipment deployment drills twice a year for equipment cited in the OSRP and owned/operated by the refinery. One drill is conducted by the refinery and the second drill is conducted with the COOP. The refinery deploys the PREP specified minimum amount of equipment during each exercise. These drills may be combined with a notification and/or tabletop drill and may be announced or unannounced. The refinery also requires, through contract, that their OSROs conduct equipment deployment drills annually in compliance with the PREP requirements. The OSROs are also required to maintain documentation of these drills or actual spill incidents which involve equipment deployment and provide that documentation to ExxonMobil upon request. The drills will typically involve the dispatch of equipment to a hypothetical spill location in a similar type of environment (i.e., in-land river) and the deployment of boom, skimmers and/or other response equipment.

Unannounced Exercise: An unannounced exercise is not a separate exercise. Any of the previously described exercises may be used as an unannounced exercise, except for the Quarterly QI Notification and annual OSRO-owned Equipment Deployment. An unannounced exercise is where the exercise participants do not have prior knowledge of the exercise, as would be the situation in an actual spill incident.

Area Exercise: The purpose of the area exercise is to exercise the entire response community in a particular area. An area is defined as “that geographic area for which a separate and distinct Area Contingency Plan has been prepared, as described in OPA 90.” The response community includes the Federal, State, and local government and industry. The area exercises are designed to exercise the government and industry interface for spill response. The goal is to ensure that all areas of the country are exercised triennially. All of the area exercises will be developed by an exercise design team. The exercise design team is comprised of representatives from the Federal, State, and local government and industry. A Lead Plan Holder would lead each area exercise. The Lead Plan Holder is the organization (government or industry) that holds the primary plan that is exercised in the area exercise. The Lead Plan Holder would have the final word on designing the scope and scenario of the exercise.

10.2.2 Drill / Exercise Logs

Drill logs and evaluation forms for the drill/exercise program will follow the example forms provided in Section 4 of the PREP Guidelines. These logs and forms are maintained by the Emergency Response Coordinator in a separate annex binder to the FRP.

10.2.3 Drill Evaluation

After conducting a drill/exercise, the Emergency Response Coordinator will evaluate the efficiency in which the drill was conducted and will identify areas where improvement could be made. The Qualified Individual Notification, Equipment Deployment, and Spill Management Team Tabletop drills/exercises are critiqued using the example exercise forms provided in Section 4 of the PREP Guidelines. These forms are maintained by the Emergency Response Coordinator in a separate annex binder to the FRP.

10.3 TRAINING AND DRILL RECORDS

The refinery will maintain records sufficient to document training of its oil spill response team members. The Personnel Response Training Logs and Discharge Prevention Meeting Logs will be maintained in a separate annex to the FRP or in a computer based training system. All training records will be made available for inspection upon request by the EPA. ExxonMobil will maintain records documenting training of the organization's personnel for a period of five years.

Drill logs and exercise records are contained in a separate annex binder to the FRP that is located in the Emergency Response Coordinator's office.

The Facility should verify that the COOP and the OSRO has completed the equipment deployment exercise requirements and has maintained the necessary documentation in an annual letter. The COOP and OSRO may deploy equipment at any location, so long as it occurs within an operating environment similar to the facility's. OSRO must demonstrate the ability of their personnel to deploy and operate response equipment and ensure that the response equipment is in proper working order.

FIGURE 10.1

RESPONSE EXERCISE PROGRAM

NPREP Exercises		
Total Number/ Triennial	**Frequency**	**Exercise Type/Description**
12	Quarterly	**QI Notification Exercise** **Scope:** Exercise communication between facility personnel and the QI(s) and/or the designated alternate(s). At least once a year, one of the notification exercises should be conducted during non-business hours. **Objective:** Contact must be made with a QI or designated alternate, as identified in the plan. **General:** All personnel receiving notification shall respond to the notification and verify the receipt of the notification. Personnel who do not respond should be contacted to determine whether or not they received the notification.
3	Annual	**Equipment Deployment Exercise (Facility-owned equipment only)** **Scope:** Deploy and operate facility equipment identified in the response plan. This equipment would be either (1) minimum amount for deployment or (2) the equipment necessary to respond to an average most probable spill, whichever is less. **Objective:** Demonstrate ability of facility personnel to deploy and operate equipment. **General:** The facility may take credit for equipment deployed in an actual spill or training as long as activities are properly documented.
3	Annual	**Equipment Deployment Exercise (with COOP equipment)** **Scope:** Deploy and operate facility equipment identified in the response plan. This equipment would be minimum amount for deployment. **Objective:** Demonstrate ability of personnel to deploy and operate equipment. **General:** The facility may take credit for equipment deployed in an actual spill or training as long as activities are properly documented.
3	Annual	**Spill Management Team Tabletop Exercise** **Scope:** Exercise the spill management team's organization, communication, and decision-making in managing a spill response. Each team identified in the plan (i.e., if different teams for different size spills) is required to conduct an annual tabletop exercise. **Objective:** Exercise the response team in a review of: knowledge of the plan, proper notifications, communication systems, ability to access an OSRO, coordination of internal spill response personnel, team transitions. **General:** A minimum of one tabletop exercise in a triennial cycle will involve simulation of the worst case discharge scenario.
3	Annual	**Unannounced Exercise:** This exercise may take the place of a required Tabletop or an Equipment Deployment Exercise.

NPREP Exercises		
Total Number/ Triennial	**Frequency**	**Exercise Type/Description**
1 (max.)	Once every 3 years	**Government-Initiated Unannounced Exercise:** an unannounced drill may be called at any time. With satisfactory performance during the drill, another unannounced drill will not be called within 36 months. **Scope:** Exercise would involve response to average most probable discharge and equipment deployment. **Objective:** Conduct proper notifications and demonstrate that the response is: timely, conducted with adequate amount of equipment and properly conducted. **General:** The facility may take credit for an actual spill as long as activities are properly documented.
Note: *Each component of the plan must be exercised at least once in the triennial cycle***.**		

11.0 GLOSSARY

ABBREVIATIONS: (*Typical*)

BLM	Bureau of Land Management (USDOI)
CEMP	Comprehensive Emergency Management Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
CWA	Clean Water Act (Federal)
EOC	Emergency Operations Center
ELIRT	Emergency Local Interfunctional Response Team (ExxonMobil)
EPA	U.S. Environmental Protection Agency
ERT	Emergency Response Team (ExxonMobil)
EQ	Environmental Quality
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Administration
FOSC	Federal On-Scene Coordinator
FRDA	Freshwater Resource Damage Assessment
FRF	Federal Revolving Fund
GIS	Geographic Information System
HAZWOPER	Hazardous Waste Operations and Emergency Response Personnel Training (29 CFR Part 1910.1200)
IC	Incident Commander
ICS	Incident Command System
LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LOSC	Local On-Scene Coordinator
MDES	Montana Disaster and Emergency Services
MMS	Mineral Management Service (USDOI)
MSDS	Material Safety Data Sheets
MTR	Marine Transportation-Related (Facility, for OPA 90)
NCP	National Contingency Plan
NIIMS	National Interagency Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center (USCG)
NRDA	Natural Resource Damage Assessment
NRT	National Response Team
OCC	Operations Control Center
OCI	Office of Criminal Investigation (EPA)
OPA90	Federal Oil Pollution Act of 1990
OSC	On-Scene Coordinator/Commander
OSHA	Occupational Safety and Health Administration (USDL)
PFD	Personal Flotation Device
PIAT	USCG Public Information Assist Team
PPE	Personal Protective Equipment
QI	Qualified Individual
RCP	Oil and Hazardous Substances Pollution Contingency Plan for Federal Region 8

RCRA	Resource Conservation and Recovery Act of 1976
RRT	Regional Response Team (Federal)
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SERC	State Emergency Response Center
SPCC	Spill Prevention Control and Countermeasures
SSC	Scientific Support Coordinator (NOAA)
STRCC	Spill Team Response Containment/Cleanup (ExxonMobil)
SUPSALV	U.S. Navy Supervisor of Salvage
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDOD	U.S. Department of Defense
USDL	U.S. Department of Labor
USDOE	U.S. Department of Energy
USDOI	U.S. Department of Interior
USDOJ	U.S. Department of Justice
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish & Wildlife Service (USDOI)
USGS	U.S. Geological Survey (USDOI)
USHHS	U.S. Department of Health & Human Services
USN	U.S. Navy
WQB	Water Quantity Bureau (Montana)

DEFINITIONS:

ACCESS/STAGING AREAS: Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

BARREL: Measure of space occupied by 42 U.S. gallons at 60 degrees Fahrenheit.

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

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

CLEAN-UP CONTRACTOR: Persons contracted to undertake a response action to clean up a spill.

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

COMMAND POST: A site located at a safe distance from the spill site where response decisions are made, equipment and manpower

deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

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

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

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

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

CRITICAL AREAS TO MONITOR: Areas which if impacted by spilled oil may result in threats to public safety or health.

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

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

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

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

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

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

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

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

FACILITY: Any pipeline, structure, equipment, or device used for handling product, including, but not limited to, underground and aboveground tanks, impoundments, mobile or portable drilling or workover rigs, barge mounted drilling or workover rigs, and portable fueling facilities located offshore or on or adjacent to coastal waters or any place where a discharge of oil from the facility could enter coastal waters or threaten to enter coastal waters.

FEDERAL FUND: The spill liability trust fund established under OPA.

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

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

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

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

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

HEAT STRESS: Dangerous physical condition caused by over exposure to extremely high temperatures.

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

IMMEDIATE RESPONSE STEPS: The immediate steps that are to be taken by the spill observer after detection of a spill.

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

INCIDENT COMMANDER: The one individual in charge at any given time of an incident. The incident commander will be responsible for establishing a unified command with all on-scene coordinators.

INCIDENT COMMAND SYSTEM: A method by which the response to an extraordinary event, including a spill, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.

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

INITIAL NOTIFICATION: The process of notifying necessary ExxonMobil personnel and Federal/State/Local agencies that a spill has

occurred, including all pertinent available information surrounding the incident.

INLAND AREA: For OPA 90, the area shoreward of the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation defined in §§ 80.740 - 80.850 of title 33 of the CFR. The inland area does not include the Great Lakes.

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

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

LEAD AGENCY: The government agency that assumes the lead for directing response activities.

LEAD FEDERAL AGENCY: The agency which coordinates the federal response to incidents on navigable waters. The lead federal agencies are:

- **United States Coast Guard (USCG):** Oil and chemically hazardous materials incidents on navigable waters.
- **United States Environmental Protection Agency (EPA):** Oil and chemically hazardous materials incidents on inland waters.

LEAD STATE AGENCY: The agency which coordinates state support to federal and/or local governments or assumes the lead in the absence of federal response.

LOCATION BOUNDARIES: Areas where oil may be expected to impact during the first day of a spill based on tidal currents and prevailing winds.

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

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

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

NON-PERSISTENT OR GROUP I OIL: For OPA 90, a petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions: 1) At least 50% of which by volume, distills at a temperature of 340 degrees C (645 degrees F), and 2) At least 95% of which by volume, distills at a temperature of 370 degrees C (700 degrees F).

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

OILY WASTE: Product contaminated waste resulting from a spill or spill response operations.

OWNER OR OPERATOR: Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

PERSISTENT OIL: For OPA 90, a petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are classified by specific gravity as follows: Group II - specific gravity less than .85; Group III - specific gravity between .85 and less than .95; Group IV - specific gravity of .95 to and including 1.0; Group V - specific gravity greater than 1.0.

PERSON: Any political subdivision, government agency, municipality, industry, public or private corporation, copartnership, association, firm, individual, or any other entity whatsoever.

PLAN: Spill response, clean-up, and disposal contingency plan.

POST-EMERGENCY RESPONSE: The portion of a response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the sites has begun.

PRIMARY RESPONSE CONTRACTOR OR An individual, company, or cooperative that has contracted directly with the plan holder to provide

CONTRACTORS: equipment and/or personnel for the containment or cleanup of spilled oil.

RECREATION AREAS: Publicly accessible locations where social/sporting events take place.

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

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

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

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

RESPONSE RESOURCES: For OPA 90, the personnel, equipment, supplies, and other capability necessary to perform the response activities identified in a response plan.

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

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

RIVERS AND CANALS: For OPA 90, a body of water confined within the inland area that has a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

SECURING THE SOURCE: Steps that must be taken to stop discharge of oil at the source of the spill.

SIGNIFICANT AND For OPA 90, any fixed MTR facility that is capable of

SUBSTANTIAL HARM:	transferring oil, in bulk, to or from a vessel with a capacity of 250 barrels or more that must submit response plans and have plans approved by the USCG.
SITE SECURITY AND CONTROL:	Steps that must be taken to provide safeguards needed to protect personnel and property, as well as the general public, to ensure an efficient clean-up operation.
SITE CONDITIONS:	Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic breakdowns, etc.
SKIMMERS:	Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.
SORBENTS:	Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.
SPILL:	An unauthorized discharge of oil or hazardous substance into the waters of the state.
SPILL OBSERVER:	The first ExxonMobil individual who discovers a spill. This individual must function as the first responder and person-in-charge until relieved by an authorized supervisor.
SPILL RESPONSE:	All actions taken in responding to spills of oil and hazardous materials, e.g.: receiving and making notifications; information gathering and technical advisory phone calls; preparation for and travel to and from spill sites; direction of clean-up activities; damage assessments; report writing, enforcement investigations and actions; cost recovery; and program development.
SPILL RESPONSE PERSONNEL:	Federal, state, local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be pre-approved on a list maintained in each region.
STATE EMERGENCY RESPONSE COMMISSION (SERC):	A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

SUBSTANTIAL HARM: For OPA 90, any mobile MTR facility (tank trucks and railroad tank cars) that is capable of transferring oil, in bulk, to or from a vessel with a capacity of 250 barrels or more that must submit a response plan to the USCG.

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

UNAUTHORIZED DISCHARGE: Discharges excluding those authorized by and in compliance with a government permit, seepage from the earth solely from natural causes, and unavoidable, minute discharges of oil from a properly functioning engine, of a harmful quantity of oil from a vessel or facility either: a) into coastal waters; or b) on any waters or land adjacent to coastal waters where harmful quantity of oil may enter coastal waters or threaten to enter coastal waters if the discharge is not abated nor contained and the oil is not removed.

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

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

- determine their roles and responsibilities for a given incident.
- determine their overall objectives for management of an incident.
- select a strategy to achieve agreed upon objectives.
- deploy resources to achieve agreed-upon objectives.

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

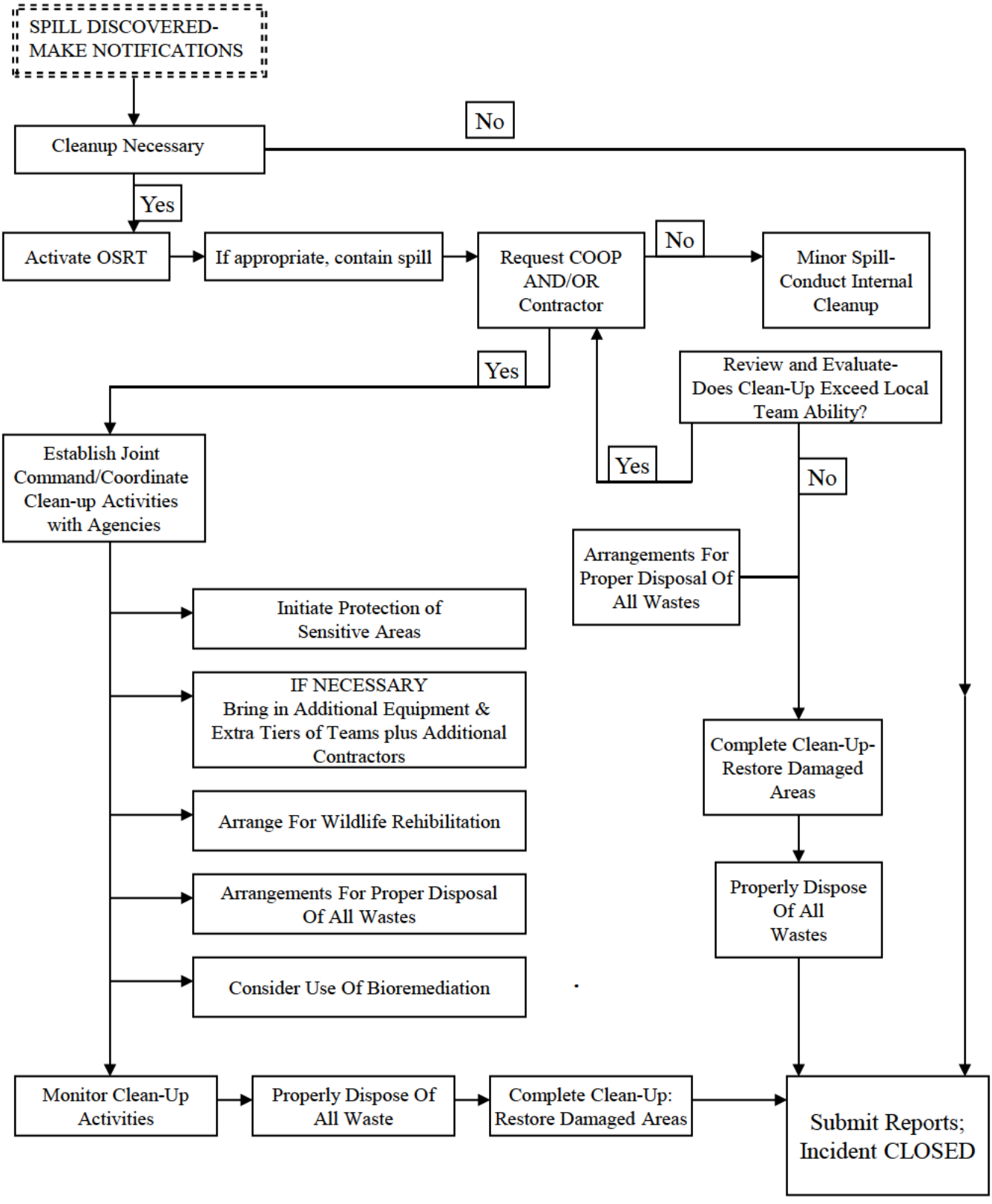
WASTE: Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and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

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

WORST CASE UNAUTHORIZED DISCHARGE:

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

FIGURE 3.1
SPILL RESPONSE FLOWCHART



APPENDIX A

EXXONMOBIL BILLINGS REFINERY SPILL HISTORY

It is the plant's policy to document and report all spills, leaks and discharges of any substance that reaches navigable water in accordance with government reporting requirements. Reportable oil spills included herein are those that (a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shoreline. This list includes those discharges that have occurred at the refinery for the life of the refinery where data was available. All of the discharges involved petroleum oil or petroleum additives.

Date	Enforcement Action	Location	Product	Amount (Gallons)	Description of Incident	Corrective Action Taken	Plans for Preventing Reoccurrence
6/1/2009	None	MPDES Outfall 002	Oily water	0.2 Tablespoon	Oil sheen was observed at the outfall due to the failure of a heat exchanger.	The cooling water return was diverted to Pond 1 and absorbent pads were put down to absorb any residual oil. Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
5/20/2009	None	MPDES Outfall 002	Oily water	0.9	Oil sheen was observed at the outfall due to the failure of a heat exchanger.	The cooling water return was diverted to Pond 1, a containment boom was deployed across the Outfall 002 discharge, a vacuum truck was used to remove the sheen and absorbent pads were put down to absorb any residual oil. Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
12/13/2008	None	MPDES Outfall 002	Oily water	0.2	Oil sheen was observed at the outfall due to the failure of a heat exchanger.	The cooling water return was diverted to Pond 1 and absorbent pads were put down to absorb any residual oil. Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
4/14/2006	None	MPDES Outfall 002	Oily water	5.5	Oil sheen was observed at the outfall due to the failure of a heat exchanger box type cooler.	The cooling water return was diverted to Pond 1, a containment boom was deployed across the Outfall 002 discharge, a vacuum truck was used to remove the sheen and absorbent pads were put down to absorb any residual oil. Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases. Evaluation underway as to improved inspections to minimize potential X Box coil leaks.
4/2/2006	None	MPDES Outfall 002	Oily water	Sheen < ½ teaspoon	Oil sheen was observed at the outfall due to the failure of a heat exchanger.	Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.

2/22/2002	None	MPDES Outfall 002	Oily water	Sheen < 1 pint	Oil sheen was observed at the outfall due to the failure of a heat exchanger.	The cooling water return was diverted to Pond 1, a containment boom was deployed across the Outfall 002 discharge, a vacuum truck was used to remove the sheen and absorbent pads were put down to absorb any residual oil. Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
5/21/1999	None	MPDES Outfall 001	Lubricating oil	sheen	An employee lubricated the hand-wheel threads and associated chain used to raise the weir at outfall.	Absorbent pads and booms were deployed.	Procedures and training have been implemented to prevent recurrence.
11/16/1990	None	MPDES Outfall 002	Oily water	< 2	Oil sheen was observed at the outfall due to construction activities associated with the installation of oil spill mitigation facilities.	Activities were altered to stop discharge and oil absorbent booms were used to absorb oil.	Two wells were installed to lower water table and eliminate source of oil.
12/15/1989	None	MPDES Outfall 001	Oily water	2 pints	Oil sheen was observed at the outfall due to excessive oil loading in the Wastewater Treatment Plant.	Oil absorbent booms and pads were placed in the side channel of the Yellowstone River downstream of Outfall 001.	Winter operation of the wastewater treatment plant was changed to allow increased retention time in polishing/stabilization ponds.
5/8/1988	None	MPDES Outfall 002	Oily water	25	Oil was observed at the outfall due to the failure of a heat exchanger.	Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
4/25/1988	None	MPDES Outfall 002	Oily water / naphtha	5 - 10	Oil was observed at the outfall due to the failure of a heat exchanger.	Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
12/3-4/1985	None	MPDES Outfall 002	Oily water / lubricating oil	4 - 5	Oil was observed at the outfall due to the failure (freezing) of a heat exchanger.	Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
6/20/1984	None	MPDES Outfall 002	Oily water	< 42	Oil was observed at the outfall due to the failure of a heat exchanger.	Leaking exchanger was isolated and repaired.	Water side pressure raised to prevent oil from pressuring into cooling water. Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
7/1982	None	MPDES Outfall 002	Oily water / diesel	1	Oil was observed at the outfall due to the failure (freezing) of a heat exchanger.	Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
2/1981	None	MPDES Outfall 002	Oily water	< 1	Oil was observed at the outfall during the cleanup of a small oil release of unknown origin.	The oil boom was torn away in the Discharge 002 conveyance from the refinery.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.

4/3-4/1979	None	Stormwater Outfall 002	Diesel	1,000 bbls	Oil entered he Yellowstone River from leaving a rail car loading valve open.	Oil removed from he river was accomplished within nine days and refinery cleanup of the groundwater drain ditch continued for several additional weeks.	Measures implemented to prevent reoccurrence, include: a complete redesign of the loading rack facilities, sewer segregation between light oils and asphalt; and a new larger sewer to drain groundwater and any oil which is or might be present near the southeast corner of 4th Street and Avenue G. A levee was constructed east to west in the east drainage ditch to segregate oily groundwater on he south that will flow through the south drainage ditch. Two underflow/overflow weirs were constructed in the west ditch and are in operation to contain any oil finding its way into the ditch.

It is the plant's policy to document and report all spills, leaks and discharges of any substance that reaches navigable water in accordance with government reporting requirements. Reportable oil spills included herein are those that (a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shoreline. This list includes those discharges that have occurred at the refinery for the life of the refinery where data was available. All of the discharges involved petroleum oil or petroleum additives.

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5/8/1988	None	MPDES Outfall 002	Oily water	25	Oil was observed at the outfall due to the failure of a heat exchanger.	Leaking exchanger was isolated and repaired.	Oil absorbent booms are present at all times up stream of Discharge 002 to minimize he impact of possible oil releases.
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APPENDIX B

WORST CASE SCENARIO EQUIPMENT PLANNING

WORST CASE SCENARIO EQUIPMENT PLANNING

This appendix addresses the response actions and resources needed to respond to different discharge scenarios. EPA categorizes oil discharges in three classifications:

- Small Discharge: 2,100 gallons or less.
- Medium Discharge: greater than 2,100 gallons and less than or equal to 36,000 gallons.
- Worst Case Discharge: greater than (b) (3), (b) (7)(F) and less than or equal to (b) (3), (b) (7)(F) gallons (100% of the largest storage tank - Tank 17).

Response resources and response times required by EPA for a small oil discharge include, as appropriate:

- 1,000' of containment boom and a means of deployment within one hour of discharge discovery.
- Oil recovery devices with an effective daily recovery rate of 50 bbl/day (equal to the small discharge volume).
- Oil storage capacity of 100 bbl for recovered oil (twice the daily recovery rate).

Response resources required by EPA for a medium oil discharge within 12 hours of discharge discovery, include:

- Sufficient quantity of containment boom and a means of deployment.
- Oil recovery devices with an effective daily recovery rate of 430 bbl/day (equal to the 50% of the medium discharge volume).
- Oil storage capacity of 860 bbl for recovered oil (twice the daily recovery rate).

Figures B.1 to B.4 provide planning volumes of response for worst case discharges corresponding to oil groups I, II, III and IV. (b) (3), (b) (7)(F) of Group III oil from Tank 17. Resources requirements are summarized below:

	Tier I	Tier II	Tier III
Response Time, hours	12	36	60
Oil Recovery, effective bbl/day	(b) (3), (b) (7)(F)		
Oil Storage, bbl/day			

The worst case discharge for the DOT surge relief tank is based on allowances using specific reduction percentages depending on the spill prevention measures used. (b) (3), (b) (7)(F) providing surge relief for a DOT regulated pipeline. The worst case discharge worksheet (Figure B.5) has been adjusted to reflect a 50% reduction for secondary containment, 10% reduction for the API standards to which it was built and is being maintained, 5% reduction for high level alarms, 5% reduction for the cathodic protection system, and 5% reduction for tertiary containment. After applying these credits, the (b) (3), (b) (7)(F) This DOT WCD is less than the US EPA calculated volumes so the greater volume will be used in determining the necessary response capacities.

These on-water oil recovery capacities exceed the available contracting caps in 40 CFR 112, Appendix E (Table 5). Additional oil spill response resources via the OSRO have been identified to meet these planning volumes (see Appendix E).

The refinery equipment is sufficient for response to the small discharges. Figure 7.1 provides a list of the response equipment available at the ExxonMobil Billings Refinery. If needed, supplemental resources are available from the COOP for meeting the medium discharge requirements. Equipment from OSRO resources should be capable of supplying the recovery for Tier III. See COOP and OSRO contractor equipment lists in Appendix E. Contracts with the COOP and OSRO are contained in Appendix E.

RESPONSE CAPABILITY SCENARIOS

The following are operational scenarios for small, medium and the worst case discharge scenarios. These scenarios explain response steps to initiate and maintain a clean-up operation.

The occurrence of a small, medium, or worst case discharge could be the result of any number of scenarios at the facility including:

- Failure of manifold, mechanical loading arm, other transfer equipment, or hoses, as appropriate;
- Tank overfill and/or failure;
- Piping line, valve, or flange leak and/or rupture;
- Tank truck and/or tank car loading overfill and/or failure;
- Explosion or fire; or
- Equipment failure (e.g. pumping system failure, relief valve failure, or other general equipment relevant to operational activities associated with internal or external facility transfers).

Events and conditions that pose a substantial threat of a worst case discharge might include:

- Tank and associated piping fire;
- Catastrophic tank shell failure; or
- Natural disaster induced tank shell or major piping failure.

A sudden release of tank contents due to the above potential threats could result in a breach of the tank basin secondary containment.

Actions to prevent or mitigate a worst case discharge due to the above potential threats include:

- Periodic inspection of the tank to confirm integrity;
- Periodic inspection of the tank basin secondary containment to confirm integrity;
- Preventive maintenance as appropriate of the tank and associated piping; and
- Training of facility personnel on the proper procedures in event of a natural disaster to minimize the potential impact.

Abnormal operations, which could result in a substantial threat of a worst case discharge, may include:

- Unintended closure of valves;

- Pressure differential exceeds or drops below the normal operating limits;
- Loss of communications; or
- Operations of any safety device (i.e., relief valve or rupture disc).

If any of these events occur, the affected system will be investigated, corrective action initiated, and the situation monitored by facility personnel. All corrective actions will be performed by personnel familiar with the task.

The response actions to each of these scenarios are outlined in Section 3. The response resources, including detail on equipment and manpower, are identified in Sections 4.0 and 7.0. Facility response personnel list/telephone numbers and other internal/external resources telephone numbers are provided in Section 2.0.

SMALL DISCHARGE = 50 BBLS (2,100 GALLONS)

A small discharge is 50 barrels.

Description

The oil types/groups that would most likely occur in the small discharge include:

- Gasoline/Group 1, Non-Persistent Oil
- Diesel/Group 2, Persistent Oil
- Crude/Group 3, Persistent Oil
- Gas Oils/Group 4, Persistent Oil

This size discharge would most likely occur due to minor equipment failures or human error. Examples may include, but not limited to:

- Pump seal leak;
- Transfer operations;
- Valve leak;
- Container rupture; or
- Storage spill.

This size discharge would likely be noticed quickly and appropriate clean up measures would be taken immediately. These types of small spills would typically occur on earthen material or concrete within the facility.

Additional Comments

Several steps can be taken to limit the number of occurrences and the amount of discharges. In particular, employees receive training periodically on proper transfer procedures. In addition, preventive maintenance of equipment is performed at regularly scheduled intervals to ensure that any potential issues are discovered. Also, old or worn parts are replaced as needed.

Most discharges are likely contained by the facility's containment systems and will be managed in the drainage system. If a 50 barrel discharge escaped the facility, it would more likely occur from leaking piping or a transfer operation outside containment. In a spill event, transfer operations would cease and containment/recovery operations initiated as appropriate. Facility management would immediately be notified and the situation would be assessed.

The closest body of water is the Yellowstone River.

Response Requirement

The facility shall identify sufficient resources, by contract or other approved means, to respond to a small discharge. The response resources shall, as appropriate, include:

- 1,000' of containment boom and a means of deploying it within one (1) hour of the discovery of a spill.
- Oil recovery devices with an effective daily recovery capacity (50 bbls/day) equal to the amount of oil discharged in a small discharge which is available at the facility within two (2) hours of the detection of an oil discharge.
- Oil storage capacity (100 bbls) for recovered oily material equivalent to twice the effective daily recovery rate.

Facility Response Resources/Capability

The Facility will respond to a small discharge with the OSRT manpower detailed in Section 4.2 as well as local COOP resources as detailed in Section 4.3.

Equipment Available to Meet Requirements:

- 1,000 feet containment boom will be provided by the facility.
- Means of deploying the boom within 1 hour of the discovery of the spill will be by boats supplied by facility.
- Boom anchor systems and buoys will be provided as needed.
- Oil containment and recovery devices with a minimum effective daily recovery capacity of 50 Bbls can be implemented at the facility, as the situation demands.
- A minimum of 100 Bbls of oil storage capacity for recovered oily material can be secured from contractor resources or made available within the facility's storage facilities, as the situation demands.
- Additional recovery and storage equipment could be made available from other Company and contract resources, as the situation demands.
- See listings in Section 7.0 for full inventory of response equipment of the facility.

Response Personnel:

- Personnel from the facility as appropriate based on the complexity of the spill.
- Qualified Individual to direct response activities.

Deployment Activities:

- As appropriate, personnel will deploy angled containment boom along the river.
- Responders will close boom around product and place sorbent boom along shoreline and pads inside boom to remove sheen.
- Responders will then begin recovery of contaminated sorbent materials and accumulate these in containers for later disposal.
- The facility personnel will not take action to contain gasoline spills on water due to the dangers inherent in this operation unless specifically directed to do so by the Federal On-Scene Coordinator.

Additional Comments:

- The worst probable chain reaction to a spill of this type would be fire, high wind and/or heavy rain.
- Initial response actions - see Initial Response Actions in Section 3.1.
- Sensitive resources at risk - see Vulnerability Analysis in Section 9.0.
- Containment strategies - See the sensitive resource maps in Section 9.0. Booming strategies will need to be developed based on actual river conditions.

Notes

- Equipment and personnel resources are detailed in Sections 4.0 and 7.0.
- Telephone notification and contact references are provided in Section 2.0.

Response personnel are trained for responding to small discharges through regularly scheduled tabletop exercises, discharge prevention/safety meetings, FRP reviews, and actual responses to spills.

MEDIUM DISCHARGE = 857 BBLS (36,000 GALLONS)

A medium discharge is 857 barrels which is less than 10 percent of the volume of the worst case discharge.

Description

The oil types/groups that would most likely occur in the medium discharge include:

- Gasoline/Group 1, Non-Persistent Oil
- Diesel/Group 2, Persistent Oil
- Crude/Group 3, Persistent Oil
- Gas Oils/Group 4, Persistent Oil

The scenarios are identical to those shown in the small discharge section except for the amount of product spilled.

Because of dikes, berms and other containment located throughout the facility, it is very unlikely that the discharge would leave the facility property or reach a navigable waterway before spill containment could begin. The spilled material would more than likely collect in recovery or facility drainage system. If a spill of this size escaped the property it would travel to the Yellowstone River. Adverse weather conditions would increase the chances of a discharge entering the river.

Additional Comments

Several steps can be taken to limit the number of occurrences and the amount of discharges. In particular, employees receive training periodically on the proper procedures for transfers to and from tanks (e.g. proper tank gauging procedures). This training includes what to do in the event of an unusual occurrence such as equipment rupture.

In addition, preventive maintenance of equipment is performed at regularly scheduled intervals to ensure that any potential issues are discovered. Old or worn parts are replaced as needed.

The closest water is the Yellowstone River so the potential for a spill of this size reaching water does exist. The immediate vicinity includes ecologically sensitive habitats, recreational areas, etc., which would have a potential impact.

Response Requirement

The facility shall identify sufficient response resources, by contract or other approved means, to respond to a medium discharge. The response resources shall, as appropriate, include:

- Oil recovery devices with an effective daily recovery capacity equal to 50% of the medium discharge volume that is capable of arriving on scene within the required time limits. (Tier I = 12 hours; Tier II = 36 hours; Tier III = 60 hours)
- Sufficient quantity of containment boom must arrive within the required time limits for oil collection and containment and for protection of fish and wildlife and sensitive environments, as appropriate. (Tier I = 12 hours; Tier II = 36 hours; Tier III = 60 hours)
- Temporary storage capacity equal to twice the daily recovery capacity.

Facility Response Resources/Capability

The facility will initially respond to a medium discharge with a similar response to the small discharge. Additional response resources will be activated from the COOP as detailed in Section 4.0.

Equipment Available to Meet Requirements:

- All resources shall be capable of arriving at the facility within the applicable response tier requirements (Tier I = 12 hours; Tier II = 36 hours; Tier III = 60 hours).
- Oil recovery devices with an effective daily recovery capacity of 428 Bbls (50% of the medium discharge volume) secured from the facility and the COOP will be on scene within 12 hours.
- 857 Bbls of oil storage capacity for recovered oily material will be secured from the COOP and/or made available within the facility's storage facilities.
- Containment boom for oil collection and containment and for protection of fish and wildlife and sensitive areas will be secured from the COOP in the event that the spill escapes the boundaries of the facility and impacts the Yellowstone River.

Response Personnel:

- ExxonMobil Billings Refinery response personnel will initiate response activities under the direction of the QI. Qualified Individual to direct response activities until properly relieved.
- COOP will provide responders as required. If deemed necessary, the local resources of COOP and ExxonMobil will be supplemented by regional resources and personnel.

Deployment Activities:

- The facility will initially respond to a medium discharge with a similar response to the small discharge.

Additional Comments:

- The worst probable chain reaction to a spill of this type would be fire, high wind and/or heavy rain.
- **Initial response actions** - See Initial Response Actions in Section 3.0.
- **Containment strategies** - See the sensitive resource maps and booming strategies in Section 9.0.
- **Proximity to downgradient wells, waterways, and drinking water intakes** - The nearest water intakes in the vicinity of the facility are identified in Section 9.0.
- **Proximity to Fish and Wildlife and Sensitive Environments** - See Vulnerability Analysis in Section 9.0.
- **Likelihood discharge will travel offsite (Topography, drainage)** - A medium discharge would most likely be contained in secondary containment. Any product that escaped secondary containment would follow the natural gradient of the facility land.
- **Weather or Aquatic Conditions** - If the weather is hot, some of the spilled product will evaporate, and the spill will likely not travel as far offsite. Adverse weather makes response, cleanup, and removal operations more difficult. Rainy conditions increase the likelihood that overland flow follows the natural contours of the land and reaches navigable water.
- **Direction of Spill Pathway** - If product escapes secondary containment, it will follow the natural gradient of the facility into the Yellowstone River.

Notes

- Equipment and personnel resources are detailed in Sections 4.0 and 7.0.
- Telephone notification and contact references are provided in Section 2.0.

Spill response personnel, including facility members, are continually trained to respond to medium discharges through regularly scheduled tabletop exercises, discharge prevention/safety meetings, FRP reviews, HAZWOPER training, and other PREP training.

WORST CASE DISCHARGE (b) (7)(F), (b) (3)

For the worst case spill incident, the discharge volume for consideration would be from a spill resulting from a rupture involving the (b) (3), (b) (7)(F)

Description

The facility has numerous aboveground storage tanks. The oil is in Groups 1, 2, 3, 4, and 5. The bulk storage tanks are not permanently manifold together and are not operated in such a manner that the multiple tanks function as one storage unit. Each tank is separated by a valve(s). Each tank has > 100 percent secondary containment. Therefore, the worst case discharge calculation is based on the capacity of the largest single above-ground oil storage tank for oil group 3.

This size discharge would most likely occur due to a natural disaster or catastrophic event. Examples may include, but not be limited to:

- Tank and associated pipeline fire;
- Catastrophic tank shell failure;
- Tornado-induced spills;
- Earthquake-induced spills; or
- Pipeline manifold rupture.

Diking and containment areas are located throughout facility. For discharge this size to reach a

waterway, or leave the facility property, diking would have to be damaged or destroyed (breached).

Additional Comments

For a worst case discharge caused by a natural disaster, preparedness is more appropriate than prevention. The Facility employees receive training periodically on the proper procedures to deal with a natural disaster. In addition, preventive maintenance of tanks is performed at regularly scheduled intervals (to ensure that any potential issues are discovered).

Calculation of planning distance for a worst case discharge is 56 miles as provided in Appendix D.

Severe rain events, tornadoes, and associated flooding would increase the chances of a spill leaving the property. Severe weather of this type could also negatively affect the response times of response contractors and other responders.

Probable chain reactions of failures would be fire and / or induced by the weather conditions. They would include, but not be limited to, failure of secondary containment, the drainage system, and discharges of more than one product.

The facility is exposed to strong winds and flying debris due to tornado conditions that may damage the tanks or the surrounding perimeter fence.

The environmental and economic impacts of a discharge of this magnitude would be disastrous to the area. It would require enormous efforts and all resources of the facility, COOP, and OSRO as well as those of the local government and assistance from outside parties, such as from USEPA Region 8 Regional Response Team and ExxonMobil's North America Regional Response Team (NARRT) to mitigate.

Response Requirement

The facility shall identify sufficient response resources, by contract or other approved means, to respond to a worst case discharge to the maximum extent practicable. The response resources shall, as appropriate, include:

- Oil recovery devices with an effective daily recovery capacity equal to the lesser of the worst case discharge Response Planning Volume Calculation or the response caps. If the daily recovery rate exceeds the applicable contracting caps (see Table B.3), then the facility must identify additional resources equal to twice the cap or the amount necessary to reach the calculated planning volume.
- Temporary storage capacity equal to twice the daily recovery capacity.
- At least 20% of the on-water response equipment should be capable of operating in water of 6 feet or less depth.
- Containment boom for oil collection and containment and for protection of areas of environmental sensitivity or economic importance.
- Identify resources capable of responding to a shoreline clean-up operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline.
- The above Response Planning Volume requirements, including response times, are based on Attachment E-1 of Appendix E, 40 CFR Part 112. (Tier I = 12 hours; Tier II = 36 hours; Tier III = 60 hours)

Facility Response Resources/Capability

The facility will respond to a worst case discharge initially with a similar response as identified for a small or medium discharge. Facility management will initiate “response actions” located in Section 3.0 immediately upon discovering a spill. Additional resources from COOP, OSRO(s), and the NARRT will be activated as the situation demands. The response resources will be capable of arriving within the required response tiers and will include:

- Worst case discharge spills will be managed by the local ICS Team, initially and supplemented by the Corporate NARRT.
- Oil recovery devices with an effective daily recovery capacity [less than the worst case discharge Response Planning Volume Calculations (Table B.3) or the response caps as required for the worst case discharge scenario will be secured from the OSRO(s) and other Company resources. On-water recovery capacities for Tier I will be provided by the refinery and COOP. On-water recovery capacities for Tiers II and III will be cascaded using additional resources as necessary from the OSRO to meet the required Tiered on-water response capacities calculated herein.
- Temporary storage capacity equal to twice the daily recovery capacity will be secured from the OSRO(s), other Company resources, or made available within the facility's storage facilities.
- At least 20% of the on-water response equipment secured from the refinery, COOP, OSRO(s) and other Company resources will be capable of operating in water of 6 feet or less depth.
- Containment boom for oil collection and containment and for protection of fish and wildlife and sensitive environments and socio-economic sensitivities will be secured from the COOP, OSRO(s) and other Company resources, if available.
- Resources capable of responding to a shoreline clean-up operation involving the calculated volume of oil and emulsified oil that might impact the shoreline will be secured from the COOP, OSRO(s) and other Company resources, if available.
- Overall response operations will be conducted under the Incident Command System with adequate facility and contract response personnel to continue operations for a minimum of seven (7) days.
- Firefighting systems, fixed equipment and procedures for handling all fires are available within the facility's firefighting facilities. Additional firefighting capabilities will be obtained by the local fire department. The QI will be the point of contact with the fire department.
- The facility will be capable of arranging for disposal of recovered products from a spill.
- Refer to the Vulnerability Analysis in Section 9.0 for more detail regarding offsite product flow. The environmental sensitivity maps are located in Section 9.0.

Notes

- Equipment and personnel resources are detailed in Sections 4.0 and 7.0.
- Telephone notification and contact references are provided in Section 2.0.
- Spill response personnel, including Facility members, are continually trained to respond to worst case discharges through regularly scheduled PREP exercises (i.e. TTX, QI notification, equipment deployment), discharge prevention/safety meetings, FRP reviews, and HAZWOPER training. A minimum of one tabletop exercise (TTX) in a triennial cycle will involve a Worst Case Discharge scenario.

RESPONSE PLANNING VOLUME CALCULATIONS FOR GROUP V OILS

OSRO has this capability and would be called in to respond appropriately. OSRO would bring in submersible pumps, divers, etc. as appropriate for the recovery.

Location Data

(b) (7)(F), (b) (3)

Discharge Volumes/Calculations

(b) (7)(F), (b) (3)

Worst Case Discharge - Based on EPA Criteria (b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)

Identified Response for Group 5 Oils*

Submersible Pumps
Dredges
Divers
Other assets as required to remove Group 5 Oil

Figure B.1 - WCD for Group I Oils

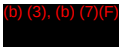


Figure B.2 - WCD for Group II Oils

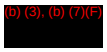


Figure B.3 - WCD for Group III Oils

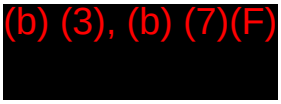


Figure B.4 - WCD for Group IV Oils

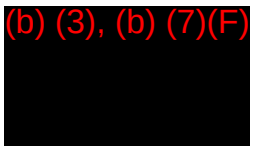
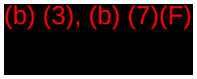


Figure B.5 - WCD for DOT



WORST CASE DISCHARGE WORKSHEET

FRP#: **08A0020** **Appendix D to CFR 112**

Oil Group # =	1	Operating Area =		X	
	(Type number in box)		(Type X in box)	Near Shore/Inland	Rivers	Great Lakes

I **Single Tank Facilities**

A. If secondary containment is adequate, then WCD = 80% tank's capacity. **(Type X) in box** ____ (gallons)

B. If secondary containment is not adequate, then WCD = tank's capacity. **(Type X) in box** ____ (gallons)

Largest AST Volume ____ (gallons)

WCD 0 (gallons)

II **Multiple Tank Facilities**

If all ASTs lack adequate secondary containment go to A. If not, go to B.

A. WCD = Total capacity of all AST's ____ (gallons)

B. 1.) Calculate total AST capacity without adequate secondarycontainment.

X= [redacted] (gallons)

2.) Calculate the capacity of the largest AST within ade[redacted]ment.

Y= [redacted] (gallons)

3.) WCD = X + Y

WCD= [redacted] (gallons)

WCD [redacted] **(gallons)**

Appendix E to CFR 112

			GROUP 2 OIL	GROUP 3 OIL	GROUP 4 OIL
PART I	**WCD (gallons)**	[redacted]	0	0	0
Step (A)	**WCD (bbls)**		0	0	0
Step (C)	**Operating Area (Type X in box)** *If operating area is Great Lakes, "X" will appear in both Inland & Great Lakes boxes.	**Inland/Near Shore**		**Rivers**	X
		Great Lakes			
Step (D)	**% of Oil (Table 2)**		80 (D1)	10 (D2)	10 (D3)
Step (E1)	**On-Water Oil Recovery** Step (D2) * Step(A) / 100		[redacted]		
Step (E2)	**Shoreline Recovery** Step (D3) * Step(A) / 100				
Step (F)	**Emulsification Factor (Table 3)**		1 0 (F)		
Step (G)	**On-Water Oil Recovery Resources Mobilization Factor**	**(Table 4)**	0 30 (G1)	0 40 (G2)	0 60 (G3)
PART II	**On-Water Recovery Capacity**	**(Barrels/Day)**	**Tier 1**	**Tier 2**	**Tier 3**
			[redacted]		
PART III	**Shoreline Cleanup Volume**	**(Barrels)**	12,476		
PART IV	**On-Water Response Capacity by Operating Area (Table 5)** Amount needed to be contracted for in advance.	**(Barrels/Day)**	**Tier 1** 1,875 (J1)	**Tier 2** 3,750 (J2)	**Tier 3** 7,500 (J3)
PART V	**On-Water by Operating Area (Table 5)** Amount needed to be identified, but not contracted for in advance.	**(Barrels/Day)**	[redacted]		

WORST CASE DISCHARGE WORKSHEET

FRP#: 08A0020 **Appendix D to CFR 112**

Oil Group # =	2	Operating Area =		X	
	(Type number in box)	(Type X in box)	Near Shore/Inland	Rivers	Great Lakes

I Single Tank Facilities

A. If secondary containment is adequate, then WCD = 80% tank's capacity. **(Type X) in box** ____ (gallons)

B. If secondary containment is not adequate, then WCD = tank's capacity. **(Type X) in box** ____ (gallons)

Largest AST Volume ____ (gallons)

WCD 0 (gallons)

II Multiple Tank Facilities

If all ASTs lack adequate secondary containment go to A. If not, go to B.

A. WCD = Total capacity of all AST's ____ (gallons)

B. 1.) Calculate total AST capacity without adequate secondarycontainment.

X= [redacted] (gallons)

2.) Calculate the capacity of the largest AST within ade[redacted]ent.

Y= [redacted] (gallons)

3.) WCD = X + Y

WCD= [redacted] (gallons)

WCD = 2,702,868 (gallons) **FR 112**

		GROUP 1 OIL	GROUP 2 OIL	GROUP 3 OIL	GROUP 4 OIL
PART I	**WCD (gallons)**	0	[redacted]	0	0
Step (A)	**WCD (bbls)**	0		0	0
Step (C)	**Operating Area (Type X in box)**	Inland/Near Shore		Rivers	X
	*If operating area is Great Lakes, "X" will appear in both Inland & Great Lakes boxes.	Great Lakes			
Step (D)	**% of Oil (Table 2)**	40 (D1)		15 (D2)	45 (D3)
Step (E1)	**On-Water Oil Recovery** Step (D2) * Step(A) / 100		[redacted]		
Step (E2)	**Shoreline Recovery** Step (D3) * Step(A) / 100				
Step (F)	**Emulsification Factor (Table 3)**		1 8 (F)		
Step (G)	**On-Water Oil Recovery Resources Mobilization Factor (Table 4)**	0 30 (G1)		0 40 (G2)	0 60 (G3)

PART II On-Water Recovery Capacity (Barrels/Day)

Tier 1	Tier 2	Tier 3
[redacted]		

PART III Shoreline Cleanup Volume (Barrels) 52,127

PART IV On-Water Response Capacity by Operating Area (Table 5) (Barrels/Day)

Amount needed to be contracted for in advance.

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

PART V On-Water by Operating Area (Table 5) (Barrels/Day)

Amount needed to be identified, but not contracted for in advance.

Tier 1	Tier 2	Tier 3
[redacted]		

WORST CASE DISCHARGE WORKSHEET

FRP#: 08A0020 **Appendix D to CFR 112**

Oil Group # =	3	Operating Area =		X	
	(Type number in box)		(Type X in box) Near Shore/Inland	Rivers	Great Lakes

I Single Tank Facilities

A. If secondary containment is adequate, then WCD = 80% tank's capacity. **(Type X) in box** ____ (gallons)

B. If secondary containment is not adequate, then WCD = tank's capacity. **(Type X) in box** ____ (gallons)

Largest AST Volume ____ (gallons)

WCD 0 (gallons)

II Multiple Tank Facilities

If all ASTs lack adequate secondary containment go to A. If not, go to B.

A. WCD = Total capacity of all AST's ____ (gallons)

B. 1.) Calculate total AST capacity without adequate secondarycontainment.

X (b) (3), (b) (7)(F) (gallons)

2.) Calculate the capacity of the largest AST within nt.

Y (gallons)

3.) WCD = X + Y

WCD (gallons)

WCD = 6,843,312 (gallons)

Appendix E to CFR 112

		GROUP 1 OIL	GROUP 2 OIL	GROUP 3 OIL	GROUP 4 OIL
PART I	**WCD (gallons)**	0	0	(b) (3), (b) (7)(F)	0
Step (A)	**WCD (bbls)**	0	0		0
Step (C)	**Operating Area (Type X in box)**	Inland/Near Shore		Rivers	X
	*If operating area is Great Lakes, "X" will appear in both Inland & Great Lakes boxes.	Great Lakes			
Step (D)	**% of Oil (Table 2)**	20 (D1)		15 (D2)	65 (D3)
Step (E1)	**On-Water Oil Recovery** Step (D2) * Step(A) / 100		(b) (3), (b) (7)(F)		
Step (E2)	**Shoreline Recovery** Step (D3) * Step(A) / 100				
Step (F)	**Emulsification Factor (Table 3)**		2 0 (F)		
Step (G)	**On-Water Oil Recovery Resources Mobilization Factor (Table 4)**	0 30 (G1)		0 40 (G2)	0 60 (G3)
PART II	**On-Water Recovery Capacity (Barrels/Day)**	Tier 1		Tier 2	Tier 3
		(b) (3), (b) (7)(F)			
		(E1) * (F) * (G1)		(E1) * (F) * (G2)	(E1) * (F) * (G3)
PART III	**Shoreline Cleanup Volume (Barrels)**		211,817		
PART IV	**On-Water Response Capacity by Operating Area (Table 5) (Barrels/Day)** Amount needed to be contracted for in advance.	Tier 1		Tier 2	Tier 3
		1,875 (J1)		3,750 (J2)	7,500 (J3)
PART V	**On-Water by Operating Area (Table 5) (Barrels/Day)** Amount needed to be identified, but not contracted for in advance.	Tier 1		Tier 2	Tier 3
		(b) (3), (b) (7)(F)			

Worst Case Discharge Worksheet For DOT Surge Relief Tank 2 (49 CFR 194.105)

(b)(1) The pipeline's maximum release time in hours, plus the maximum shutdown response time in hours (based on historic discharge data or in the absence of such historic data, the operator's best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest line drainage volume after shutdown of the line section(s) in the response zone expressed in barrels (cubic meters); or	NA
(b)(2) The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels, based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventive action taken; or	NA
(b)(3)If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels. (See Notes)	(b) (3), (b) (7)(F)

Notes:

(1) "Storage facilities" represent all facilities subject to this part, excluding oil production facilities.

(2) Secondary containment is defined in 40 CFR 112.7. Acceptable methods and structures for containment are also given in 40 CFR 112.7.

(3) 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). Permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined. (Refer to 40 CFR Part 112, Appendix D, Section 1.2 for further discussion.)

(4) Complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

(5) The volume reflects a 50% reduction for secondary containment, 10% reduction for the API standards to which it was built and is being maintained, 5% reduction for high level alarms, 5% reduction for the cathodic protection system, and 5% reduction for tertiary containment.

APPENDIX C

TANK CAPACITIES, TYPICAL TANK FAILURES & CAUSES

(b) (7)(F), (b) (3)

The following Tables are included in the ERAP, Section 9:

- **Table C.1 - Fixed Aboveground Storage Tanks (Atmospheric Tanks)**
- **Table C.2 - Fixed Aboveground Storage Tanks (Misc. Atmospheric Tanks)**
- **Table C.3 - Portable Container (Drums, Totes, Roll-off Bins) Storage Areas**
- **Table C.4 - Mobile Containers**
- **Table C-5. Oil Filled Operational and Manufacturing Equipment (excluding Electrical)**
- **Table C.6a - Oil Filled Electrical Equipment in Service (Transformers, breakers, etc.)**
- **Table C.6b - Oil Filled Electrical Equipment - Other (Transformers, breakers, etc.)**
- **Table C.7 – Secondary Containment Volumes for Product Tankage**

APPENDIX D

HAZARD EVALUATION

HAZARD EVALUATION

Hazard evaluation is an industry practice used to develop a complete understanding of potential hazards and response actions necessary to address these hazards. Planning for potential releases may reduce the severity of discharge impacts that may occur in the future.

HAZARD IDENTIFICATION

The ExxonMobil Billings Refinery routinely handles a variety of hydrocarbons and other hazardous materials. The refinery processes crude into a complete line of fuel products.

Process Units

The process units within the refinery are where crude oil is refined, cracked or otherwise treated and converted to a commercial hydrocarbon product. The units are located in areas served by an active gravity oily water sewer system. All spills, wash water, or precipitation within the area is collected and treated in the wastewater treatment plant.

Storage Tank Areas

The refinery has a total fixed aboveground tank bulk oil storage capacity of approximately 120 million gallons. The tankage is listed in Appendix C. All tanks are provided with adequate secondary containment, with the capacities to contain the contents of the largest tank within the dike area or by remote impounding and an additional allowance for precipitation.

Because of the semi-arid climate, most of the tank dikes are constructed without drain facilities. In these situations, recovery of spills is accomplished with vacuum trucks, portable pumps and temporary pipeline connections. Since all dike areas are constructed with clay floors ranging from 2 to 20 feet thick, recovery can be accomplished before oil would penetrate in the impervious clay. The only exception to the above is Tank 17, which has only 6 inches of clay under its foundation.

The dikes around Tank 17 along with Tanks, 1, 3, 7, 8, 9, 10, and 11 are equipped with separate containment drains to the gravity sewer. Each containment sewer drain is equipped with an isolation valve, located outside the containment. The isolation valves are normally in the closed position for Tanks 1, 3, 7, 8, 9, 10, 11 and 17. The valves can be manually closed to isolate the containments for the sewer system and wastewater treatment plant.

Loading and Unloading Transfer Facilities

Loading equipment for oil products at the refinery includes a tank car loading rack located on the east side of the refinery and a truck loading rack in the asphalt area. Asphalt and lighter oils are loaded at the tank car rack. Approximately 10% of raw material and 30% of finished product is transferred via the tank car and truck loading facilities.

Toe walls enclose the tank car loading rack, and also separate the asphalt loading arms from the lighter oil loading arms. Lighter oil spills are collected in the gravity oily water sewer system and treated in the wastewater treatment plant. No open drains are provided in the asphalt tank car loading section. No walls or drains are provided at the truck loading rack. The congealing properties of asphalt prevent a spill from entering a watercourse.

Day-to-Day Operations

The risk of a spill during normal manufacturing operations, loading and unloading operations, and product transfer operations are minimal. Product transfers from tank to tank are routinely performed and are monitored by the operator responsible for controlling the transfer. The OCC operator monitors tank levels at the control console to identify a possible overfill/spill condition. All product storage tanks have dedicated inlet and outlet valves. Maintenance repairs are infrequent and would normally have a risk of discharging a quantity well below that described in the small spill scenario.

Normal Daily Throughput

The refinery processes approximately 60,000 barrels of crude per day. Daily throughput does not typically vary to any significant degree. Accordingly, variation in daily throughput at this facility is not likely to have any effect on the potential discharge volume calculation.

Transfer Piping

Aboveground piping is used from the tank farms to the manufacturing areas and from/to the loading/unloading areas to/from the tank farms. The majority of aboveground piping is located within diked areas, bermed areas, or areas that drain to site-wide drainage system. Spills from this piping would be captured and treated prior to discharge. The pipelines associated with the tanks are fitted with isolation and segregating valves that can be used to isolate a leak from lines and minimize the spill that may occur.

ANALYSIS OF THE POTENTIAL FOR AN OIL SPILL

The potential for a spill has been analyzed and deemed to be present, but unlikely. The probability of tank failure for single-wall storage tanks is 1.0 x 10-4 spill/tank-year (U.S. DOT, FEMA, and U.S. EPA Handbook of Chemical Hazard Analysis Procedures). The facility has 75 single-wall aboveground field erected product tanks which gives a spill frequency of 0.0075 spills/year.

The highest probability for offsite (offsite is a refinery term for areas not generally within the immediate process unit) oil spills exists in the dike areas enclosing storage tanks. Spills of this nature, rarely exceeding 200 barrels, have occurred infrequently and have been contained within the dike areas. In the past, most spills have occurred from tank overfill and in a few instances where drain valves were improperly set. Catastrophic tank failure is a remote possibility due to the refinery's extensive inspection and maintenance program. No catastrophic tank failures have occurred at the ExxonMobil Billings Refinery according to records.

Storage tanks, fill lines and transfer pump capacities are generally sized in relative proportion. Because of the remote gauging capability and the surveillance requirements of operating procedures, it is estimated that a spill due to tank overfill would not exceed two hours capacity of the transfer pumps. Therefore, in the most extreme case, it is estimated that such a spill would not exceed 25% of the secondary containment capacity.

Most spills occurring in other offsite areas will be of smaller proportions and in most instances be collected in existing area surface drains. In areas not serviced by surface drains, the spilled oil will be recovered by one of two vacuum trucks maintained at the refinery. Capacities of the trucks are 25 and 60 barrels and are normally used for tank cleaning, flushing lines, etc. In addition to the onsite vacuum trucks, contractor owned vacuum trucks are available for use within the immediate vicinity. These contract vacuum trucks have capacities that are similar to those within the refinery.

Spills heading toward the groundwater drain ditch on the south part of the refinery will be retained with the perimeter containment berms; however, any overflow will be retained via two underflow/overflow baffles in the west drainage ditch or diverted into a larger sewer drain located at the southwest corner of Avenue G and 4th Street.

Oil Spill History

Refer to the reportable oil spill history in Appendix A for details concerning spill history for the life of the facility.

Tank Age

Refer to Table C located in Appendix C for the year of construction of each of the bulk storage containers at the Facility.

Horizontal Range of a Spill

Secondary containment dikes at the facility will in most cases prevent the horizontal migration of a spill. Attenuations of any spilled material which might escape a diked area would be accomplished through the implementation of spill response activities by: (1) facility personnel, or if necessary, (2) the OSRO contractor listed in this Plan.

Other Factors

Material Safety Data Sheets (MSDS) for all the petroleum products are maintained at the facility to inform employees about the hazardous chemicals to which they may be exposed to on the job. Although the petroleum products present a variety of hazards, some generalities can be made concerning their effects. The primary hazards with these materials are fires and explosions. Petroleum products can also cause immediate and long-term health effects if improperly handled. Every precaution is taken to: prevent the discharge of petroleum products at the facility; prevent safety and environmental impacts; and reduce the loss of revenues associated with the lost product.

VULNERABILITY DUE TO NATURAL DISASTER

All storage tanks and ancillary piping are fabricated in compliance with rigorous nationally recognized design specifications. The specifications include wind-load allowances and recognition of any applicable seismic considerations. These factors minimize the risk of vulnerability to natural disasters, including tornadoes. In addition to the above referenced factors, it should also be noted that inspection and response drills, as well as Standard Operating Procedures (SOPs) for day-to-day operations and the like, contribute to minimization of spill potential at the facility.

Climatic Fluctuations

Minor climatic fluctuations could result in seasonal variations in temperature, rainfall or wind direction. Fluctuations in rainfall may temporarily cause additional work to remove water within the dikes during periods of heavy precipitation. High wind would not substantially effect vulnerability.

Glaciation

The geological record indicates glaciation and peri-glacial processes have affected the Billings area. However, the climatic changes leading to ice ages and glacial advance occur over tens of

thousands of years. These long-term changes occur slowly enough that refinery equipment and spill prevention and response plans will easily be able to adapt to the changes.

Stream Erosion

No known streams run through or under the facility. Stream activity to the east and west of the refinery is either far away from storage or from containment facilities to reduce erosion vulnerability or constructed of slow eroding material such as concrete. The Yellowstone River bank is reinforced and monitored for stability. Any bank erosion would be detected and corrected quickly making the risk from stream erosion minimal.

Magmatic Activity

Magma may be found at some depth below the surface at all locations on Earth. Surface or near-surface manifestations of magmatic activity are a function of structural and crustal stability. Magmatic activity is not known to have occurred in the immediate Billings area during the geologic past and is not considered a meaningful risk in this area.

Dissolution

Dissolution is the process where soluble materials are dissolved from subsurface strata resulting in formation of caves, channels and pathways from water migration. Native materials in the facility area are predominately stable fine-grained sediments lacking soluble limestone or dolomite components. These sediments are unlikely to form solution channels that would compromise containment so dissolution is not a concern at this facility.

Flooding

Flooding is not considered a significant risk for the facility since none of the storage or containment area is within the 100-year flood plain.

Undetected Features

Approximately 500 feet of Cretaceous-age Clagget Shale underlie the ExxonMobil Billings Refinery area. This marine shale was laid down in a shallow epeiric sea. The massive nature of this fine-grained formation, lack of magmatic activity and seismic activity in the area suggest the risk from undetected features in this geologic environment is minimal.

Meteorites

The likelihood of meteoric impact at the refinery is extremely low.

Fires

Vegetation is controlled near the facility by manual and chemical methods reducing the possibility of brush fires. Vegetation is completely removed for the areas where oil is stored making the risk from brush fires minimal.

Tornadoes

Tornadoes have been reported in Montana. The reported tornadoes have been relatively small and have caused insignificant surface damage. Based on infrequent occurrence and minimal damage, the risk from tornadoes is minimal.

Earthquakes

The ExxonMobil Billings Refinery is in an area of low seismic potential and therefore the risk from earthquakes is minimal.

Ground Motion

The potential for ground motion at the ExxonMobil Billings Refinery is very low due to relatively flat slopes and stable fine-grained sediments. The risk from ground movement is minimal.

PLANNING DISTANCE CALCULATION

EPA regulations require facility owners or operators to determine whether the facility is located at a distance such that an oil discharge from the facility could cause injury fish, wildlife, and sensitive environments, or disrupt operations at public drinking water intakes. This Plan uses EPA's method contained in 40 CFR Part 112, Appendix C, Attachment C-III. (Oil Pollution Prevention regulations for non-transportation-related onshore facilities) to determine the planning distance for the plant.

EPA's method provides formulas for calculating oil transport on (1) moving navigable waters, (2) still waters (lakes, ponds, or bodies of water that do not have a measurable velocity), (3) tidal-influence areas and (4) over land. Since the plant is located on the Yellowstone River and regarded not to be located in a tidal-influence area, only the following formula for oil transport on moving navigable waters needs to be applied.

The planning distance formula for oil transport on moving navigable water is as follows:

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

t: the time interval based upon the type of water body and location (in hours) - 27 hours (all other rivers and canals, inland, and near shore areas); and

c: constant conversion factor - 0.68 sec-mile/hr-ft (3600 sec/hr / 5280 ft/mile).

The Chezy-Manning's Equation is as follows:

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

v: the velocity of the river of concern (in ft/sec);

n: Manning's Roughness Coefficient

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; and

s: the average slope of the river (unitless).

Billings Refinery Planning Distance Calculation

(b) (7)(F), (b) (3)

[redacted]

After contacting the US Army Corps of Engineers and USGS, the refinery determined mid-channel depths are not available for each mile along the length of the Yellowstone River from the ExxonMobil Billings Refinery to the first potentially affected drinking water intake at Hysham. Mid-channel depths were only available at the USGS gauging locations in Billings, Forsyth, and Miles City. Although the calculation for hydraulic radius specifies average mid-channel depths be used, the refinery used the annual high gauge mid-channel depths average at the gauging locations for years from 1989 to 1993. The five years of river depth information was obtained from the State of Montana USGS District Office. High flow mid-channel river depths are summarized below:

	Location		
	Billings, Montana	**Forsyth, Montana**	**Miles City, Montana**
1989 High Flow Pool Depth (ft)	10.67	7.23	9.10
1990 High Flow Pool Depth (ft)	10.07	6.88	10.19
1992 High Flow Pool Depth (ft)	12.44	9.85	11.76
1993 High Flow Pool Depth (ft)	10.7	7.73	9.51
Average Location Depth (ft)	10.96	7.87	10.12
Downstream Average Depth (ft)	---	9.4	9.65
Hydraulic Radius, r (ft)	---	6.3	6.4

s = [(A - B) (ft)/C (miles)] x (1 mile/5280 feet); where

s: average slope of the river (unitless);
A: elevation at point of discharge (feet);
B: elevation of water at appropriate distance downstream (feet); and
C: distance downstream (miles).

Since Normal Pool Elevations were unable to be determined, elevation contours were used to determine the average river slope as defined in the equation above.

Location	Elevation Discharge, A (feet)	Downstream Elevation, B (feet)	Distance, C (miles)	Slope, s (unitless)
Billings, Montana	3,081.4	---	---	
Forsyth, Montana	---	2,500.0	122	9.0×10^{-4}
Miles City, Montana	---	2,330.2	177	8.0×10^{-4}

Billings to Forsyth, Montana

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

$v = 1.5/.05 \times (6.3)^{2/3} \times (9.0 \times 10^{-4})^{1/2}$

v - 3.07 ft/sec

d = v x t x c

d = 3.07 x 27 x 0.68

d = 56.4 miles

Billings to Miles City, Montana

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

$v = 1.5/.05 \times (6.4)^{2/3} \times (8.0 \times 10^{-4})^{1/2}$

v = 2.90 ft/sec

d = v x t x c

d = 2.90 x 27 x 0.68

d = 53.2 miles

This Planning Distance includes all locations along the Yellowstone River down to the 56 miles. This means that impacts from a worst case discharge must be anticipated and planned for anywhere along the river of the plant for 56 miles.

VULNERABILITY ANALYSIS

Vulnerable areas identified as being “at risk”, within the 56 mile planning distance are represented in Figures 9.1 and 9.2. These figures identify areas of potential impact in the event there is an oil spill that reaches the Yellowstone River. Additionally, agricultural water intakes, medical facilities, transportation routes and utilities are discussed below:

Agricultural Water Intakes

(b) (7)(F), (b) (3) [redacted]

Medical Facilities, Transportation Routes and Utilities

There are no known medical facilities, transportation routes or utilities located within the 56 mile planning distance.

APPENDIX E

COOPERATIVE AND OSRO CONTRACTS

The following agreements/ contracts are included in the FRP Contracts Annex Binder:

Montana - Wyoming Oil Spill Control Cooperative, LLC

- Operating Agreement
- Acceptance of Members – signature pages
- Equipment Resources
- Representative Contract List / Equipment Locations and Access Contacts / OSR Equipment

Clean Harbor Environmental Services, Inc.

- Contract (Agreement Number A1974282)
- Amendment 016
- Amendment 018
- CHES response resources for Group V oils
- CHES cascaded resources for WCD scenario
- CHES – Northern Rocky ER Resources

APPENDIX F

COMMUNICATIONS EQUIPMENT

Key information is copied from the ExxonMobil Billings Refinery Emergency Manual - Communications and is included herein:

- Text Messaging System
- Telephone List
- Radios

Any change to the above sections in the Emergency Manual will result in replacing the material herein with the new information.

TEXT MESSAGING SYSTEM

NOTE: This text messaging system can be accessed from any of the Shift Supervisors Console and from the Main Gate computer.

1. TEXT MESSAGING SYSTEM

The refinery has four emergency pager systems and depending on the particular incident, each will bring a different response.

TEXT	ACCESS TEXT	RESPONDERS	COMMENTS
Business cell's	OCC Consoles Main Gate Any Computer	Fire Brigade, Oil Spill Response Team, Rescue Squad Business units	Will be tested twice a week at 6:00 p.m. by OCC Shift Supervisor or designee.
		Management Team	

NOTE: PROCESS RESCUE SQUAD MEMBERS MUST BE SUMMONED WITH PROCESS RADIO WHEN IN PLANT.

2. TEXT MESSAGING SYSTEM

The Text Messaging System is activated by the Shift Supervisor as needed to call out Emergency Response Teams, Management team, and Business Team members.

2.1 To use the system:

2.1.1 From any computer type DS-RS-BIRF-mgmtphones-EXT into the ExxonMobil Directory address

2.1.2 Type out Who needs to respond, Where and Why.

3. EMERGENCY CALL-OUT SERVICE

3.1 We have contracted Answer net Network to provide us with an emergency call-out service. We have supplied the lists that will be called when requested. The message asked is noted on the bottom of the lists. We have five lists; the Fire Brigade, Rescue Squad, Process Emergency Organization, Crisis Management, Oil Spill, Industrial Hygiene (IH), and the Crisis Management lists.

3.2 Answer net will call the people on the lists by priority and then fax us the responses to their calls. They will then continue calling the busy signals for one hour and re-call the no answers one time.

3.3 Answer net will conduct a monthly test on the 1st of every month at 6:30 p.m. They will also test when requested.

3.3.1 To activate a call-out:

Call 657-9246
Identify which list is requested.
State where emergency is and which group needs to be called out.

3.3.2 When a call is received:

Please answer with a yes or no, for responding.
Answer net can fax us the list of those responding.

RADIOS

1. SYSTEMS DESCRIPTION

The ExxonMobil Billings Refinery operates on an 800 MHz radio system to enhance communications both within and between departments. Repeaters are located on Sacrifice Cliffs above the City of Billings, and on Refinery property to improve the coverage of the radio system.

The frequencies the Refinery is licensed to use are listed below.

Base Stations: 854.7625 MHz.
Mobile Units: 854. 7625, 809.7625 MHz.

2. ZONES and TALK GROUPS

Two (2) "Zones", designated "A" and "B containing sixteen (16) Talk Groups respectively. Various Departments throughout the Refinery have been assigned specific "Talk Groups" to facilitate both inter and intra Department communications.

Zone "A" includes the Process & Mechanical Department's talk groups, while Zone "B" includes all Emergency Response talk groups.

Zone "A" - Process & Mechanical			Zone "B" - Emergency Response	
A- 1	Process 1		B- 1	Incident Command
A- 2	Process 2		B- 2	Operations Chief
A- 3	Shut Down / TA / Start Up		B- 3	Rescue
A- 4	LG Constructors		B- 4	Confined Space / Entry
A- 5	Mechanical Shops		B- 5	Oil Spill
A- 6	Electrician		B- 6	Emergency Operations Center
A- 7	Instrumentation		B- 7	SAFE HAVEN
A- 8	Inspection		B- 8	Blank
A- 9	SAFE HAVEN		B- 9	Blank
A- 10	Riggers - Lifting Operations		B- 10	Blank
A- 11	Blank		B- 11	Blank
A- 12	Capital Projects		B- 12	Mutual Aid Conoco
A- 13	Security		B- 13	Mutual Aid CHS
A- 14	EMERGENCY ALL CALL		B- 14	EMERGENCY ALL CALL
A- 15	Back Up		B- 15	Back Up
A- 16	Simplex		B- 16	Simplex

3. OPERATIONAL EXPECTATIONS

All personnel or positions that have been issued radios are expected to keep their radios in serviceable condition, powered-up, with adequate volume to allow for good communications, a charged battery, and be tuned to the correct talk group for the work assignment. Personnel, who regularly work in the field, should carry their radios with them at all times. This is for Safety, as much as it is for communications.

When keying a microphone for a transmission, the user must "wait for the beep" before speaking his/her message. This "beep" is actually two (2) very fast beeps or tones that indicate the repeater system has located an open frequency for the transmitting radio. Speaking before the "beep" will cause the first few words in the transmission to be missed.

Federal Communications Commission regulations prohibit the use of foul or profane language over radio airwaves. Company policies also prohibit the use of offensive language.

When changing talk groups to speak to another Department, it is a recommended practice to pause for 10 seconds to be sure that no other conversations are taking place. Once the air is clear, you must say who is calling and who you would like to speak to. This is to eliminate any unnecessary air time trying to figure out who is calling.

A chart has been developed to assist all Refinery personnel in locating someone on the radio; this chart is located on the last page of this document.

4. EMERGENCY ALL CALL

Talk Group #14, in both Zones A and B have been dedicated to the Emergency All Call feature. This feature allows the simultaneous transmission of emergency information to all radios on the ExxonMobil Billings Refinery 800 MHz system.

The Shift Super and Operations Control Center are equipped with radios programmed to transmit Emergency All Call messages.

All radios on the ExxonMobil Billings Refinery 800 MHz system receive Emergency All Call messages.

5. BACK-UP & SIMPLEX REDUNDANCY

The availability of two- (2) systems, known as "Back Up" (talk group 15) and "Simplex" (talk group 16) protect the operational integrity of the radio system.

Talk group 15 a.k.a. Back Up would be used in the event of a failure of all of the repeaters on the cliffs above the city. The Back Up talk group operates off a repeater on Refinery property. All radios would be switched to talk group 15, and the refinery

would operate on this talk group alone. The message to make such a switch would come from OCC via any and all means of communication (except radios).

Talk group 16 a.k.a. Simplex would be used in the event of a failure of all repeaters (on-site and off-site). The Simplex talk group operates on a radio to radio basis, without any repeaters. All radios would be switched to talk group 16, and the refinery would operate on this talk group alone. The message to make such a switch would come from OCC via any and all means of communication (except radios).

6. RECORDER

The following Process and Emergency talk groups are continuously recorded.

A-1	Process 1
A-2	Process 2
B-1	Incident Command
B-2	Operations Chief
A-9 & B-7	SAFE HAVEN

The purpose for this recorder is to aid in incident investigations in the event of a major incident. It is a reel type recorder in which tapes are rewound and reused every 24 hours.

8. OTHER RADIOS

The Shift Super and Fire Chief have separate radios that are programmed to the Lockwood Fire Department and other local emergency service's frequencies. These radios are used during drills and actual emergencies to allow for immediate communications to local emergency response officials.

The Fire Chief has a Billings Fire Department radio for use during specific mutual aid responses.

Zone "A" - Process & Mechanical		
A- 1	Process 1	Day to Day Process Business, Used by All Units/Areas Process Supervision, Environmental Department, Fire Chief (non emergencies) This talk group should be used to directly contact respective Process Unit/Area Operators to request

		entry into said units or areas.
A- 2	Process 2	Used only during process unit upsets, as well as some shut downs and start-ups. The Shift Super decides when and by whom this talk group will be used.
A- 3	Shut Down / TA / Start Up	Used jointly by Process and Mechanical during Turnarounds. May be used during shut downs or start ups, if Process 2 occupied. The Shift Super ultimately has the decision on the use of this channel.
A- 4	LG Constructors	Day to Day LG Constructors Business. Used by All LG Constructors Crafts & Supervision.
A- 5	Mechanical Shops	Day to Day Mechanical Department Business, Used by All Mechanical Shops & Supervision.
A- 6	Electrician	Used by Electrical Shop personnel only during specific equipment checks/verifications that demand a "quiet channel".
A- 7	Instrumentation	Used by Instrumentation Shop personnel only during specific equipment checks/verifications that demand a "quiet channel".
A- 8	Inspection	Day to Day Inspection Department Business.
A- 9	SAFE HAVEN	Emergency use during Vapor Release Incidents.
A- 10	Riggers	Used by Rigging Shop personnel only during Lifting Operations that demand a "quiet channel".
A-13	Security	Used by main gate security to communicate between guards.
A- 14	EMERGENCY ALL CALL	Used by the Shift Super or OCC to send Emergency Information to all refinery radios.
A- 15	Back Up	Used in the event of a failure of all of the repeaters on the cliffs above the city.
A- 16	Simplex	Used in the event of a failure of all repeaters (on-site and off-site).

9. RECORDER

A Dictaphone 9000 radio recorder is installed in the Operations Control Center. This recorder records the frequencies listed below. The justification for this recorder is to aid in incident investigations in the event of a major incident. It is a reel recorder and tapes are rewound every 24 hours and reused.

9.1 Process F1

9.2 Process F2

9.3 Operations Base

9.4 Fire Brigade

9.5 Safe Haven

9.6 Pagers

TELEPHONE LIST

1. SYSTEM DESCRIPTION

Almost all of the refinery telephone extensions are connected to a central switchboard located in the Main Office Building. This switchboard is a CISCO Unity Telephone system and allows refinery extensions to be connected to outside lines entering the U.S. West System. The CISCO Unity Telecom Telephone system switchboard normally receives power through the regular Main Office 440 V feeder from the Lab Rack.

The CISCO Unity Telecom Telephone system also has a battery backup power supply which is described in Section C - POWER FAILURE.

2. IMPORTANT EXTENSIONS

2.1 Fire Phone -- Ext. 75200

This extension is located in OCC and should only be used to report fires, vapor releases, or other emergencies. It must never be used for routine business, fire drills, or any other purposes.

2.2 Shift Superintendent -- Ext. 75320

This extension is located in the Shift Superintendent's office. If possible, limit length of call to no more than one minute. General information calls should be directed to the Shift Superintendent.

2.3 Control Supervisors -- Ext. 75321/75322/75323

These extensions are located in the Control Center which is continuously manned. If possible, limit length of call to no more than one minute. Only calls specifically directed to the Control Supervisors should be made to these extensions.

3. POWER FAILURE

3.1 In the event of a total Refinery power failure the CISCO Unity Telecom Telephone system will automatically switch over to its battery back-up system for electrical power. This battery system, located in the telephone equipment room in the main office building, is completely separate from other emergency power systems in the plant. The batteries will supply electrical power for at least 16 hours. Consequently, even in the event of a total power failure, the refinery telephone system should operate normally.

3.2 The U.S. West switchboard, located downtown, has emergency generators to supply power during electrical disruptions. Delays may be experienced, however, in completing calls.

3.3 To provide additional protection some extensions are equipped with outside line direct access capability. There are four different systems:

3.3.1 Control Center

Telephones at the Shift Superintendent's office (Ext. 75320) and both of the Control Supervisors' desks (Ext. 75321/75322) can access a direct outside line: 657-5320. This line does not enter the Refinery phone system. To use it, simply press the extension button. For local calls dial 9 and the number. For long distance calls dial 9 then 1 and the area code (if outside of Montana), then the number.

4. MOBILE (CELLULAR) PHONE

These phones are for emergency use. Cellular Inc. coverage consists of dual backup system to sustain phone operation during a power failure. It consists of dual towers providing overlapping coverage in our area and dual power backups - batteries for up to 8 hours and a diesel powered generator.

5. TOTAL CISCO UNITY TELECOM TELEPHONE SYSTEM FAILURE

5.1 EMIT
Doug Morris 406-696-5769

5.2 Julie Cantrell - Office 657-5233 (b) (7)(F), (b) (3)