



# **Emergency Response Plan**

**Anacortes Refinery**

**Contents**

**PREFACE** ..... i

    Plan Approval Statement ..... i

    Distribution List ..... ii

        Hard Copies (Binders) ..... ii

    Record of Changes ..... ii

**SECTION 1 FACILITY OVERVIEW/HAZARD ASSESSMENT** ..... **1**

    1.1 Introduction ..... 1

    1.2 Purpose and Scope ..... 1

    1.3 Description of Facility ..... 3

        Figure 1-1 Facility Overview ..... 3

        1.3.1 Anacortes Refinery ..... 3

            Figure 1-2 Anacortes Refinery ..... 4

        1.3.2 Anacortes Wharf ..... 4

            Figure 1-3 Anacortes Wharf ..... 5

        1.3.3 Crude Rail Offloading Facility (CROF) ..... 5

            Figure 1-3 CROF ..... 6

    1.4 Priority Policy ..... 6

    1.5 Pre-Plans ..... 7

    1.6 List of Tanks ..... 7

    1.7 Chemicals of Concern ..... 7

        Table 1-1 Chemicals of Concern ..... 7

    1.8 Accident Prevention Measures ..... 7

    1.9 Process Safety Management ..... 8

    1.10 Off-Site Risk Evaluation ..... 8

        1.10.1 Potential Risks from Off-Site Sources ..... 8

        1.10.2 Potential Risks to Off-Site Locations ..... 8

**SECTION 2 EMERGENCY ALERTING AND RESPONSE PROCEDURES** ..... **1**

    2.1 Procedure Activation ..... 1

    2.2 Emergency Communications, Notifications, Call Out and Immediate Response ..... 1

        2.2.1 Reporting Emergencies ..... 1

        2.2.2 Response to the Emergency Telephone System ..... 2

            Logistics Board Operator with back-up from the Utilities Board Operator ..... 2

            Utilities Working Board Operator ..... 2

            CAER Classification of Emergency Incidents ..... 2

            Table 2.1 CAER Emergency Incident Levels ..... 3

            Logistics Foreman ..... 3

            Emergency Medical and Rescue Responders ..... 4

        2.2.3 Emergency Notification Systems ..... 4

            Whelen Alarm System ..... 4

            MPCAlerts – Send Word Now System ..... 5

            Radio System ..... 5

            ALERTUS Emergency Communications System ..... 6

        2.2.4 Response to False Alarm Event ..... 6

    2.3 Assessment ..... 6

    2.4 Emergency Evacuation Plan ..... 7

        2.4.1 Evacuation ..... 7

2.4.2 Localized Evacuation ..... 8

2.4.3 Non-essential personnel response to a Localized Evacuation ..... 8

2.4.4 Plant Wide Evacuation ..... 8

2.4.5 Evacuation Assembly Points ..... 9

    Primary Evacuation Assembly Points ..... 9

    Secondary Evacuation Assembly Points ..... 9

    Evacuation Alarm Activation Locations ..... 9

    Truck Rack Evacuation ..... 10

2.4.6 Vehicle Access Restrictions - Security ..... 10

2.4.7 Evacuation of Non-Essential Personnel ..... 10

2.4.8 Evacuation of Essential Personnel ..... 10

    Unit or Zone Evacuation of Essential Personnel ..... 11

    Duties of Essential Personnel Prior to Evacuation ..... 11

2.4.9 Evacuation of Buildings ..... 11

    Administration Building /Offices Outside the Gate ..... 11

    Central Control Room ..... 12

    Training ..... 12

2.4.10 All Clear ..... 12

    Work Activities after an Emergency Incident ..... 12

2.5 Accountability ..... 13

    2.5.1 Employees ..... 13

    2.5.2 Emergency Evacuation Accountability ..... 13

    2.5.3 Accountability for Responding Incident Support Personnel ..... 13

    2.5.4 Off-Shift Operations Response to Refinery ..... 13

2.5 Response Safety ..... 14

**SECTION 3 NOTIFICATIONS ..... 1**

3.1 Emergency Reporting and Notification Procedures ..... 1

    3.1.1 Initial Notification ..... 1

    3.1.2 Notification Requirements ..... 1

    3.1.3 Data Reporting ..... 1

        Figure 3-1 Notification Flowchart ..... 2

3.2 Notification Information ..... 3

    3.2.1 Personnel Notifications ..... 3

        Figure 3-2 Notification Summary ..... 3

3.3 Mutual Aid ..... 5

3.4 Internal Communications ..... 5

    Table 3-1 Radio Frequencies ..... 5

3.5 Community Notifications ..... 7

**SECTION 4 RESPONSE TEAM ORGANIZATION ..... 1**

4.1 National Incident Management System (NIMS) ..... 1

4.2 IMT Activation Procedures ..... 1

4.3 Team Member Response Times ..... 1

4.4 Unified Command System ..... 1

    4.4.1 Roles and Responsibilities ..... 2

    4.4.2 Training Certification and Documentation ..... 2

4.5 Incident Command Team Duties and Responsibilities ..... 2

    Figure 4-1 Anacortes IMT – Leads ..... 5

4.6 Emergency Response Team ..... 5

4.6.1 General Information ..... 5

4.6.2 Emergency Releasable Operations Positions ..... 6

4.6.3 Advanced Exterior Fire Brigade..... 6

4.6.4 Rescue Squad ..... 7

4.6.5 Hazardous Materials Team (HazMat) ..... 7

4.6.6 Emergency Medical Team (EMT) ..... 7

4.6.7 Oil Spill Response Team ..... 7

4.6.8 Auxiliary Support Team..... 8

    Figure 4-2 Anacortes Emergency Response Team Roster ..... 8

    Figure 4-3 Incident Response Team Organization ..... 10

**SECTION 5 DOCUMENTATION.....1**

5.1 Documentation ..... 1

    5.1.1 Emergency Response Status ..... 1

    5.1.2 Emergency Scenario Information ..... 2

    5.1.3 Meteorological Reports ..... 2

    5.1.4 Correspondence with Government Agencies ..... 2

    5.1.5 Costs Incurred ..... 2

    5.1.6 Photographs ..... 2

    5.1.7 Logs ..... 2

5.2 Site Safety Health Plan ..... 2

**SECTION 6 POST INCIDENT ISSUES .....1**

6.1 Emergency Termination Guidelines..... 1

    6.1.1 Termination Criteria..... 1

6.2 Post-Emergency Incident Management..... 2

6.3 Recovery Procedures ..... 2

6.4 Documentation ..... 3

6.5 Incident Investigation ..... 3

6.6 Critique and Follow Up ..... 3

6.7 Claim Procedures ..... 4

6.8 Critical Incident Stress Management..... 4

**SECTION 7 SPECIFIC RESPONSE ACTIONS.....1**

7.1 General Information ..... 1

    7.1.1 Definitions and Applicability ..... 1

    7.1.2 Emergency Assessment..... 1

7.2 Roles and Responsibilities..... 1

    7.2.1 Overall Responsibility..... 1

    7.2.2 Environmental, Health & Safety..... 1

    7.2.3 Area Team Leads, Supervisors, and Foreman ..... 1

    7.2.4 Operations Personnel ..... 1

    7.2.5 Maintenance Personnel ..... 2

    7.2.6 Contractor Personnel ..... 2

    7.2.7 Skilled Support & Specialist Personnel ..... 3

    7.2.8 Visitor Responsibilities ..... 3

7.3 Response Actions and Limitations ..... 3

    7.3.1 Response Actions & Limitations..... 3

    7.3.2 Non-Essential Personnel ..... 3

    7.3.3 Unit Operators Response Actions..... 3

        7.3.3.1 Operations actions prior to IC establishment..... 3



7.3.3.2 Operations actions upon IC establishment.....	4
7.3.4 Limitations on Individual Operator Actions .....	4
7.3.4.1 Operator actions outside hot zones.....	4
7.3.4.2 Operator actions within hot zones .....	4
7.3.5 Zone C Shift Supervisor .....	5
7.4 Emergency Response Team Operations Framework.....	5
Step 1 – Site Management and Control.....	6
Step 2 – Identify the Problem .....	6
Step 3 – Evaluate the Hazards and Risks (RECEO): .....	6
Step 4 – Select the Proper Level of Personal Protective Clothing .....	7
Step 5 – Coordinate Information and Resources.....	8
Step 6 – Implement Response Objectives .....	9
Step 7 – Decontamination and Clean-Up Operations.....	9
Step 8 – Terminate the Emergency.....	10
7.5 Fire Emergencies.....	10
7.5.1 Responsibilities .....	10
7.5.2 Hazard Control Zones.....	11
7.5.3 Hot Zone Safety Operations.....	12
7.5.4 Fire Pre-Plans .....	13
7.5.5 Scenario.....	14
7.6 Medical Responses.....	14
7.6.1 Reporting Medical Emergencies & First Aids.....	14
7.6.1.1 Emergency Telephone .....	14
7.6.1.2 Medical Surveillance .....	14
7.6.2 Need for Ambulance .....	14
7.6.3 Notification of Family in Case of Accident .....	15
7.6.4 Triage.....	15
7.6.4.1 Emergency Medical System .....	16
7.6.4.2 Transportation Services .....	16
7.6.4.3 Hospitals.....	16
7.6.4.4 Physicians.....	16
7.6.5 Emergency Medical Operations Protection .....	17
7.6.6 Scenario.....	17
7.7 Hazardous Materials Incident - Mercaptan .....	17
7.7.1 Immediate Action Considerations .....	18
7.7.2 Notification and Reporting.....	18
7.7.3 Personnel Safety Considerations .....	18
7.7.4 Response Considerations.....	18
7.7.5 Scenario.....	19
7.8 Hazardous Materials Incident – Hydrogen Sulfide (H <sub>2</sub> S).....	19
7.8.1 H <sub>2</sub> S Description .....	19
7.8.2 Actions.....	20
7.8.3 Scenario.....	21
7.9 Hazardous Materials Incident – Small Spills Not to Water .....	21
7.9.1 Scenario.....	23
7.10 Radiation Emergency .....	23
7.10.1 Actions .....	23
7.10.2 Fire or Explosion near a Radiation Source Holder .....	24

7.10.3 Scenario.....	25
7.11 Truck Rack Response.....	25
7.11.1 LPG Fires.....	25
7.11.2 LPG Leaks .....	25
7.11.3 Hydrocarbon Pool Fires.....	25
7.11.4 Scenario.....	26
7.12 Rail Response .....	26
7.12.1 Special Hazards .....	26
7.12.2 Response Actions.....	27
7.12.3 Scenario.....	28
7.13 Rescue .....	28
7.13.1 Confined Space Entry.....	28
7.13.2 Inert Atmosphere Confined Space Entry .....	28
7.13.3 High Angle Rescue.....	29
7.13.4 Water Rescue .....	29
7.13.5 Scenario.....	29
7.14 Thunderstorms.....	29
7.14.1 Initial Monitoring .....	29
7.14.2 Roles and Responsibilities.....	30
7.14.3 Work Continuation Determination .....	30
7.14.4 Sheltering.....	31
7.14.5 Scenario.....	31
7.14.6 Lightning Safety Guidance Drawing .....	31
7.15 Earthquake .....	32
7.15.1 General.....	32
7.15.2 Guidelines .....	33
During an Earthquake .....	33
After an Earthquake.....	34
7.15.3 Scenario.....	35
7.16 Flooding.....	35
7.16.1 Heavy Rainfall Flooding.....	35
7.16.2 Scenario.....	35
7.17 Tsunami.....	36
7.17.1 Tsunami Center Message Definitions .....	36
7.17.2 Skagit County/Salish Sea Region Tsunami Alert System .....	36
7.17.3 Response Actions.....	37
7.17.4 Scenario.....	37
7.18 Volcano .....	38
7.18.1 Personnel Safety .....	38
7.18.2 General Communications and Electronic Equipment.....	39
7.18.3 Facility Operations .....	39
Shipping Operations.....	39
7.18.4 Scenario.....	40
7.19 Security Incident .....	40
7.19.1 Organization & Responsibilities .....	40
Incident Coordinator.....	40
Facility Security Officer .....	40
Refinery Management Duty Person.....	40

Logistics Supervisor .....	41
Superintendents Operations.....	41
Management Team Members .....	41
Maintenance Superintendents .....	41
7.19.2 Search Personnel.....	41
7.19.3 Evacuation Personnel.....	41
7.19.4 Search Procedures .....	41
Internal Search Procedures.....	42
Logistics Supervisor .....	42
Perimeter Search Procedures .....	42
Safety Supervisor or Designee to Assign Search Routes.....	42
Security Officer Patroller.....	43
Operations Supervisors.....	43
Process Unit Operators .....	43
Electrical Supervisors .....	43
7.19.5 Evacuation due to Bomb Threat .....	43
Operating Supervisor(s) .....	43
Maintenance Supervisors .....	43
Quality Assurance Supervisor .....	43
Plant Controller .....	43
All Clear .....	43
7.19.6 Telephone Bomb Threats.....	43
7.19.7 Written Bomb Threats .....	44
7.19.8 Letter or Package Bombs .....	44
7.19.9 Armed Subject.....	44
7.19.10 Scenario.....	46
7.20 Civil Disturbances, Terrorism Event .....	46
7.20.1 Communications .....	46
7.20.2 Procedure.....	46
7.20.3 Scenario.....	47
7.21 Disaster Recovery Plan (IT Emergency).....	47
7.21.1 General Information and Process .....	47
7.21.2 Scenario.....	47
<b>SECTION 8 PPE, DECON, SITE SECURITY AND CONTROL.....</b>	<b>1</b>
8.1 Personal Protective Equipment .....	1
8.1.1 Personal Protective Clothing.....	1
8.1.2 Structural Firefighting Protective Clothing .....	1
8.1.3 Chemical Protective Clothing.....	1
8.1.4 Respiratory Protection .....	2
8.1.5 Air Purification Devices. ....	2
8.1.6 Self-Contained Breathing Apparatus (SCBA).....	2
8.1.7 Supplied Air Respirators (Air Line Units).....	3
8.1.8 Downgrading Levels of PPE.....	3
8.2 Decontamination .....	4
8.2.1 General.....	4
8.2.2 General Design Principles .....	4
Figure 8.1: Site Control Map .....	5
8.2.3 General Work Practices.....	5

8.2.4 Resources ..... 6  
     Table 8.1: Decontamination Equipment Options ..... 6  
 8.2.5 Contaminant Removal Methods ..... 6  
 8.2.6 Personnel Protection and Monitoring ..... 7  
 8.2.7 Decontamination Procedure Steps ..... 8  
     Figure 8.2 Typical Decon Station Setup ..... 9  
 8.2.8 Emergency Decontamination..... 10  
     Figure 8.3 Emergency Decon Decision Flowchart..... 11  
 8.3 Site Security & Control ..... 12  
**APPENDIX A TRAINING AND EXERCISES ..... 1**  
 A.1 Exercises ..... 1  
     Figure A-1 Type and Frequency of Emergency Response Exercises ..... 1  
     A.1.1 Notification Exercises ..... 1  
     A.1.2 Emergency Response Field Exercises..... 1  
     A.1.3 Tabletop Exercises ..... 2  
     A.1.4 Shelter-In-Place/Safe Haven Drills ..... 2  
     A.1.5 Evacuation Drill ..... 2  
     A.1.6 Documentation ..... 2  
     A.1.7 Alternative Means of Meeting Exercise Requirements ..... 2  
     A.1.8 Response Equipment Inspections..... 3  
 A.2 Training ..... 3  
     A.2.1 Emergency Response Plan Training ..... 3  
     A.2.2 HAZWOPER Training Program ..... 4  
     A.2.3 IMT Training Program ..... 4  
     A.2.4 Response Team Training..... 5  
         A.2.4.1 Operations Positions Including Emergency Releasable Positions..... 5  
         A.2.4.2 Exterior Fire Brigade ..... 5  
         A.2.4.3 Hazardous Materials Technician..... 5  
         A.2.4.4 Rescue Squad ..... 5  
         A.2.4.5 Emergency Medical Responders Services ..... 5  
         A.2.4.6 Oil Spill Response Team ..... 6  
         A.2.4.7 Auxiliary Support Team ..... 6  
         A.2.4.8 Incident Commander/EOC..... 6  
         A.2.4.9 Emergency Response Trainers..... 6  
     A.2.5 Training Documentation and Record Maintenance ..... 6  
**APPENDIX B EMERGENCY RESPONSE RESOURCES ..... 1**  
 B.1 Fire Protection Resources ..... 1  
     B.1.1 Firefighting Water System ..... 1  
     B.1.2 Fire Pumps ..... 1  
     B.1.3 Fire Hydrants..... 2  
     B.1.4 Quick Acting Hose Racks (QAR)..... 2  
     B.1.5 Turret Nozzles ..... 2  
     B.1.6 Portable Turret Nozzles ..... 2  
     B.1.7 Hose Stations on Decks..... 2  
     B.1.8 Water Spray/Deluge Systems ..... 3  
     B.1.9 Firefighting Foam Inventory ..... 3  
     B.1.10 Fixed Systems..... 3  
     B.1.11 Mobile Firefighting Support Vehicles and Equipment..... 3

B.1.12 Foam Tender Operation..... 3

B.1.13 Fire Extinguishers..... 4

B.1.14 Wharf Fire Protection ..... 4

    B.1.14.1 Water Sprinkler System ..... 4

    B.1.14.2 Fixed & Portable Firefighting Equipment ..... 4

    B.1.14.3 Foam Equipment..... 4

B.1.15 Other Related Equipment ..... 4

B.2 Environmental Systems and Resources ..... 4

    B.2.1 Air Monitoring Equipment, Fixed Systems ..... 4

    B.2.2 Air Monitoring Equipment, Portable Systems ..... 5

    B.2.3 Storage Tank High Level Alarms..... 5

B.3 Hazardous Materials and Oil Spill Equipment ..... 5

B.4 Medical Resources ..... 5

    B.4.1 Refinery Medical Personnel ..... 5

    B.4.2 Refinery Medical Equipment ..... 5

    B.4.3 Local Medical Facilities ..... 6

    B.4.4 Regional Burn Unit ..... 6

    B.4.5 Transport Capabilities ..... 6

B.5 Mutual Aid ..... 6

**APPENDIX C ERT STATEMENT OF ORGANIZATION ..... 1**

    C.1 Statement ..... 1

        Figure C.1 Emergency Management Organization (ICS) ..... 1

    C.2 Team Expectations and Training..... 1

        C.2.1 Advanced Exterior Fire Brigade ..... 1

        C.2.2 Incipient Exterior Fire Brigade ..... 1

        C.2.3 Emergency High Angle & Confined Space Rescue Team ..... 2

        C.2.4 Hazardous Materials Team (HazMat) ..... 2

        C.2.5 Emergency Medical Responders..... 2

        C.2.6 Air Monitoring Team..... 2

        C.2.7 Auxiliary Support Team..... 2

**APPENDIX D ACRONYMS AND DEFINITIONS..... 1**

    D.1 Acronyms ..... 1

    D.2 Definitions ..... 3

**APPENDIX E CROSS REFERENCE..... 1**

    E.1 WASHINGTON OCCUPATIONAL SAFETY AND HEALTH..... 1

    E.2 Occupational Safety and Health Administration (29 CFR) ..... 3

    E.3 Environmental Protection Agency Risk Management Program (RMP) (40 CFR) ..... 5

## PREFACE

### Plan Approval Statement

# ANACORTES REFINERY EMERGENCY RESPONSE PLAN

## PREFACE

### Plan Approval Statement:


This Emergency Response Plan is intended for all persons working within the Anacortes Refinery. It is designed to comply with the following requirements: 29 CFR 1910.120 "Hazardous Waste Operations and Emergency Response", 29 CFR 1910.39 "Fire Prevention Plan", 29 CFR 1910.38 "Emergency Action Plan", 40 CFR 68.95 "Emergency Response Program", 40 CFR 68.96 "Emergency Response Exercises" and WAC 296-24-567 "Employee emergency plans and fire prevention plans".

It will be the responsibility of the Refinery Fire Chief and the Emergency Preparedness Group Representative to maintain and review this plan at least annually. All personnel affected by this plan will be trained of its content and are encouraged to participate in its annual review.

I certify, to the best of my knowledge and belief, under penalty of perjury under the laws of the State of Washington, that the information contained in this Emergency Response Plan is true and correct and that the plan is both feasible and executable.

  
\_\_\_\_\_  
Cameron Hunt  
General Manager, Anacortes Refinery

02/28/2024  
Date

  
\_\_\_\_\_  
Shannon Logan  
ES&S Manager, Anacortes Refinery

2/28/2024  
Date

## Distribution List

The Emergency Response Plan has been distributed to the personnel or areas listed in the table below.

### Hard Copies (Binders)

Name	Position and/or Location	Binder number
	Refinery Manager	1
	Control Room	2
	Refinery EOC	3, 4
	Fire Chief Vehicle	5
	Fire Chief Office	6
Robert Kestenbaum	Emergency Management Coordinator (EPG)	7
	Skagit County Emergency Management	8
	Anacortes Fire Department	9

## Record of Changes

The plan shall be reviewed at least annually using a risk-based technique to ensure the appropriate response scenarios have been considered. Criteria affecting the need to update the ERP include:

- Changes in personnel lists, telephone numbers, resources, equipment, outside contacts, etc.
- Modifications to refinery facilities.
- Development of improved concepts, procedures, ideas, etc.
- Regulatory changes.
- Positive or negative plan performance during an emergency.
- Results from new or updated Process Hazard Analysis (PHA).

These changes will be noted in this form. Stewart Tanner, Fire Chief and Robert Kestenbaum, Emergency Preparedness Group, are responsible for ensuring the plan is reviewed and updated.

Revision #	Date	Description	Name
Original	June 2024	New format	Tanner, Kestenbaum
1	Aug 2024	5: Revised 333 Call Log sheet	Johnson, Kestenbaum

## SECTION 1 FACILITY OVERVIEW/HAZARD ASSESSMENT

### 1.1 Introduction

The Anacortes Refinery Emergency Response Plan covers three separate facilities, all located within close proximity to each other in Anacortes, Washington. Covered under this plan is the Anacortes Refinery, Anacortes Wharf and the Crude Rail Offloading Facility (CROF). The CROF has a separate emergency action plan but is also covered as part of this plan for response support. The locations are collectively known as “Facility” or “Refinery” throughout this plan unless specifically called out for site-specific information.

Despite stringent safety measures and prevention procedures implemented, the potential exists for an emergency to develop at the facility. This potential exists where highly flammable and hazardous materials are processed or handled. This emergency response plan is designed to anticipate, prepare, and respond to those potential emergencies.

The purpose of the Company’s Emergency Response Plan (ERP) is to provide effective organizational response to potential emergencies, in a timely manner. This includes instituting a systematic approach, the Incident Command System, to respond to an emergency. In addition, the Company’s Emergency Response Plan and program are designed to comply with applicable regulations. The provisions of the Plan apply to the Facility. The step-by-step approach adopted in this plan will help to normalize an emergency situation as soon as possible yet be flexible enough to adapt to any size or type of emergency. The incident may be a fire, off-site or on-site spill, bomb threat, toxic release, multiple injury, earthquake, protest demonstration, security threat, etc.

The plan provides a general description of the Company’s facilities, outlines the response organizational structure, and defines functional titles and job responsibilities. It also provides notification and call-out procedures and identifies appropriate response to potential incidents.

### 1.2 Purpose and Scope

This Emergency Response Plan is intended to fulfill the requirements of the following federal and state regulations and corporate and industry standards:

- OSHA 29 CFR 1904, Recordkeeping
- OSHA 29 CFR 1910.120, HAZWOPER
- OSHA 29 CFR 1910.15,6 Fire Brigades
- WAC 296-800-15005, First Aid Requirements
- WAC 296-800-320, Accident Reporting and Investigation Reports
- WAC 296-824, Emergency Response
- WAC 296-843, Hazardous Waste Operations
- Anacortes Refinery – Oil Spill Response Plan
- Incident Management Handbook
- SAF-4018, Hazardous Waste Operations and Emergency Response (HAZWOPER)
- RSP-1308, Mechanical Integrity
- RSP 1311, Emergency Response and Planning
- RSP 1124-000, Emergency Response Equipment and Preparedness
- RSP 1705-000, Refinery Fire Protection
- NIOSH 85-115, Occupational Safety & Health Guidance Manual for Hazardous Waste Site Activities



- NFPA 600, Standard on Industrial Fire Brigades
- NFPA 1081, Standard for Industrial Fire Brigade Member Professional Qualifications
- NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of mass Destruction Incidents
- NFPA 1006, Standard for Technical Rescuer Professional Qualifications
- FEMA National Incident Management System

The Emergency Response Plan details the duties, organizational roles, responsibilities, and procedures to be followed during an emergency by all employees, contractors, and visitors while in the facility.

Additionally, the Emergency Response Plan outlines the activation, responsibilities, roles, and structure of the Emergency Response Organization at the Facility. The Emergency Response Organization is comprised of an Incident Management Team (Incident Command System) and Emergency Response Team (Industrial Fire Brigade). The Emergency Response Plan is not intended to replace unit or process-specific emergency operating procedures already in place.

In order to comply with State and Federal requirements, as well as, guidelines of the National Fire Protection Association (NFPA), a Statement of Organization and guidelines for training is available in Appendix C of this plan.

Training of this plan, including changes or updates, will be provided annually to all employees through means such as the annual Health, Environmental, and Safety (HES) Training, Safety Meetings, and/or Computer-Based Instruction. The Training Department, in conjunction with the Safety Departments, administers the development and record-keeping of the HES Training. Information contained in this plan will be communicated to Company contractors as part of their site-specific orientation. Visitors to facilities covered by this plan will be informed of the procedures and responsibilities contained herein by their Company host.

The plan will be reviewed annually and updated as needed. Revisions may be triggered by changes in management, Process Safety Management (PSM) and Rules, Standards and Standing Instructions (RSSI). Updates to the Emergency Response Plan are the responsibility of the Safety Department in coordination with the Emergency Management Coordinator.

For additional information regarding this plan please contact Stewart Tanner, Refinery Fire Chief (360-293-1657), Andrew Johnson, Safety Supervisor (360-293-1647) or Robert Kestenbaum, Emergency Management Coordinator (562-499-2232).

## 1.3 Description of Facility

Figure 1-1 Facility Overview



### 1.3.1 Anacortes Refinery

The refinery receives crude oil via Trans-mountain pipeline, the wharf, and by rail. Trans-mountain pipeline deliveries occur approximately twice a week at a receiving volume of approximately 8,000 barrels per hour. Wharf crude deliveries occur approximately every 10 days via crude ships in the 75-125 DWT class. Discharge volumes on crude ships range from 25,000-30,000 barrels per hour. Crude is discharged to shore tanks which in turn are transferred to hill tanks at approximately 10,000 barrels per hour for feed to the crude unit. The crude unit processes approximately 90,000-100,000 barrels per day of crude. These products in turn are distributed to various tanks and process units.

Product ships range from 34,000-62,000 DWT and load approximately 240,000-275,000 barrels of gasoline, diesel, Jet A and intermediate products. These products are loaded from the hill tanks to the shipping pumps located at the Logistics Control House area to wharf lines and loading manifold at the wharf.

Loading rate varies from 3,000-7,000 barrels per hour. Tank barges load and offload products such as gasoline, diesel, Jet A, marine fuel oil, decanted oil, and cat cracker feed. Cat cracker feed is discharged to shore tanks at approximately 5,000-10,000 barrels per hour and transferred to hill tank for processing in the cat cracker unit. Products are loaded on barges in the same way ships are loaded.

The truck rack facility loads regular unleaded, ethanol, diesel and propane. The refinery receives crude oil via the rail car facility with 11,000 barrels per hour offload rate which has a pressure leak detection from the piping.

*Figure 1-2 Anacortes Refinery*

### 1.3.2 Anacortes Wharf

Two main segments of the facility are the causeway (wharf approach structure) and the wharf proper. The causeway extends approximately 3,100 feet from the shoreline and consists of a 15-foot-wide roadway and open pipeway. The structure is constructed entirely of timber and has turnout points to facilitate traffic movement.

The wharf is constructed of timber with the exception of the dolphins, sumps, new north manifold, and pipeway. The dolphins are concrete with prestressed concrete pilings and rubber fenders that absorb shock caused from the impact of vessels. The sumps at the loading and pumpout stations are made from reinforced concrete and the new north manifolds are constructed of steel. The pipeway on the wharf and the sumps are lined with grating to facilitate visual inspection.

The wharf head proper is 650 feet long by 65 feet wide, with a 28-foot-wide pipeway in the center. An aft mooring dolphin extends from a 193.5-foot finger pier to the west. Three breasting dolphins for tankers are spaced approximately 210 feet apart on the north side (i.e. outside) of the wharf. A forward mooring dolphin extends from a 140-foot long finger pier to the east.

The outside berth can accommodate tankers about 950 feet in length and 125,000 Dead Weight Tonnage (DWT), with a draft suitable for 44 feet of water at Mean Lower Low Water (MLLW). The inside berth is limited by a distance of 357 feet from the centerline of the hose manifold to the bow fender dolphin. The inside berth can accommodate tankers up to about 650 feet in length and 50,000 DWT, with a draft suitable for 38 feet of water at MLLW.

Located midway on the wharf proper is the control house and personnel shelter. The lower floor of this two-story structure contains a pressurized electrical switch room, a foam tank for firefighting, a

restroom, and a vessel crew waiting room. There is also a centrally located storeroom for life preservers, rope, and operating gear. Full vision of the wharf, causeway, and vessels secured to the wharf is permitted at all times from the specially designed, pressurized second floor. The second floor contains the operating equipment, storage, desks, and telephones necessary to manage wharf operations. A plot plan is provided as *Figure 1-6*.

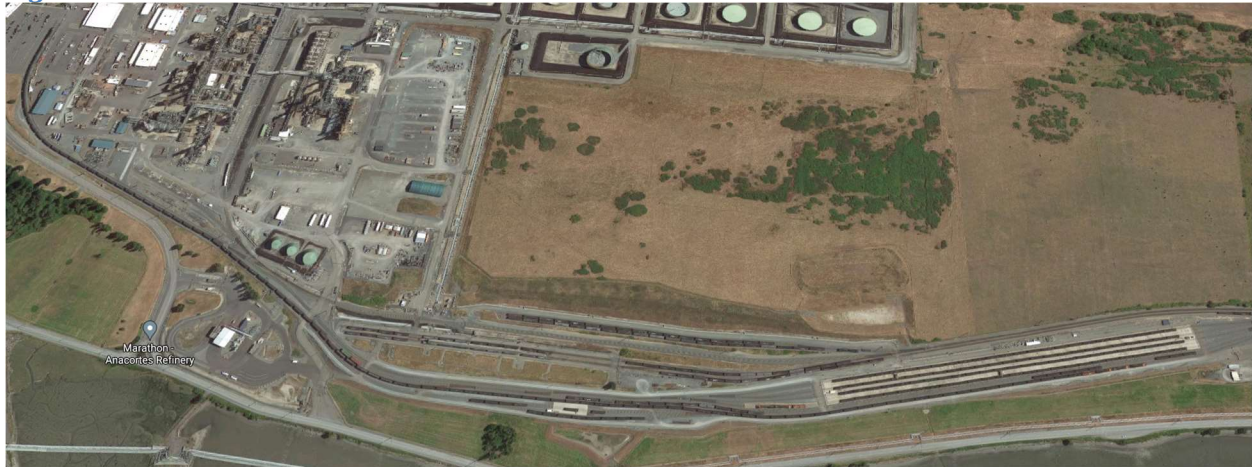
*Figure 1-3 Anacortes Wharf*



### **1.3.3 Crude Rail Offloading Facility (CROF)**

The Crude Rail Offloading Facility (hereinafter referred to as 'CROF' or 'Facility') is a 54-acre rail offloading and storage facility adjacent to the Anacortes Refinery to the west, off of March Point Road in Anacortes, Washington. The CROF is capable of storing 220 cars with the potential to offload 100 cars simultaneously for crude offload on four tracks. A plot plan is provided as *Figure 1-7*.



**Figure 1-3 CROF**

### 1.4 Priority Policy

Human Life or the safety of employees and the public is the most important consideration in any emergency. Therefore, the appropriate strategic priorities in managing a fire or any emergency shall be the following five elements in the order listed below (commonly referred to as RECEO). For all elements of emergency response, whether for the elements of RECEO or other strategic priorities, any operations in a hazardous area must be performed using the buddy system in groups of two or more.

- **Rescue** - The strategy of rescue means removing human beings from a place of danger to a place of safety. The responder must insure his or her safety first and then the rescue or evacuation of other endangered or potentially endangered humans.
  - Rescue or evacuation of humans overrides all other strategic considerations at a fire or other emergency. Certain tactics such as extinguishment or ventilation may be employed towards protecting people, but the primary concern is rescue or evacuation.
- **Exposure Protection** - The second priority is to prevent the fire, hazardous material spill, etc., from spreading to or affecting uninvolved unit equipment, adjacent or areas beyond the facility boundaries. After performing a comprehensive assessment of the incident and undertaking rescue operations, the focus should be on protecting adjacent units or equipment from exposure to the fire or hazardous substance.
- **Confinement of the Incident** - After rescue and exposure protection, the next priority is confinement. Confinement means preventing the incident from extending to uninvolved sections of the facility.
- **Extinguishment** - After it has been determined that no human life is endangered and exposures are reduced or eliminated, the fire or leak should be extinguished or terminated as quickly as possible. This is accomplished by identifying the core or seat of the fire or source of the leak and extinguishing the fire or eliminating the source of the leak or spill.
- **Overhaul** - The purpose of overhaul is to assure that the fire is completely out or that the incident has been abated. This involves a systematic assessment of the source or cause of the fire, leak, spill, etc., and examination of the scene of the incident for indications of re-ignition, additional leaking, etc.
  - Overhaul should proceed only after the cause and/or source of the incident has been completed. Valuable information is sometimes destroyed during overhaul; therefore, investigation should precede overhaul where possible.

## 1.5 Pre-Plans

Pre-plans for worst case scenarios are prepared and maintained by the Fire Chief.

## 1.6 List of Tanks

A list of tanks, containing information on product, tank capacity, type of tank, size and status, is provided in the Anacortes Refinery Oil Spill Response Plan. This list is reviewed and updated as appropriate.

## 1.7 Chemicals of Concern

Hydrocarbon gases and liquids are the most significant hazards within the refinery. However, other toxic and/or corrosive materials are also present and could pose a threat to both refinery employees and the public if released in an emergency situation. Some of these chemicals are raw materials, while others may be the by-products of combustion's or process reactions.

*Table 1-1* is a list of the chemicals, which are found in quantity within the refinery complex and may be considered to pose the greatest threat in the event of an emergency release. Several of these chemicals are identified as Extremely Hazardous Substances (EHS) under SARA, Title III, Section 302 and Highly Hazardous Chemicals as defined by OSHA 1910.119, Process Safety Management of Highly Hazardous Chemicals.

Safety Data Sheets (SDS) for all hazardous chemicals can be found in each of the processing units and shops throughout the refinery. SDS's are also available through the Safety Department and online.

**Table 1-1 Chemicals of Concern**

Butane	Ethyl mercaptan [Ethanethiol]	2-Methylpropene [1-Propene, 2-methyl-]
1-Butene	Hydrogen	Pentane
2-Butene	Hydrogen chloride (anhydrous) [Hydrochloric acid]	1-Pentene
Butene	Hydrogen sulfide	2-Pentene, (E)-
2-Butene-cis	Isobutane [Propane, 2-methyl-]	2-Pentene, (Z)-
2-Butene-trans [2Itene, (E)]	Isopentane [Butane, 2-methyl-]	Propane
2,2-Dimethylpropane [Propane, 2,2-dimethyl]	Methane	Propylene [1-Propene]
Ethane	3-Methyl-1-butene	
Ethylene [Ethene]	2-Methyl-1-butene	

*Additional chemicals identified for the Community Exposure Guidelines are provided at the end of this section.*

## 1.8 Accident Prevention Measures

The refinery complex is engineered, designed, and constructed in accordance with both regulatory and voluntary petroleum industry consensus standards. In addition, numerous policies and procedures are set forth in the refinery's operating and safety manuals outlining both normal and emergency practices and procedures. The PREVENTION of emergencies is our goal.

The refinery is highly automated and equipped with instruments, analyzers, alarms, computers, etc. to assist personnel in both monitoring and controlling processes. This is necessary in order to ensure both safe operations and to ensure the manufacture of quality products. Designed and engineered safety measures include the following:

- A refinery fire water system consisting of redundant fire pumps and water sources.
- The use of water spray systems on LPG tanks and spheres.

- The placement of numerous monitors throughout the refinery.
- The use of both fixed firefighting foam suppression systems at various locations, including storage tanks and certain transfer areas.
- Engineered monitoring and detection systems to monitor the presence and concentration of specific gases and contaminants at various processes and locations throughout the refinery.
- High level alarms with audio and visual signals at continuously staffed operating stations.
- Remote controls on pumps and valves activated from unit control rooms constantly manned are provided on critical systems, with accompanying indicators and alarms.

Both fire protection and chemical resources are outlined in greater detail in [Appendix B](#), Emergency Response Resources.

## 1.9 Process Safety Management

The refinery has designated a Process Safety Department and has an established Process Safety Management (PSM) program and procedures which meets the requirements of WISHA's Safety Standards for Process Safety Management of Highly Hazardous Chemicals (WAC 296-67) and OSHA's Process Safety Management Regulation (29 CFR 1910.119).

## 1.10 Off-Site Risk Evaluation

### 1.10.1 Potential Risks from Off-Site Sources

The greatest potential risk from off-site sources would be the Holly Frontier refinery to the south.

### 1.10.2 Potential Risks to Off-Site Locations

Hazards analysis determines potential off-site consequences to the community, is an integral element of the Risk Management Program. The hazard analysis process has shown that there are potential situations where products such as **butane, pentane, chlorine, ammonia, sulfur dioxide and hydrogen sulfide** can be released and travel beyond the refinery property fence-line. This is determined by constructing hypothetical scenarios of damage or malfunction of plant equipment and simulating a release with a computer using dispersion models. Information on these scenarios is available through the Process Safety Department.



3	IRG	1/20	AS-BUILT PER DCN-20201001-3	OKD	APP
2	ABR	7/19	FIXED BERM, REMOVED HDD STRUCTURE, REMOVED RAILROAD TRACK TO WAREHOUSE	OKD	APP
1	ABR	5/14	AS-BUILT (MDC 5051)	OKD	APP LRM
REV	BY	DATE	DESCRIPTION	APPROVED	

**MARATHON** **Anacortes Refinery**  
 10200 March's Point Rd,  
 Anacortes, WA 98221

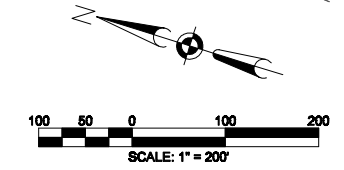
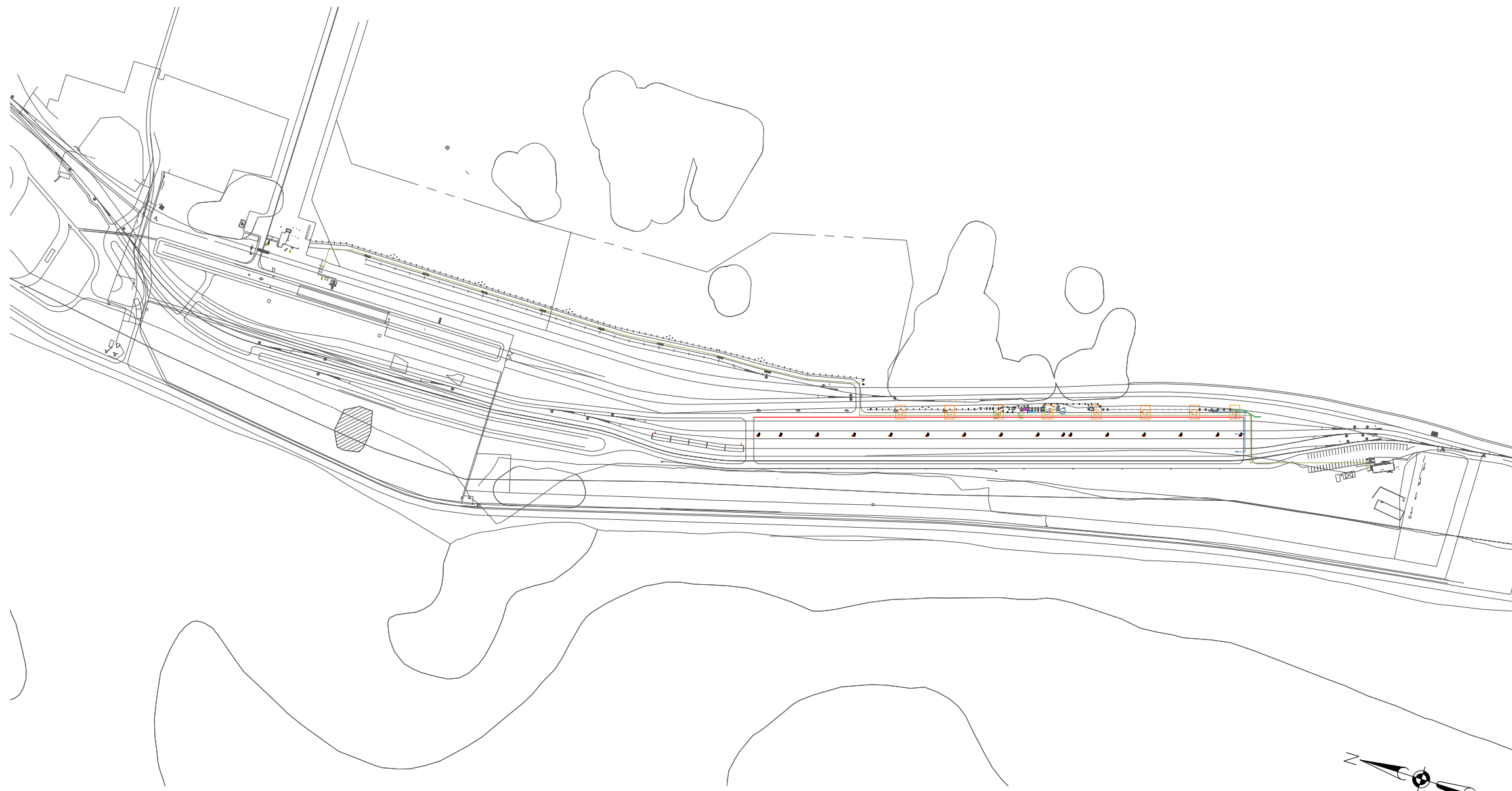
BASE  
 (MARCH POINT LAYOUT)

SCALE: 1-1	APPROVED:
DATE: 3/2009	CHKD:
DRWN: HAMMOCH	DRAWING NO. 40RA3-BASE
PROJ. NO:	REV. 3





PATH: \$FILE\$  
 PRINTED: \$DATE\$  
 TIME: \$TIME\$  
 BY: \$USERNAME\$



REFERENCE DRAWINGS	
DWG. NO.	DESCRIPTION
D14S-637	GRADING AND DRAINAGE - KEY SHEET INDEX
D14S-639	GRADING AND DRAINAGE - OVERALL SITE PLAN
D14S-640	GRADING AND DRAINAGE - OVERALL SITE PLAN
D14P-670	ELECTRICAL - OVERALL SITE PLAN

△				CKD	APP
△				CKD	APP
△				CKD	APP
△				CKD	APP
△				CKD	APP
REV	BY	DATE	DESCRIPTION	APPROVED	
			ANACOSTIA RIVER	ANACOSTIA RIVER	

PLOT SCALE:	DWG SCALE: 1" = 200'	APPROVED ERNEST MACQUARRIE
PLANT NO: ALL	DATE: 03-30-12	APPROVED CLAYTON ABBOTT
	DRWN: CGA	<b>D14S-613</b>
JOB NO: 112100041	CHKD: CGA	
		REV <b>0</b>

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Agent Name	Cas No	MPC Community Exposure Guidelines							MPC Exposure Limit	Notes	Odor Threshold	Location	Measuring Equip
		10 min	30 min	60 min	4 hr	8 hr	24 hr	Re-population					
Ammonia	7664-41-7	30 ppm	30 ppm	30 ppm	30 ppm	30 ppm	30 ppm	< 30 ppm	TWA 25 ppm STEL 35 ppm		5-50 ppm	PTU, VF, Ammonia Scrubber (Strippers), Effluent	Sensidyne Tube and Pump
Asbestos (all forms)	1332-21-4; 12001-29-5; 12172-73-5; 132207-33-1								TWA 0.1 f/cc Excursion 1 f/cc		NA	Refinery Wide	NMAM 7400 - Gilian 5000 and 0.8um MCE cassette, 2 lpm
Asphalt fumes	8052-42-4								TWA 0.5 mg/m3		Low odor threshold (ppb)	ROSE	OSHA 58 - GFF 37mm, 2 lpm
Benzene	71-43-2	130 ppm	73 ppm	52 ppm	18 ppm	9 ppm	2 ppm	< 0.1 ppm	TWA 0.2 ppm STEL 1.0 ppm		1.5-4.7 ppm	Crude, Bensat, CR/NHT, Wharf	UltraRAE 3000 or 3M 3520 passive badge
n-Butane	106-97-8	10,000 ppm	6,900 ppm	5,500 ppm	5,500 ppm	5,500 ppm	5,500 ppm	< 1,600 ppm	STEL 1000	C1-C4 Aliphatic Gases	1.2-6.1 ppm	Tank Car Rack, Butamer	OSHA 2010 - ORBO 91 tubes, 0.05 lpm
Carbon dioxide	124-38-9								TWA 5000 ppm STEL 30,000 ppm		No odor	FCCU (Flue Gas Scrubber)	Extech CO2 Analyzer
Carbon monoxide	630-08-0								TWA 25 ppm		No odor	CO Boilers FCCU, (Flue Gas Scrubber)	MX6, AreaRAE
Diesel Fuel	68334-30-5	35-39 ppm	35-39 ppm	35-39 ppm	35-39 ppm	35-39 ppm	35-39 ppm	< 35-39 ppm	TWA 100 mg/m3	0.7 correction factor PID	0.7 ppm	DHT, Day Tank, Truck Rack	NIOSH 1550 - Charcoal Tube, 0.2 lpm
Dimethyl Disulfide	624-92-0								TWA 0.5 ppm		7 ppb	CFH, CR/NHT, DHT	Charcoal Tube, 0.1 lpm
Ethanol	64-17-5	550 ppm	550 ppm	550 ppm	550 ppm	550 ppm	550 ppm	< 550 ppm	STEL 1000 ppm		80 ppm	Ethanol Rack, Ethanol Day Tank	NMAM 1400 - Charcoal Tube, 0.05 lpm
Gasoline	86290-81-5	200 ppm	200 ppm	200 ppm	200 ppm	200 ppm	100 ppm	< 100 ppm	TWA 300 ppm STEL 500 ppm	Gasoline, Similar Products, Intermediate Streams	0.025 ppm	Gas Rec, Gasoline Tanks, Tank, Truck Rack	MX6, AreaRAE, NMAM -1550 - Charcoal Tube, 0.2 lpm
Hydrogen sulfide	7783-06-4	1 ppm	1 ppm	1 ppm	1 ppm	1 ppm	1 ppm	< 1 ppm	TWA 10 ppm STEL 15 ppm	Max peak limit above 20ppm, but below 50ppm is 10 minutes	0.008 ppm	Crude, DHT, Treaters, Strippers, FGR, Wharf	MX6, AreaRAE
Isobutane	72-28-5	10,000 ppm	6,900 ppm	5,500 ppm	5,500 ppm	5,500 ppm	5,500 ppm	< 1,600 ppm	STEL 1000	C1-C4 Aliphatic Gases	1.2 ppm	Alky/BI	Sensidyne Tube (113SB) and Pump
Kerosene	8008-20-6	51-59 ppm	51-59 ppm	51-59 ppm	51-59 ppm	51-59 ppm	51-59 ppm	< 51-59 ppm	TWA 200 mg/m3	0.67 correction factor PID	0.1 ppm	Crude, VF, FCCU	NMAM 1550 - Charcoal Tube

Lead Inorganic (as Pb)	7439-92-1								TWA 0.05 mg/m3		No Odor	Old Coatings	NMAM 7300 - MCE PW filter 2 lpm or EPA 6010C for paint chips
Mercaptan (Ethyl)	74-93-1	1 ppm	1 ppm	1 ppm	1 ppm	1 ppm	0.5 ppm	< 0.5 ppm	TWA 0.5 ppm Ceil 10 ppm		1.6 ppb	Near propane bullets, Treaters	Sensidyne Tube and Pump or NMAM 2542 (SKA 225-9007 Tube), 0.2 lpm
Nickel carbonyl	13463-39-3								TWA 0.001 ppm CEIL 0.05 ppm		0.5 - 3 ppm	Nickel based catalyst reactors (CR, DHT, NHT)	Nickel Tetracarbonyl Draeger Tubes
Nitrogen dioxide (NO2)	10102-44-0								TWA 0.2 ppm CEIL 5 ppm		0.12 - 0.22 ppm	Flue Gas	Draeger Tubes with accuro pump or OSHA 182 (SKC 226- 40-02), 0.2 lpm
Nitrogen oxides (NOX)	10102-43-9								STEL 1 ppm		0.12 - 0.22 ppm	Flue Gas	NMAM 6014 (SKC- 226-40), 0.025 lpm
Noise	---								85 dBA		NA	Steam Blows, PSV	3M Noise Dosimeters, 3M Sound Level Meter
Particles NOS (inhalable)									TWA 10 mg/m3		NA	Dust from construction/d emo activities	3M EVM or Gillian 5000 with pre- weighed PVC cassette
Particulate NOS (respirable)									TWA 3 mg/m3		NA	Dust from construction/d emo activities	3M EVM or Gillian 5000 with pre- weighed PVC cassette and aluminum cyclone
Propane	74-98-6	10,000 ppm	6,900 ppm	5,500 ppm	5,500 ppm	5,500 ppm	5,500 ppm	< 1,600 ppm	TWA 1000 ppm	C1-C4 Aliphatic Gases	Unodorized 20,000ppm	Tank Car Rack, Bullets, Gas Rec, Truck Rack	Sensidyne Tube and Pump
Refractory ceramic fibers	142844-00-6								TWA 0.2 f/cc		No Odor	Furnaces and Boilers	NMAM 7400 - Gilian 5000 and 0.8um MCE cassette, 2 lpm
Silica - respirable quartz	14808-60-7								TWA 0.05 mg/m3		No Odor	Refractory Mixing, Chipping, Concrete Cutting	NMAM 7500 - Gilian 5000 Pump and PVC 3-piece Cassette with Aluminum Cyclone
Sulfur dioxide	7446-09-5	0.5 ppm	0.5 ppm	0.5 ppm	0.5 ppm	0.5 ppm	0.5 ppm	< 0.5 ppm	TWA 0.5 ppm STEL 1 ppm		0.67-4.75 ppm	CO Boilers FCCU, (Flue Gas Scrubber)	MX6
Sulfuric acid	7664-93-9								TWA 0.2 mg/m3		0.25 ppm	Alky Unit	Sensidyne Tube and Pump or OSHA ID- 113 with MCE filter, 2 lpm

<b>Toluene</b>	108-88-3	67 ppm	67 ppm	67 ppm	67 ppm	67 ppm	67 ppm	< 67 ppm	TWA 20 ppm, CEIL 300 ppm		8 ppm	Lab and Refinery Wide	3M 3520 passive badge
<b>Total Organic Vapors (as n-Hexane)</b>									TWA 100 ppm STEL 150 ppm			Refinery Wide	MX6, Area RAE or 3M 3520 passive badge
<b>Xylene</b>	1330-20-7	130 ppm	130 ppm	130 ppm	130 ppm	130 ppm	130 ppm	< 130 ppm	TWA 100 ppm STEL 150 ppm		1 ppm	Lab and Refinery Wide	3M 3520 passive badge

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## SECTION 2 EMERGENCY ALERTING AND RESPONSE PROCEDURES

### 2.1 Procedure Activation

The refinery's alert and action procedures will go into effect upon the observance of any uncontrolled fire, explosion, or event involving the unplanned sudden or non-sudden release of oil or hazardous material to air, ground, or water. In the event of a discharge of oil into or on navigable waters, or adjoining shorelines; or a substantial threat of such a discharge, refer to the Anacortes Refinery Oil Spill Response Plan.

### 2.2 Emergency Communications, Notifications, Call Out and Immediate Response

During emergencies, effective communications is critical. Emergency communication must cover two separate functions. First, during off-hours Emergency Responders must be notified to report to the Refinery. Second, dedicated communications systems must be available to manage the emergency.

The first system consists of the MPC Alerts system that is run on the Send Word Now platform that sends emergency notifications via voice and text to cell phones and home phones. The second system consists of radios with dedicated emergency channels. A brief description of each of these systems follows.

#### 2.2.1 Reporting Emergencies

When an emergency occurs (fire, release, or major injury) go immediately to the nearest plant phone and dial x333. This number will ring at the Logistics Board Operator console and be answered by the Logistics Board Operator. If the Logistics Board Operator is not available to answer, the 333 call will be automatically forwarded to the Utilities Board Console after 3 rings. The Caller is required to provide the following information:

- Name of Caller
- Nature of the emergency (Ex: fire, release, rescue, medical)
- Location of the emergency
- Resources required (Ex: ambulance, Fire Brigade, Oil Spill Team, Rescue Team, Medical Team)
- Any additional known information pertinent to the response
- Wait for confirmation of the details before hanging up

If for any reason you fail to complete the call when dialing x333, dial x145, Logistics Board Operators desk line. If that fails to connect you with the Logistics Board Operator, then dial x365 or x606 which ring at the Utilities Control console located in the Central Control Room to report the incident.

The fire alarms inside the Administrative Building and Lab do not activate the Refinery Evacuation System. If a fire is found and is beyond the incipient stage, it must be treated as a structure fire. Dial x333 to report the fire and notify that a total evacuation of the building is required. Logistics/Utilities Board Operator will notify local Fire Response Agencies via 911. (City of Anacortes Fire Department).

Medical Emergencies requiring immediate attention can be communicated on radio channel 12/radio channel all call and/or a 333 call.



## 2.2.2 Response to the Emergency Telephone System

### *Logistics Board Operator with back-up from the Utilities Board Operator*

When the emergency phone rings, answer stating “Emergency Phone, what is the nature of the emergency?” Follow through Forms *R-16-001-F01* and *R-16-001-F02* (Section 5) to collect pertinent information. If multiple events have occurred, i.e., fire with medical, follow through both sections. If an ambulance is requested call 911 and request an ambulance. Complete the appropriate Emergency Form located in *Section 5*.

When the emergency phone rings the Logistics/Utilities Board Operator will listen to the information given and initiate the Emergency Notification Systems. The Logistics/Utilities Board Operator shall:

- Log the name of the caller, time, and location of the emergency by completing the appropriate Emergency Form located in *Section 5*.
- Activate the appropriate evacuation alarm.
- Notify all areas by radio utilizing the ALL CALL channel. ALL CALL communications should be to the point and brief so as not to impede unit response communications.
- Notify the Utilities Board Operator to start the fire water pumps if necessary.
- Activate the ALERTUS Emergency Communication system.
- If the nature of the incident requires the Emergency Response Team, activate the MPC Alerts communication system.
- Make CAER notification to 911. Call 911 or E-mail [ECDISPATCH@skagit911.us](mailto:ECDISPATCH@skagit911.us)
  - **Message:** CAER Low Level Incident. The Marathon Refinery is reporting an Operational upset at the Marathon site resulting in a local audible siren. This incident is a CAER LOW LEVEL incident. No Zone notification is required. No outside assistance is requested at this time.
  - The 911 CAER notification levels can be reviewed below in the CAER Classification of Emergency Incidents section *Table 2.1*.
- Relay all the pertinent information to Safety and Operations (Zone C Supervisor and Utilities Working Board)

### *Utilities Working Board Operator*

Emergency Phone (333) or from the Logistics Board Operator the Utilities Working Board Operator shall:

- Start the firewater pumps (steam-driven & diesel fire pumps).
- Activate the proper emergency alarm (on the Fire/Evacuation Alarm Graphic in Experion) if not already completed.
- Activate the ALERTUS Emergency communication system, if not already completed.

**Note:** If the emergency call was received via radio, a follow up 333 notification may still be required to initiate the emergency response actions and notifications.

### *CAER Classification of Emergency Incidents*

The following classification guide was developed by the March Point Community Awareness Emergency Response (CAER) Group, and should be used as a guideline to help determine the emergency incident level:

**Table 2.1 CAER Emergency Incident Levels**

Levels	Emergency Incident Description
1	Events with negligible off-site impact and not requiring outside assistance Minor emergencies or events that have the potential for off-site impact and may require minimal outside assistance
2	More serious emergencies that may require varying levels of outside assistance
3	Major uncontrolled fires, releases, or explosions that have or may create imminent danger to plant personnel and the community

The Logistics Board Operator will have the responsibility to make the initial CAER notification for all emergency incidents (within the first 15 minutes) to 911. Generally, a CAER Level 1 should be made unless the emergency magnitude is immediately known to be at the Level 2 or 3.

A CAER notification should be relayed to 911 as follows:

This is (your name) from Marathon Refinery reporting a CAER level 1 event for a (select from below):

- Unit upset with audible alarm (localized or refinery wide)
- Unit upset with flaring (15 minutes or longer)
- Unit upset and fire
- Unit upset and release of product

When making a CAER notification select the appropriate issue or combination of issues and relay that to the 911 operator. The Incident Commander and EOC should ensure the community CAER notification has been completed.

\*No CAER notifications are required for Ambulance services for medical issues alone (not combined with another emergency). Just call 911 requesting an ambulance to be dispatched to the refinery.

Emergency incidents can have many different impacts depending on the area, equipment involved, the potential of harm to human or environmental health, or the economic loss to the company. In most cases, all these factors will have some impact in determining the emergency incident level.

It is the responsibility of the Incident Commander, along with the EOC, to determine the severity of the incident and the potential impact to the community. Appropriate notifications (initial and follow up) will be made based on the emergency incident level to Marathon Refinery Leadership Team, government agencies, and media (when necessary).

The Refinery Manager or Management Duty Person will make notifications to the Marathon Corporate Duty Officer through MAPLINE at 877-627-5463 (877-MAPLINE) within the first hour of an incident, if appropriate to do so. When dialing into MAPLINE ask the emergency operator to put you in contact with the CERT leader on-call. The Refinery Manager or Management Duty Person will provide details on the incident with information gathered from the EOC and IC. This will be utilized to determine the notification and response actions at the corporate level.

### **Logistics Foreman**

Upon receiving the Emergency information from Logistics/Utilities Board Operator, the Logistics Supervisor will:

- Assume the role of Incident Commander (see the Emergency Management & Organization Section).

- Ensure an ambulance has been called, if needed, and that Security has been made aware of the incoming ambulance. Designate an individual or respond to the main gate to escort ambulance to the scene.
- A briefing is required at the main gate prior to an ambulance responding to any scene. The briefing should include information, such as the following:
  - Condition and location of the patient
  - Any medical treatments that have been administered
  - Conditions of the area (i.e. if responding in the plant other than the medical station)
  - Copy of the Safety Data Sheets (SDS)
- Ensure notifications to Emergency Response Team and Management has been initiated.
- Establish communication with the Emergency Releasable Operations Positions to brief them of the incident and initiate response to the incident scene.

### ***Emergency Medical and Rescue Responders***

In the event of a medical or rescue emergency, the Safety Department or Logistics/Utilities Board Operator will broadcast an announcement over the All Call Channel on the refinery radio and/or PA system that directs Emergency Medical Responders and Rescue Team Responders to radio channel 12 where additional information concerning the emergency would be available.

### **2.2.3 Emergency Notification Systems**

The Refinery has the following Emergency Notification systems that can be utilized for communication of emergencies or other urgent needs throughout the refinery or requesting response by the various emergency response team to the facility.

- Whelen Alarm System - Emergency Communication System
  - Refinery wide Evacuation alarm
  - Unit evacuation alarms
  - Refinery PA system
  - All these alarm systems are built into the one Whelan Alarm System.
- MPC Alerts/Send Word Now System
  - Emergency Call out system for the plant Emergency Response Teams.
- Alertus System
  - Digital Reader Boards & Beacons.

### ***Whelen Alarm System***

The Whelen Alarm system is comprised of one physical activation location (old Boiler House control room as well as remote activation locations within the DCS system on the following control board stations:

- Zone A - Resid console
- Zone A – Distillate console
- Zone B – ALKY console
- Zone B – CCU console
- Zone C – Logistics console
- Zone C – Utilities console

These remote activation locations are routed through the DCS system back to the physical activation location in the old boiler House control room. The Whelan Alarm System is responsible for sounding the

refinery wide evacuation alarm, all localized evacuation alarms, the “All Clear” alarm as well as access to the PA system. **Note:** Only the physical activation location can be utilized for the PA system.

Only Logistics, and Utilities have console has access to the refinery wide evacuation alarm. The other console locations can only activate their localized evacuation alarm. Logistics and Utilities have access to all the alarms within the Whelen alarm system.

The Whelan alarm system will relay the alarm to eight audible speakers that are in the following locations:

- Refinery Main Lab Building – Exterior, Northeast corner
- ALKY – Exterior, Northwest corner of old ALKY control room
- CCU – Exterior, Westside of Sub 3
- Crude unit – Exterior, Northwest corner of Sub 1
- Intersection of 5th & C streets – Exterior, South of the Main Substation (adjacent to the ROSE unit)
- CR/NHT – Exterior, East of the old CR/NHT control room (in pipe rack)
- Intersection of 7th & E streets – Exterior, on top of power pole
- Intersection of 10th & F street – Exterior, on top of power pole (south of intersection)

The refinery wide evacuation alarm is tested weekly each Wednesday at noon. The Fire Chief ensures activation locations are rotated during the weekly tests

#### ***MPCAlerts – Send Word Now System***

The MPC Alerts/Send Word Now system is a web-based service that Marathon utilizes to communicate with employees. The Company uses this system for all Emergency Response communications for “call out” purposes. When a “call out” is required the Logistics/Utilities Board Operator will log into the system through their board console to initiate the Emergency Notification to the respective Emergency Response group(s). The Fire Chief is responsible to keep the Emergency Response group(s) current.

The Logistics/Utilities Board Operator activates the communications system through MPCAlerts.com. Training on steps for MPC Alerts activation and telephone system failure is required for anyone who is expected to activate the communications system. If there should be a failure of the MPC Alerts/Send Word Now communications system, the Logistics/Utilities Board Operator shall call the appropriate personnel utilizing the Refinery Duty List.

Testing of the MPCAlerts system will be conducted as follows:

- Weekly: A small group will be tested. This “Drill Group” will consist of (at a minimum): Zone C Area Lead, Safety Supervisor, and Fire Chief. This test will be for cell phones, voice, and text messaging. The Logistics Board Operator will activate the test on Wednesdays at 12:00 pm.
- Monthly: All groups will be tested, which will include all cell/home phone numbers provided. This test is automated through the MPC Alerts system.

#### ***Radio System***

The refinery radio system is a Marathon owned and operated radio system that is used throughout the refinery for all our radio communications. The radio system equipment is located in the building near the radio tower and shop 1. There are 13 repeaters at the plant to support the radio system. The radio system is comprised of over 60 “talk groups” or channels. The system has a capacity to carry 26 conversations simultaneously, two conversations per repeater. For emergency response there are six dedicated radio talk groups (listed in section 7.6) for communication during an emergency. All the Safety

department radios including those located in or on emergency response equipment have access to all these dedicated emergency talk groups. Some radios that are issued to Emergency Response Team members also have access to these emergency talk groups.

In the event of a medical or rescue emergency, the Logistics/Utilities Board Operator will send out an announcement over the refinery PA system that directs Emergency Medical Responders and Rescue Team Responders to radio channel 12 where additional information concerning the emergency would be available.

### ***ALERTUS Emergency Communications System***

The Alertus system is another web-based system that is initiated by the Logistics/Utilities Board Operator. This system is an in-plant notification system to relay information throughout the refinery. The Alertus system communicates with the digital reader board and Alertus Beacons that are in various locations throughout the refinery. Some of these locations include, but not limited to: Zone FOC's, CCR, Shops 1 & 2, Admin Building, Safety Trailer, and the south dock of the Warehouse.

The Alertus Beacons when activated will have an audible alarm along with a message displayed on the reading screen. Where the Alertus Beacons are connected to the digital reader boards the same message would be displayed on the reader boards.

The ALERTUS emergency communications system will be utilized for emergency communications when the audible alarm is sounded, as well as notifications of "Working in the Flare" systems.

Following an emergency event an "All Clear" message will be activated. When the emergency ends, or when work in the flare or hot drop out is completed the ALERTUS emergency communications system will be cleared.

**Note:** The "Working in the Flare" messages will only be sent to selected ALERTUS beacon stations that are directly affected by the work activity.

Activation of the ALERTUS emergency communications system is the responsibility of the Logistic Board or Utilities Board Operator.

### **2.2.4 Response to False Alarm Event**

Initial response to any evacuation or fire alarm shall always be conducted per this manual, until verified that it is a false alarm event. Once a false alarm event has been verified, Operations shall reset the alarm and sound the "all clear." If the alarm cannot be reset during off-hours, the Logistics Foreman will contact Control Systems Duty Personnel, Phone & Radio Communications Personnel, and the Safety Duty Person. This will ensure that the appropriate personnel are notified, and the system can be repaired. The Safety Duty Person will make community notifications through the CAER 911 notification system.

## **2.3 Assessment**

The Emergency Response Plan provides a system to manage the preparation for, mitigation of, response to, and recovery from emergencies.

Use the RSP-1150-040-FORM1 Managing Minor Hazardous Leaks Hazard Assessment and the guidance in RSP-1150-040 Management of Minor Leaks and Clamp/Wrap Life Cycle Management when the

situation does not pose an immediate threat to the health and safety of personnel, environment, community, or facility assets. An “immediate threat” includes, but is not limited to the following;

- Personal or fixed gas monitoring equipment which indicates an IDLH atmosphere;
- An immediate personnel exposure threat, e.g. a Health Hazard;
- Flammability;
- Vapor cloud forming;
- Released material at or above its auto ignition temperature; and
- A mechanism of failure that is not understood.

Convene a hazard assessment meeting in a prompt and timely manner at a safe location. The hazard assessment team shall perform a documented hazard assessment to determine what further actions, if any, should be taken. The Hazard Assessment should consider additional PPE. The hazard assessment will be completed by a team composed of the following individuals. Those denoted by an asterisk (\*) should assemble on-site, others may be consulted via telephone:

- Maintenance Supervisor and/or Maintenance Foreman/Planner \*
- Unit Foreman and/or Shift Leader \*
- Chief Operator/Domain Foreman/Shift Coordinator \*
- Area Inspector \*
- Unit Operator \*
- Area Team Leader
- Maintenance Manager
- Operations/Products Control Manager
- Safety/Environmental/PSM

Note: The hazard assessment need not be completed for ASME B31.3 Category D Services.

**Important:** When applicable a FLIR camera can be used to identify the location of the leak first, so as not to place personnel unnecessarily in hazardous situations. I.e., personnel donning SCBA’s and using air monitoring equipment.

**Important:** When assessing leaks under insulation, the removal of insulating materials shall only be performed after a documented risk assessment has been performed and agreed to by subject matter experts. Leak assessments should be conducted according to the following flowchart and the data sheet. The SAFER plume modelling program may be used to assist site characterization.

## 2.4 Emergency Evacuation Plan

### 2.4.1 Evacuation

At the time of an emergency, the evacuation of non-essential personnel is mandatory, whether it is any of the following: unit upset, uncontrolled release, or a fire beyond the incipient stage. At the Refinery, there are two levels of evacuation: Localized evacuation, and Plant-Wide evacuation. During any evacuation, personnel should be aware of the storage of any hazardous substances. [Figures 2.1, 2.2 and 2.3](#) at the end of this section provides a map showing evacuation routes, tanks and other hazardous storage areas.

### 2.4.2 Localized Evacuation

The localized evacuation is intended to be used for Operational issues and upsets with potential local unit impacts only (i.e., you don't need personnel outside of the unit/area to take action). The localized evacuation alarm should be activated for situations where Operations would like all Non-Essential Personnel to evacuate the unit, such as: small and controlled releases, unit upsets or trips.

The activation of a localized evacuation does not restrict any vehicle traffic or require the mustering of non-essential personnel at any of the evacuation assembly locations. If vehicle traffic needs to be restricted immediately the plant wide evacuation should be activated. If vehicle traffic does not need to be restricted immediately, adjacent unit roads can be shutdown via barricade.

The localized evacuation alarm is a series of 4 tones followed by a voice-over intercom message announcing the localized evacuation area(s).

There are pre-recorded voice-over intercom messages for the process units.

Work may continue in areas not affected by the local evacuation, but personnel should be ready to evacuate should the event progress to a plantwide evacuation.

### 2.4.3 Non-essential personnel response to a Localized Evacuation

Evacuate from the affected area and badge-out at the Zone's badge reader (if safe to do so). If not safe to badge-out of the affected area, proceed to the nearest badge card reader in an unaffected area to badge-in so Operations knows that you have safely evacuated the affected Unit. If you are badged-in to the affected area but physically out of the area at the time of the evacuation, proceed to the nearest badge reader to badge-in to another area so Operations knows that you have safely evacuated the affected unit. Badging-out is secondary to ensuring the non-essential personnel leave the affected area in a safe and controlled manner. Operations, IC and EOC can review personnel logged into the unit via the Electronic Unit Accountability report on the SharePoint page.

Upon activation of a Localized Evacuation, all Emergency Response Team members that are on-site will report and badge in at staging located at the Fire Hall. They shall remain in staging until receiving additional information and dispatched to the field.

### 2.4.4 Plant Wide Evacuation

The plant wide evacuation is to be initiated for emergency situations where the full evacuation of non-essential personnel is necessary. Examples of incidents that should activate the Plant Wide Evacuation include, but not limited to:

- Fires not immediately extinguished or beyond incipient stage
- Uncontrolled release or spill (especially if vehicle traffic needs to be stopped)

The Plant Wide Evacuation is a 90-second siren that makes a "Whoop" sound. Upon activation of the refinery-wide evacuation alarm, all non-essential personnel are to evacuate to one of the predetermined evacuation assembly points. In general, these incidents would include, but are not limited to a fire beyond incipient stage, an uncontrolled release or spill, and any incident requiring immediate ERT response.



### 2.4.5 Evacuation Assembly Points

There are primary and secondary evacuation points that have been established for the purposes of being able to track personnel for accountability and to relay information.

#### *Primary Evacuation Assembly Points*

Primary evacuation assembly points are the pre-determined mustering areas that will provide the quickest and most accurate accountability for all personnel working at this facility at the time an incident occurs. Personnel evacuating the facility are to badge out through the badge readers and proceed to the assembly location.

The pre-determined Primary assembly points are:

- Main Gate (assemble in the East/West Cafeteria)
- Gate 20 (assemble in main contractor parking lot, outside the gate)
- Gate 26 – Located on 8th Street East of the Tank Car Rack. Gate 26 separates the Refinery, the Tank Car Rack, and the Rail Terminal. If an emergency requires further evacuation from this assembly point, then the posted evacuation route signs direct personnel out of the Tank Car Rack through the Rail Terminal to March Point Road.

#### *Secondary Evacuation Assembly Points*

Secondary evacuation assembly points are intended for employees who cannot safely reach any primary evacuation point.

The pre-determined Secondary Evacuation Assembly Points are the following:

- Gate 10 – Southwest of Tank 60
- Wharf Parking Area

At a secondary evacuation point, it is acceptable to cut the gate chain during an actual evacuation for the purpose of further evacuation, as required. Please do the following if the chain must be cut:

- Cut the chain, but not the lock (if at all possible)
- Notify Security
- Proceed as a group to a safe location for assembly
- Remain within eye-sight of the gate until the gate is re-secured (if it is safe to do so).

#### *Evacuation Alarm Activation Locations*

In the event that a localized area or refinery-wide evacuation is required, the alarm can be activated at the following locations:

- Utilities Board DCS \*
- CCU Board DCS
- Alky Board DCS
- Crude Board DCS
- CR/NHT Board Experion
- Logistics Board Console \*
- 

Only locations listed above with green asterisk can activate a plant-wide evacuation.

Each location will be tested annually with no individual location being activated for two consecutive tests.



### *Truck Rack Evacuation*

The truck rack has two emergency evacuation gates.

- The north gate is located just west of the exit gate by the scale house.
- The south gate is located west of the entry gate along the fence by the diversion water pumps.
- All gates are activated by pushing a simple “Panic bar” mounted on the gate.
- In the event of an emergency, determine wind direction and use the appropriate gate away from the incident.

**NOTE: These gates are to be used ONLY IN AN EMERGENCY!**

### **2.4.6 Vehicle Access Restrictions - Security**

Upon hearing or being notified of the evacuation alarm, the Main Gate Security Guard shall issue an order to restrict vehicular access into the facility at all gates. The restriction shall remain in place until notified that the incident has been secured and the “all clear” has been sounded.

### **2.4.7 Evacuation of Non-Essential Personnel**

If an emergency occurs within an operating unit, evacuation of all non-essential personnel is critical for a safe and orderly shutdown of the unit or for maintaining unit operation. This could be a localized or a refinery-wide evacuation. Non-essential personnel shall leave the unit via the safest and shortest route. Never return to a PSM covered process access point to sign-out during an evacuation.

When a person hears the alarm, they should respond in the following manner:

- Stop all work immediately.
- Secure the work area. This is accomplished through stopping all draining or venting of flammable or combustible material, securing open flanges, retracting radiation sources (pill) into the X-ray camera.
- Shut-off all fire ignition sources and equipment. Pull vehicles over to the side of the road, turn off the engine and leave the keys in the ignition.
- Evacuate the area in the most direct safe path. If it is a refinery-wide evacuation, proceed to the safest most accessible evacuation assembly point. Always be aware of wind direction. Travel cross wind or upwind of the incident scene. Use indicators such as windsocks, steam plumes, and flags to assist you in determining wind direction.
- Personnel evacuating should badge out per the instructions in 8.2 and 8.4 depending on whether a Unit or Plantwide evacuation. Never return to a PSM covered process access point to sign-out of the area electronically.
- Immediately report any personnel not accounted for to the Main Gate Security Guard at x119 or radio channel 10. State your name, company, the unaccounted person’s name and their last known location. Wait for confirmation before ending the call.

### **2.4.8 Evacuation of Essential Personnel**

Essential personnel evacuation from an operating unit or zone is required if the magnitude of an emergency situation results in conditions beyond their control. The person in charge (Foreman, Supervisor or Temporary Foreman) of the essential operating personnel will ensure that the unit or zone is evacuated in a safe and orderly manner.

Whether or not essential personnel are evacuated depends on the situation. Essential personnel will be evacuated when the risk to essential personnel outweighs the value of having them in the affected area.

### *Unit or Zone Evacuation of Essential Personnel*

- Unit Evacuation: Evacuate essential personnel that are no longer required via the established escape routes. If the essential personnel are to perform duties in the unaffected unit(s), then direct them to surrounding operating units via the safest route.
- Zone Evacuation: Evacuate personnel by established escape routes to one of the predetermined evacuation assembly points.
- Upon evacuation, the person in charge will ensure that all essential personnel are accounted for.
- Information on the number of essential personnel accounted for and the condition of the evacuated unit must be relayed immediately to the Incident Commander, whether it is a unit or zone evacuation.

Unit or zone emergency procedures/checklists should be followed prior to evacuation of essential personnel, if possible, to ensure the safest possible condition of the evacuated unit or zone.

### *Duties of Essential Personnel Prior to Evacuation*

The safety of all personnel is the highest priority. To help assure a proper and safe evacuation, consider the following checklist items prior to and during an evacuation of essential personnel:

- Are all essential personnel accounted for?
- What duties are they performing?
- Is additional PPE required for operating or evacuating the unit or zone?
- Has the emergency alarm system been activated (i.e. x333)?
- Have the emergency shutdown procedures been implemented?
- Have feed and fuel sources been isolated?
- Has fixed and portable fire equipment been activated?
- Are there breeches to any dedicated systems, utilities or process equipment?
- Does the power need to be shut off (i.e. local or remote)?

### **2.4.9 Evacuation of Buildings**

Security has the ability to provide a report showing all persons that are unaccounted for. The IC and EOC will first determine if all unaccounted persons are out of the affected area. The IC will determine if rescue is necessary. Secondly, the EOC will utilize any available Supervisors to aide in the evacuation of any personnel that may still be inside buildings. The Supervisor, if available, of a building has the following responsibilities under the direction of the EOC:

- Upon hearing the alarm, assure personnel in area of responsibility have evacuated in the safest and shortest route.
- Check rooms and enclosed spaces for personnel who may be trapped or otherwise unable to evacuate the area.
- Help communicate evacuation via radio or other means necessary to affected personnel.

### *Administration Building /Offices Outside the Gate*

Personnel within the Administration Building are to respond to an evacuation event as follows:

- Shelter in place. Close all windows and vents. Wait for additional instruction from the EOC if an evacuation of the building is required.
- If it is deemed unsafe to remain in the building, evacuate to one of the predetermined evacuation assembly points.

Members of the Local Incident Management Team (LIMT) will not typically evacuate the Administration Building and will set up the Emergency Operations Center (EOC) located in the 2nd floor conference room, if safe to do so. If necessary, the LIMT will displace and set-up the EOC in the cafeteria.

### ***Central Control Room***

The Central Control Room (CCR) and the Control Board Operators are critical to the safe operation of the refinery processes. The CCR is equipped with safety systems and equipment for continued occupancy during emergencies as a place of refuge. The CCR has been deemed a Shelter-In-Place location during emergencies occurring outside the CCR with continued occupancy of key personnel to maintain continued operation of the refinery process systems. If the CCR requires total evacuation the evacuation of essential personnel from the process areas should be considered.

### ***Training***

Each employee and contractor shall be familiar with the evacuation and all clear alarms. Weekly tests are conducted to help all personnel be familiar with the sound and duration of these alarms. The weekly test serves as refresher training for all employees. Contractors are trained during the annual PSM Training.

#### **2.4.10 All Clear**

For Plantwide evacuations, when the IC and EOC determine the site is in a safe state, an announcement will be made over the ALL CALL channel to communicate the "ALL CLEAR". An "All Clear" alarm over the siren system will also be activated by the Logistics/Utilities Board Operator for plant wide evacuations. The "All Clear" alarm is a constant tone that last for 30 seconds. The Logistics/Utilities Board Operator will also stop additional call outs and send an "All Clear" message via MPC Alerts system to all groups that were notified initially. ALERTUS emergency communication system will also be used to communicate "All Clear." Following the "All Clear" announcement the Utilities Working Board Operator will need to clear the ALERTUS emergency communication system.

For local evacuations, the "All Clear" will be conducted using the radio ALL Call and/or PA system by the affected zone's Operations Supervisor or IC.

The "All Clear" notification does not mean that all areas of the Refinery will be accessible. Access to areas of the Refinery may still be restricted based on the emergency incident or operational activities. All personnel must contact the appropriate operating zone via the radio system to gain access to a process unit. All permits issued prior to the incident are void until revalidated by the permit issuer following the "All Clear."

### ***Work Activities after an Emergency Incident***

Once the "all clear" has been issued, all work activities must be rechecked, and permits reissued prior to work resuming. If the event was a localized evacuation, only those permits in the affected area need to be re-issued. All personnel must check in through operations prior to entry into the units. The Supervisor of the area and/or work activities is responsible for checking and determining if the area is safe for re-entry and if work activities can resume. A Health & Safety Department Representative should be utilized as a consultant to help determine if the area directly affected by the emergency incident is safe for re-entry, and if work activities are permissible. A Site Safety Plan shall be in place for all affected areas following an emergency incident if conditions require it (non-routine hazards).

## 2.5 Accountability

### 2.5.1 Employees

All employees that enter the plant are required to badge in and out. In addition, all employees shall be required to carry their Marathon issued photo identification badge at all times.

### 2.5.2 Emergency Evacuation Accountability

Evacuation of all non-essential personnel should be accomplished by following the evacuation procedure. The Lenel badging system is our primary means for accountability during an evacuation event. For Plant Wide evacuations, personnel are to evacuate to the predetermined evacuation assembly points and badge out through the gate and muster in the assembly location.

The back-up system to the Lenel system, if it is down, is through the evacuation assembly sign-in sheets. Supervisors shall report via radio or telephone to the main gate if they are unable to verify that all employees are in a safe area. The main gate is to verify if an employee is in the plant through the gate keeping system. The main gate is to contact the Incident Commander if there are any unaccounted personnel.

The Operations Supervisor or Maintenance Supervisor with essential personnel that remain in the zone to deal with the incident are required to immediately obtain, and continually keep accountability for all personnel assigned to them. This can be conducted via Radio, or Face to Face.

Once the Incident Command has been established Operations should report to the IC. At this time the Supervisors shall report to the Incident Commander/EOC the status of their personnel and any accountability issues.

### 2.5.3 Accountability for Responding Incident Support Personnel

Support personnel are individuals that are needed to carry out a specific task or role within the Refinery. This could include Maintenance or Logistics support. Support personnel accountability is managed by the Logistics Section through staging. When a support person responds to the refinery, they should respond to the affected area and sign in for accountability purposes. All support personnel will be under the direction of the Incident Commander.

A Staging Accountability Form has been developed for use by the Staging Officer to manage accountability of personnel responding to a major incident. This form is located within Attachment 1 and should be filled out with the following information: incident date, name of personnel that responded, time they arrived at staging, where they were assigned (i.e. Sector 1, Incident Command, or Emergency OPS Center), time they left for their assignment, time they returned to staging, and time they were released from the incident.

### 2.5.4 Off-Shift Operations Response to Refinery

Additional operations personnel are often requested or required in support of emergency response and recovery actions. It is critical that off-shift personnel responding to the refinery are accounted for and integrated into the response plan. Their efforts will be coordinated by and through IC and the operations organizational structure.

The designated initial muster point for Operators responding from off-shift is the Field Operations Center (FOC) for the area or zone they are assigned. In the event the assigned FOC is affected by the incident, Operators will report to the Fire Hall.

Off-shift Operators responding to an emergency will:

- Proceed to assigned field shelter FOC to don PPE
- If FOC is not accessible, proceed to the Fire Hall
- Report to the Central Control Room and sign in
- Report to the Shift Supervisor of their respective area after donning proper PPE and get direction prior to proceeding into the units

## 2.5 Response Safety

During Emergency Response activities, maintaining the safety of response personnel is a top priority. A Safety Officer will always be assigned and responsible for ensuring safety during all phases of a response.

When responding, approach the scene in an observant mode, stay upwind to the extent possible, and avoid driving into potential spills or vapor releases. Park in a visible and safe location, using the vehicle to control further access if necessary. Don appropriate PPE based on potential hazards. There is a variety of PPE available to refinery employees including SCBA's, respirators, chemical protection suits, and turnout gear. Use appropriate gas detection for the spill or release to begin site characterization. A variety of air monitoring equipment is available. See list of air monitoring equipment and action levels below.

Once initial site characterization is complete adjust the hot zone and site controls as necessary. Make sure responders are aware of this information. Begin the initial site safety plan using the ICS 201-5 and once completed make sure all responders are briefed on the plan. Document that they have been briefed on the plan before allowing them to enter the exclusion zone. The Safety Officer should brief employees over the radio of hazards if they are not able to brief them in person.

The Safety Officer establishes and oversees an on-going atmospheric monitoring program to ensure repeat testing is completed to ensure incident changes are quickly identified. If the size of the response increases the Safety Officer is responsible for requesting additional safety personnel. The Safety Officer must work closely with the Incident Commander and Operations Section to make sure they are providing input on current and planned operational tactics.

If off-site impacts are confirmed, suspected, or forecast the SAFER system should be activated, and Area RAE's deployed based on environmental conditions.

AIR MONITORING EQUIPMENT				
Type	Quantity	Parameters	Detection Limits	Location
UltraRAE 3000	3	Benzene	0.2 ppm	Safety Trailer
Industrial Scientific – Ventis MX4	12	Oxygen	.1%	Safety Equipment Room
		LEL	1%	
		Hydrogen Sulfide	.1 ppm	
		Carbon Monoxide	.1 ppm	
Industrial Scientific – Ventis MX6	4	Oxygen	.1%	Safety Trailer
		LEL	1%	
		Hydrogen Sulfide	.1 ppm	
		Carbon Monoxide	.1 ppm	
		VOC	.1 ppm	
		Sulfur Dioxide	.1 ppm	

AIR MONITORING EQUIPMENT				
Type	Quantity	Parameters	Detection Limits	Location
AreaRAE	10	Oxygen	.1%	Safety Trailer/ IC Van
		LEL	1%	
		Hydrogen Sulfide	1 ppm	
		Carbon Monoxide	0.1 ppm	
		VOC	0.1 ppm	
		Sulfur Dioxide	0.1 ppm	

AIR MONITORING PARAMETERS			
Parameter	Monitor Procedure	Equipment	Action Threshold
Oxygen	Continuous Monitoring	4-Gas Meter MX4/MX6/Area RAE	Safe entry limits from 19.5%-22%
H2S	Continuous Monitoring	4-Gas Meter MX4/MX6/Area RAE	Unprotected entry <10 ppm >10 ppm requires supplied-air respirator
CO	Continuous Monitoring	4-Gas Meter MX4/MX6/Area RAE	Unprotected entry <35 ppm 35-1200 ppm requires supplied air respirator
Lower Explosive Limit (LEL)	Continuous Monitoring	4-Gas Meter MX4/MX6/Area RAE	Safe entry ≤1% LEL 2%-9% LEL requires approval by Safety Officer prior to entry. No entry ≥10%
VOC	Continuous Monitoring	4-Gas Meter MX6/AREA RAE	Unprotected entry <50 ppm 50-500 ppm requires half face respirator equipped with organic vapor cartridges 500-1000 ppm requires full-face respirator equipped with organic vapor cartridges >1000 ppm requires supplied-air respirator
Benzene	Direct Reading	Photo Ionization Detector (PID) RAE 3000	Unprotected entry ≤ 1 ppm 1-10 ppm requires half-face respirator equipped with organic vapor cartridges 10-50 ppm requires full-face respirator equipped with organic vapor cartridges >50 ppm requires supplied-air respirator
Sulfur Dioxide	Continuous Monitoring	4-Gas Meter MX4/MX6/Area RAE	< 2ppm safe entry 2-20ppm requires half face respirator equipped with organic vapor cartridges 20-100ppm requires full face respirator equipped with organic vapor cartridge.

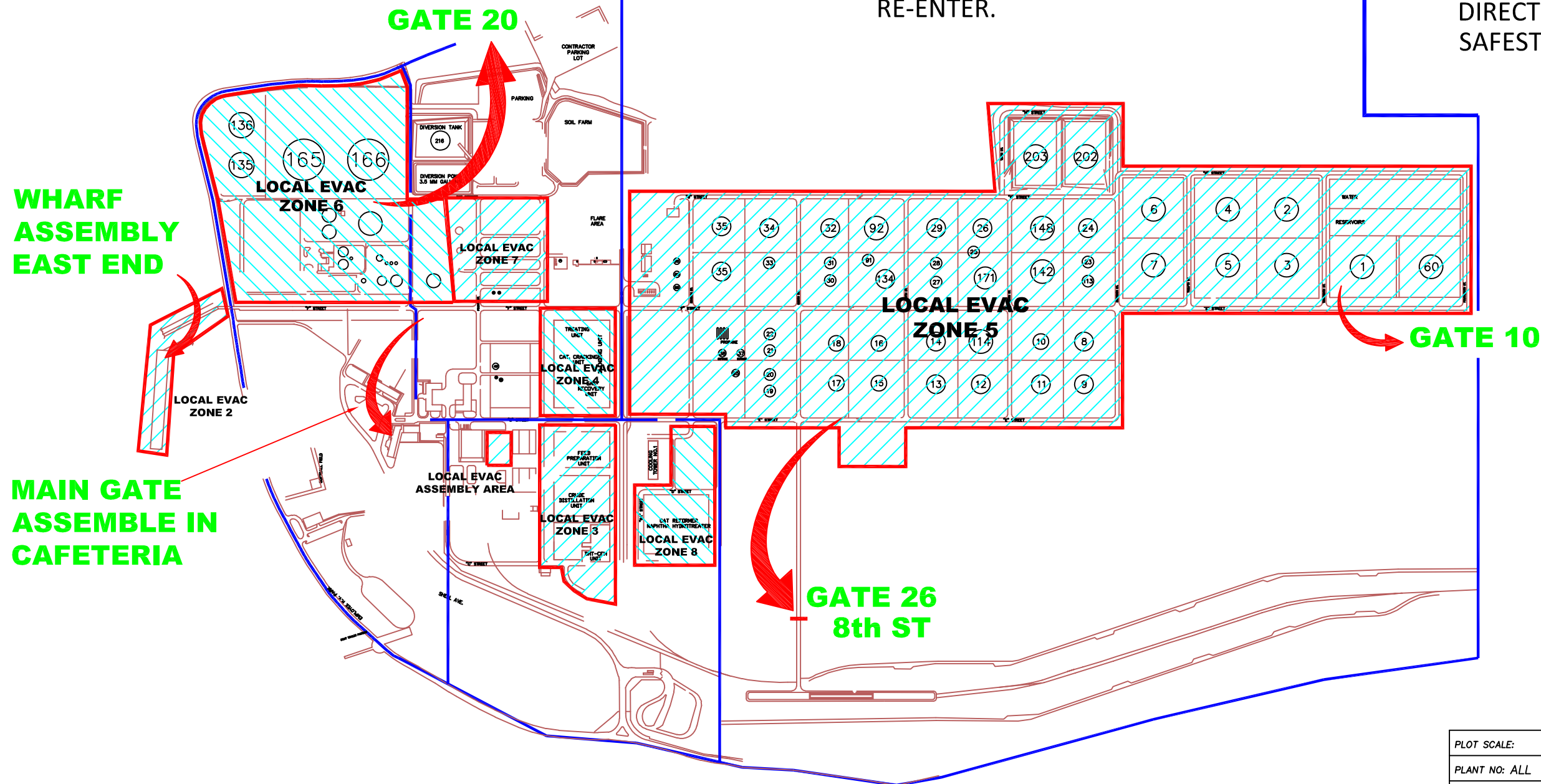
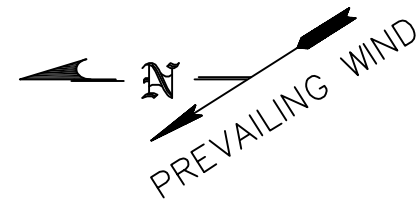


PRIMARY EVACUATION POINTS	SECONDARY EVACUATION POINTS
MAIN GATE-ASSEMBLE IN CAFETERIA	
GATE 20-EAST OF ALKY/BI UNIT	GATE 10-SOUTHWEST OF TANK 60
GATE 26-8th St. EAST OF TCR	WHARF ASSEMBLY POINT

**ALL CLEAR / SAFE RETURN TO WORK**  
 WHEN THE INCIDENT CAUSING THE EVACUATION IS UNDER CONTROL AND IT HAS BEEN DETERMINED THAT IT IS SAFE FOR ALL PERSONNEL TO RE-ENTER THE PLANT, AN ALL CLEAR SIGNAL WILL BE ANNOUNCED OVER THE LOCALIZED EVAC. INTERCOM SYSTEM.  
 UNDER CERTAIN CIRCUMSTANCES, A PARTIAL RETURN TO UNAFFECTED AREAS OF THE PLANT MAY BE ALLOWED. IN THAT SITUATION, JUST RADIOS WILL BE USED TO INFORM THE EVACUATION WARDENS WHAT AREAS ARE SAFE TO RE-ENTER.

**WHEN ALARM IS SOUNDED, YOU SHOULD REACT IN THE FOLLOWING MANNER:**

1. STOP ALL WORK IMMEDIATELY.
2. STOP ALL DRAINING OR VENTING OF FLAMMABLE OR COMBUSTIBLE MATERIAL IF POSSIBLE, SECURE OPEN FLANGES.
3. SHUT OFF ALL FIRE IGNITION SOURCES & EQUIPMENT, INCLUDING TURNING OFF VEHICLES. LEAVE KEYS IN THE IGNITIONS.
4. RETRACT RADIATION SOURCES (PILL) INTO CAMERA..
5. EVACUATE THE AREA ALONG THE MOST DIRECT & SAFE PATH TO THE NEAREST & SAFEST ASSEMBLY LOCATION



EMERGENCY PHONE  
333

NOTIFY OPERATIONS

9	DK	6/16	UPDATED AS PER FIRE & SAFETY	RE
8	DK	10/15	UPDATED AS PER FIRE & SAFETY	RE
7	DK	5/14	ADDED LOCAL EVAC. ZONES	MH
6	CLH	10/13	TEXT CORRECTION	RE
5	bh	2/13	UPDATED TEXT	CKD EATON APP EATON
4	dk	8/12	DELETED GATE 15A & ADDED GATE 26	CKD APP RE
3	BH	7/10	ADDED ASSY. GATE 15A	CKD APP JAW JAW
REV	BY	DATE	DESCRIPTION	APPROVED

**TESORO REFINING AND MARKETING COMPANY**  
 ANACORTES REFINERY ANACORTES, WASH.

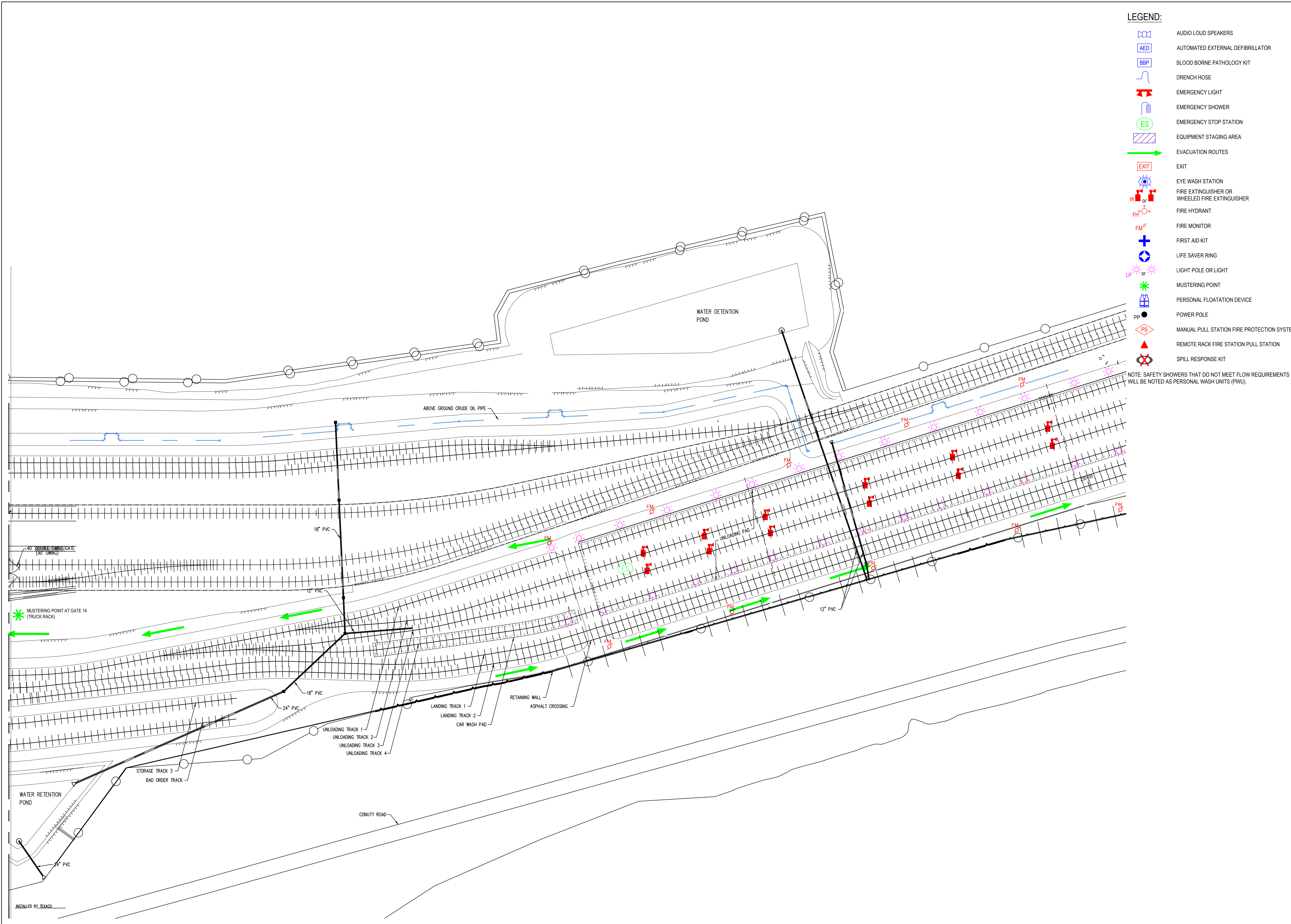
TESORO ANACORTES  
 EVACUATION POINTS AND  
 FIRE ZONE MAP

PLOT SCALE:	DWG SCALE: NONE	APPROVED
PLANT NO: ALL	DATE:	APPROVED
	DRWN: JPK	
JOB NO:	CHKD:	C39A- 309
		REV 9

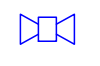






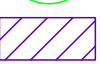



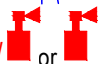
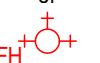
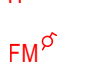


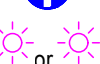


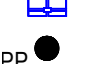





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PLOT LOGIN: MONTGOMERY, AMY



**LEGEND:**

-  AUDIO LOUD SPEAKERS
-  AUTOMATED EXTERNAL DEFIBRILLATOR
-  BLOOD BORNE PATHOLOGY KIT
-  DRENCH HOSE
-  EMERGENCY LIGHT
-  EMERGENCY SHOWER
-  EMERGENCY STOP STATION
-  EQUIPMENT STAGING AREA
-  EVACUATION ROUTES
-  EXIT
-  EYE WASH STATION
-  FIRE EXTINGUISHER OR WHEELED FIRE EXTINGUISHER
-  FIRE HYDRANT
-  FIRE MONITOR
-  FIRST AID KIT
-  LIFE SAVER RING
-  LIGHT POLE OR LIGHT
-  MUSTERING POINT
-  PERSONAL FLOATATION DEVICE
-  POWER POLE
-  MANUAL PULL STATION FIRE PROTECTION SYSTEM
-  REMOTE RACK FIRE STATION PULL STATION
-  SPILL RESPONSE KIT

NOTE: SAFETY SHOWERS THAT DO NOT MEET FLOW REQUIREMENTS WILL BE NOTED AS PERSONAL WASH UNITS (PWU).

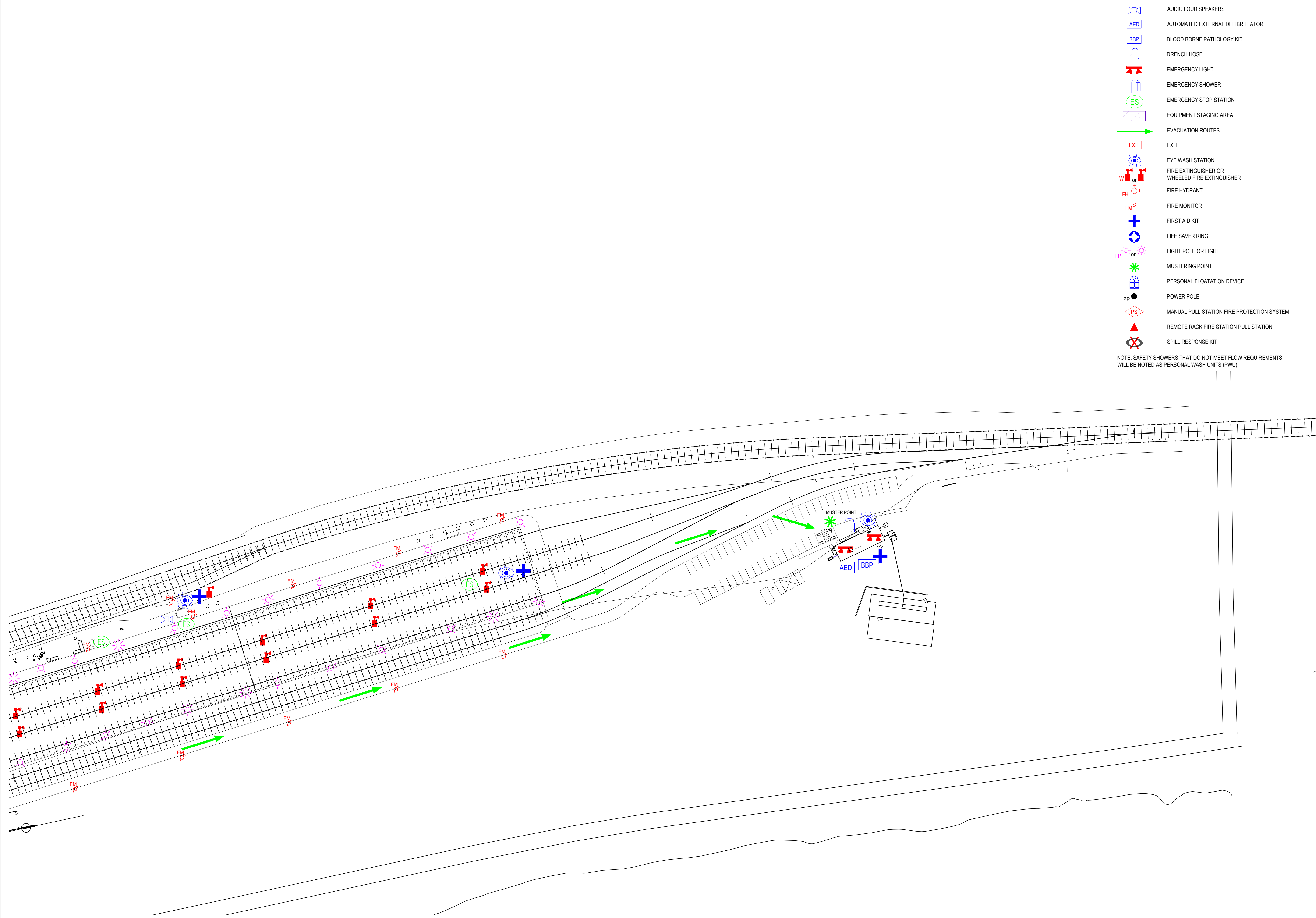
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APPROVER	
DESIGNER	
REVISION DESCRIPTION	
PROJECT ID#	
MOC #	
DATE	6-24-21
REV	0
ANECORTES, WA TERMINAL ANECORTES, WA	
<b>CORE SITE DIAGRAM SHEET 1</b>	
	
SCALE	1/64" = 1'-0"
DATE	2/6/12
DGNR.	JB
APRVR.	
PROJ. ID	
DISC. DRAWING NO.	P D14A100A

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- LEGEND:**
- AUDIO LOUD SPEAKERS
  - AUTOMATED EXTERNAL DEFIBRILLATOR
  - BLOOD BORNE PATHOLOGY KIT
  - DRENCH HOSE
  - EMERGENCY LIGHT
  - EMERGENCY SHOWER
  - EMERGENCY STOP STATION
  - EQUIPMENT STAGING AREA
  - EVACUATION ROUTES
  - EXIT
  - EYE WASH STATION
  - FIRE EXTINGUISHER OR WHEELED FIRE EXTINGUISHER
  - FIRE HYDRANT
  - FIRE MONITOR
  - FIRST AID KIT
  - LIFE SAVER RING
  - LIGHT POLE OR LIGHT
  - MUSTERING POINT
  - PERSONAL FLOATATION DEVICE
  - POWER POLE
  - MANUAL PULL STATION FIRE PROTECTION SYSTEM
  - REMOTE RACK FIRE STATION PULL STATION
  - SPILL RESPONSE KIT
- NOTE: SAFETY SHOWERS THAT DO NOT MEET FLOW REQUIREMENTS WILL BE NOTED AS PERSONAL WASH UNITS (PWU).

REV	DATE	MOC #	PROJECT ID#	REVISION DESCRIPTION	DESIGNER	APPROVER	DRAWING PHASE
0	6-24-21			AS-BUILT TO MARATHON STANDARD	ALM	HMO	

ANECORTES, WA TERMINAL  
 ANECORTES, WA

**CORE SITE DIAGRAM  
 SHEET 2**

SCALE 1/64" = 1'-0"  
 DATE 2/6/12  
 DGNR. JB  
 APRVR.  
 PROJ. ID -  
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 P D14A100B

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## SECTION 3 NOTIFICATIONS

### 3.1 Emergency Reporting and Notification Procedures

***SPILLAGE OF ANY PETROLEUM HYDROCARBON or OTHER HAZARDOUS SUBSTANCE ONTO LAND OR WATER MUST BE IMMEDIATELY REPORTED.  
THERE ARE NO EXCEPTIONS!***

#### 3.1.1 Initial Notification

In the event of an emergency condition, it is imperative that everyone at all levels of operation knows what action they must take to ensure proper completion of the internal and external notification process. Emergencies require quick response; therefore, delays at any level of the notification process must be avoided.

The first Company employee who discovers an oil spill, fire, or other emergency, or to whom an oil release, fire or other emergency has been reported by an outside person, will be responsible for initiating notification procedures and will act as the incident commander (IC) until relieved by a competent IC.

#### 3.1.2 Notification Requirements

Immediate notification of the National Response Center (NRC) is required for releases to water or to air over RQ levels. Immediate reports shall also be made to the local USCG Sector if there is a spill that impacts or threatens navigable waters.

**When making notifications, include safe approach information if there is a concern for VOCs, LEL or other hazardous conditions. This information should also be provided when calling 911 for public responder assistance.**

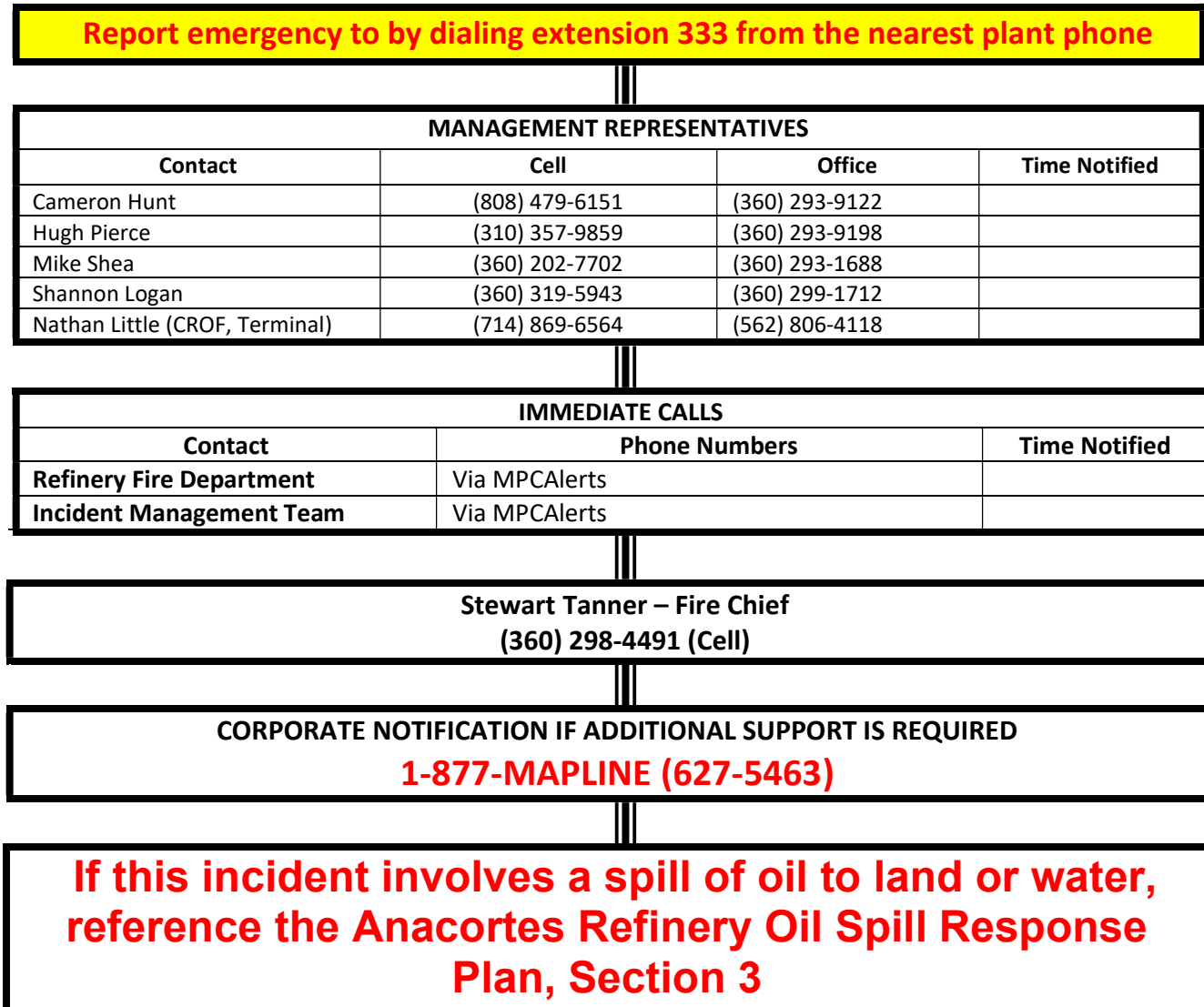
It should be noted that the obligation to report immediately takes precedence over obtaining all the information outlined in the checklist. **Notifications to the appropriate external agencies will not be delayed solely to gather all the required information.**

#### 3.1.3 Data Reporting

The Company employee who discovers an emergency condition or receives initial notification of an emergency or abnormal condition should try to obtain the following information to provide pertinent data to HES to permit the making of an immediate report to the applicable agencies and personnel on the notification list. Other specific Notification Information may be required by other local, state and federal reporting requirements.

1. Location of emergency	6. Cause of emergency.
2. Was anyone hurt?	7. Actions taken.
3. Time of emergency	8. Weather conditions.
4. Type of emergency	9. Equipment needed.
5. Product/volume involved.	10. Environmental concerns.

Figure 3-1 Notification Flowchart



## 3.2 Notification Information

### 3.2.1 Personnel Notifications

Incident Management Team (IMT) members will be notified and/or activated as needed by the Team Lead, Qualified Individual or other appropriate responder. A roster of the IMT is in [Section 4](#).

*Figure 3-2 Notification Summary*

COMPANY MANAGEMENT			
AFFILIATION	OFFICE NUMBER	CELL NUMBER	TIME CONTACTED
Refining General Manager - Cameron Hunt	360-293-9122	808-479-6151	
Fire Chief – Stewart Tanner	360-293-1657	360-298-4491	
Emergency Preparedness – Kelly Codlin	360-293-1490	360-202-0955	

FEDERAL AGENCIES			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
EPA Region X – Seattle	(206) 553-1263 or (206) 553-1264		
NOAA Emergency Response Division	(206) 526-6317		
National Weather Service - Seattle	(206) 526-6087 (206) 424-2000 (#9000) after hrs.		
Federal Bureau of Investigation - Seattle	(206) 622-0460		
U.S. Fish and Wildlife Service - Seattle	(206) 764-3463		
U.S. Department of the Interior Portland, OR	(503) 326-2489		
National Park Service – Seattle	(206) 553-5670 (206) 937-9562*		

STATE AGENCIES			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
Washington Highway Patrol	(360) 757-1175		
Washington State Department of Fish and Wildlife	(360) 902-2200		
Washington Department of Fish and Wildlife Oil Spill Team (24/7 pager)	(360) 534-8233		
Washington State Department of Natural Resources (Regional)	(360) 902-1000		
Washington Department of Parks and Recreation (NW Region)	(360) 755-9231		
Washington State Fire Marshall	(360) 336-0151		

LOCAL AGENCIES			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
Anacortes Fire Department	911 or (360) 293-1925 (Bus.)		
Burlington Fire Department	911 or (360) 755-0261 (Bus.)		
Mt. Vernon Fire Department	911 or (360) 336-6277 (Bus.)		
Summit Park Fire Department	911		
Anacortes City Police	911 or (360) 293-4684 (Bus.)		
Burlington Police Department	911 or (360) 755-0921 (Bus.)		
Mt. Vernon Police Department	911 or (360) 428-3200		
Skagit County Sheriff	(360) 336-9450 or 911		

RESPONSE CONTRACTORS			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
Marine Spill Response Corporation	(800) 645-7745		
Everett Office	(800) 259-6772		
	(425) 252-1300		
Global Diving and Salvage Inc.	(206) 623-0621		
Clean Harbors Environmental	(253) 639-4240		
	(800) 645-8265		
Cimmaron Trucking - Ray Sizemore	(360) 293-0176		
Waste Management - Kristy Beedle	1-800-592-9995		
Pacific Groundwater Group (Ground Spills)	(206) 329-0141		
Janet Knox	Cell (206)-842-3202		

UTILITIES			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
Homer Electric	(800) 478-8551		
Enstar Gas	(907) 262-9334		

MEDICAL			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
Island Hospital, Anacortes, WA	(360) 299-1300		
Skagit Valley Hospital Mt. Vernon, WA	(360) 424-4111		
United General Hospital, Sedro-Woolley	(360) 856-6021		
Aero-Skagit Ambulance Service	(360) 853-8831		
Airlift Northwest	(800) 426-2430		
Central Skagit Medic One	(360) 336-8176		

NEIGHBORING FACILITIES			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
HollyFrontier/Sinclair	(360) 293-0800		
HollyFrontier/Sinclair Wharf	(360) 293-1754		
CAER Hotline	(360) 293-1767		
General Chemical	(360) 293-2171		

MEDIA (BY PIO ONLY)			
AFFILIATION	PHONE NUMBER	PERSON CONTACTED	TIME CONTACTED
<b>NEWSPAPERS</b>			
Seattle Times	(206) 464-2204		
Associated Press	(206) 682-1812		
Anacortes American & Skagit Weekly	(360) 293-3122		
Skagit Valley Herald & Skagit Weekly	(360) 424-3251		
<b>RADIO STATIONS</b>			
KWLE	(360) 293-3141		
KBRC	(360) 424-1430		
KAPS	(360) 424-7676		
KGMI/KAFF/KBAH/KTUG -Bellingham	(360) 676-5464		
<b>TELEVISION STATIONS</b>			
KING TV NBC, Channel 5	(206) 448-3850		
KIRO TV CBS, Channel 7	(206) 728-8307		
KOMO TV ABC, Channel 4	(206) 404-4000		

### 3.3 Mutual Aid

A table is provided at the end of this section for requesting Mutual Aid.

### 3.4 Internal Communications

#### Cell Phones

Key Emergency Response & Management personnel are provided with cell phones; some Job positions have cell phones that stay in the facility. In addition, many cell numbers are noted in the facility email “outlook Properties”.

#### Radio System

Table 3-1 lists radio channels and frequencies. These radio channels would be used for most emergencies

*Table 3-1 Radio Frequencies*

<b>Zone 1</b>	<b>Description</b>
Channel 1) Maintenance	Maintenance Talk group
Channel 2) Wharf	Wharf Talk group
Channel 3) Zone A OPS 1	Crude, CR/NHT Talk group
Channel 4) Zone B OPS 1	CCU, ALKY Main Talk group
Channel 5) Zone C	Zone C Logistics Talk group
Channel 6) BoilerHouse	Boiler House Talk group
Channel 7) Zone B OPS 2	CCU, Alky Back Up Talk group
Channel 8) Zone A OPS 2	Crude, CR/NHT Back Up Talk group
Channel 9) I/E	I/E Shop Talk group, all I/E radios hear this channel no matter which channel they are on.
Channel 10) Machinist	Machinist Talk group
Channel 11) Shop 2	Shop 2 Talk group
Channel 12) Safety	Safety Talk group, all safety radios hear this channel no matter which channel they are on.
Channel 13) Zone A Maint.	Zone A Maintenance Talk group
Channel 14) Zone B Maint.	Zone B Maintenance Talk group
Channel 15) Zone C Maint.	Zone C Maintenance Talk group
Channel 16) Security	Security Talk group
Channel 17) Crane 1	Crane 1 Simplex
Channel 18) Crane 2	Crane 2 Simplex
Channel 19) Construction 1	Construction 1 Talk group
Channel 20) Construction 2	Construction 2 Talk group
Channel 21) Construction 3	Construction 3 Talk group
Channel 22) I/E Cutover 1	I/E Cutover 1 Talk group
Channel 23) I/E Cutover 2	I/E Cutover 2 Talk group
Channel 24) Zone E Maint.	Zone E Maintenance Talk group
Channel 25) Scaffold	Scaffolding Talk group
Channel 26) Insulation	Insulation Talk group
Channel 27) Zone A Training	Zone A Operations Talk group
Channel 28) Zone B Training	Zone B Operations Talk group
Channel 29) Zone C Training	Zone C Operations Talk group
Channel 30) Spare 1	Active Spare 1 Talk group
Channel 31) Spare 2	Active Spare 2 Talk group
Channel 32) Spare 3	Active Spare 3 Talk group
Channel 33) Shutdown 1	Shutdown Talk groups (To be assigned at Shutdown)
Channel 34) Shutdown 2	Shutdown Talk groups
Channel 35) Shutdown 3	Shutdown Talk groups

Zone 1	Description
Channel 36) Shutdown 4	Shutdown Talk groups
Channel 37) Shutdown 5	Shutdown Talk groups
Channel 38) Shutdown 6	Shutdown Talk groups
Channel 39) Shutdown 7	Shutdown Talk groups
Channel 40) Shutdown 8	Shutdown Talk groups
Channel 41) Shutdown 9	Shutdown Talk groups
Channel 42) Shutdown 10	Shutdown Talk groups
Channel 43) Shutdown 11	Shutdown Talk groups
Channel 44) Shutdown 12	Shutdown Talk groups
Channel 45) Shutdown 13	Shutdown Talk groups
Channel 46) Shutdown 14	Shutdown Talk groups
Channel 47) Shutdown 15	Shutdown Talk groups
Channel 48) Shutdown 16	Shutdown Talk groups
Channel 49) Shutdown 17	Shutdown Talk groups
Channel 50) Shutdown 18	Shutdown Talk groups
Channel 51) Shutdown 19	Shutdown Talk groups
Channel 52) Shutdown 20	Shutdown Talk groups
Channel 53) Shutdown 21	Shutdown Talk groups
Channel 54) Shutdown 22	Shutdown Talk groups
Channel 55) Shutdown 23	Shutdown Talk groups
Channel 56) Shutdown 24	Shutdown Talk groups
Channel 57) Shutdown 25	Shutdown Talk groups
Channel 58) Shutdown 26	Shutdown Talk groups
Channel 59) Shutdown 27	Shutdown Talk groups
Channel 60) Shutdown 28	Shutdown Talk groups
Channel 61) Shutdown 29	Shutdown Talk groups
Channel 62) Shutdown 30	Shutdown Talk groups
Channel 63) Shutdown 31	Shutdown Talk groups
Channel 64) Shutdown 32	Shutdown Talk groups
Channel 65) MSRC (Clean Sound) Simplex	Clean Sound radio to radio
Channel 66) MSRC (Clean Sound)	Clean sound repeated
Channel 67) Oil Spill	Oil Spill Talk group
Channel 68) Zone C & Boilerhouse	Zone C Supervisors only
Channel 69) Security 2	Security officers only
Channel 70) CROF 1	CROF and Zone C
Channel 71) CROF 2	CROF only
Channel 72) CROF Simplex	CROF only radio to radio
Channel 96) CAER	Safety, EOC, Zone C Supervisors only
Channel 97) Safety	Safety, EOC, Zone C Supervisors only
Channel 98) Safety	Safety, EOC, Zone C Supervisors only
Channel 99) Safety	Safety, EOC, Zone C Supervisors only
Emergency button	All radios heard by Safety and Maingate
Maintenance All Call	Maintenance Supervisors can make a all call to Maintenance.
ALL CALL	Safety, EOC, Zone C Supervisors can only make an ALL Call
Zone 2 Emergency	In case Trunking system fails
Channel 1 Maintenance Emer	
Channel 2 Security Emer	
Channel 3 Zone A Emer	
Channel 4 Zone B Emer	
Channel 5 Zone C Emer	
Channel 6 Boiler House Emer	



**Zone 2 Emergency**                      **In case Trunking system fails**

Channel 7 Alky Emer

Channel 8 CR/NHT Emer

Channel 9 Safety 1 Emer Safety Radios only

Channel 10 Safety 2 Emer Safety Radios only

### 3.5 Community Notifications

In the event of a Refinery emergency that requires community notification, the Refinery shall:

- Activate the CAER Notification Protocol ([Section 2.2.2](#))
- Inform Skagit County DEM of the potential need for Reverse 9-1-1.

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# To Request Mutual Aid Contact

Updated: 3/1/2023

CONTACT	TITLE	PLANT	PHONE (CELL)	EMAIL
<b>PHILLIPS 66</b>				
<b>EMERGENCY</b>	Switch Board	360-384-1011		
Perkins, Carl	Refinery Manager	360-384-8343	504-444-3674	
Rinesmith, Bill	Emergency Response Team Lead	360-384-8267	360-815-0701	
England, Michelle	Health & Safety Team Lead	360-384-8416	615-430-7068	
Gopal, Vivek	HSE Manager	360-384-8562	832-922-5926	
<b>BP CHERRY POINT</b>				
<b>EMERGENCY</b>	Security	360-371-1301		
24 Hour	Shift Supervisor	360-371-1271		
Zimpfer, Eric	VP of Refining Cherry Point/Refinery Manager	360-968-8256	409-370-5734	
Knapp, Dan	Operations Manager	832-619-5750	630-835-2362	
Lancaster, Courtney	HSE&C Manager		360-296-0892	
Williams, Patsy	Crisis & Continuity Manager	360-526-3166	360-220-6070	
<b>MARATHON ANACORTES REFINERY</b>				
<b>EMERGENCY</b>	Security	360-293-9119		
Hunt, Cameron	General Manager	360-293-9122	808-479-6151	
Johnson, Andrew	Safety Superintendent	360-293-1647	330-413-2049	
Tanner, Stewart	Emergency Response Coordinator	360-293-1657	360-298-4491	

# To Request Mutual Aid Contact

Updated: 3/1/2023

CONTACT	TITLE	PLANT	PHONE (CELL)	EMAIL
<b>HOLLY FRONTIER PUGET SOUND REFINERY</b>				
<b>EMERGENCY</b>	Security	360-293-1701		
Lang, Steve	Refinery Manager	360-299-0107	970-218-5094	Stephen.Lang@HFSinclair.com
McCreery, Scott	H.S.S.E/ Security Manager	360-299-9065	360-206-8953	Scott.McCreery@HFSinclair.com
Bowles, Jeff	Health & Safety/ Emergency Response Manager		360-298-5007	Jeffrey.Bowles@HFSinclair.com
Martin, Joe	Emergency Response Coordinator	360-293-0815	360-421-1041	Joseph.Martin@HFSinclair.com
<b>PAR PACIFIC US OIL</b>				
<b>EMERGENCY</b>	Shift Supervisor	253-383-1651 ext. 237	253-377-0910	
Troske, Andrew	Refinery Manager/VP of Manufacturing	253-383-1651 ext. 3258	808-479-0539	
Mori, Randy	Operations Manager	253-383-1651 ext. 4259	253-377-0909	
Melvin, Brian	Engineering Manager	253-383-1651 ext. 3220	253-229-9750	
Debchoudhury, Ron	Safety & Security Manager	253-393-5516	253-241-2708	
Thomas, Matt	OHS & Emergency Response Lead	253-680-3204	808-354-1687	

## SECTION 4 RESPONSE TEAM ORGANIZATION

### 4.1 National Incident Management System (NIMS)

The key to an effective emergency response is a rapid, coordinated, tiered response by the affected locality, and the Incident Management Team (IMT), consistent with the magnitude of an incident. The IMT responding to an incident for this facility will be made of company personnel from local, regional and national IMT members that are trained and experienced as stated in *Appendix A*.

First response to an incident at the Facility will be provided by the Emergency Response Team (ERT). The Incident Management Team (IMT) will respond, to the degree necessary, to incidents exceeding local capability. If a response exceeds the Emergency Response Team's capabilities, the Incident Commander will activate the Incident Management Team (IMT).

The Emergency Response Team (ERT) or Incident Management Team (IMT) has been created and organized to plan for and manage emergencies, including oil spills. The IMT is composed of Company personnel assigned to the company assets. The IMT will develop strategies and priorities for the emergency response, then will supervise contractors, handle safety and security matters, and will provide logistical support for contractor personnel. The IMT will handle all communications with the media and the public.

The organizational structure of the IMT is based on the Incident Command System (ICS). The structure of the IMT is modular. The First Responders respond to all emergencies (i.e., fire, injury, releases, and hazardous waste) and oil spills. If only a small quantity of oil is spilled, the initial responders will complete the cleanup. The IMT will train by participating in drills.

These response teams will use the NIMS Incident Command System (ICS) to manage the 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.

### 4.2 IMT Activation Procedures

Activation of the IMT may be accomplished in stages. Initially, the First Responder reports the incident to a supervisor, who may take command as the Initial Incident Commander. During an incident, the IC may be able to respond without assistance from the IMT. If the situation requires more resources, he or she may request additional manpower or management support from the IMT. The IC would then call the other IMT members.

### 4.3 Team Member Response Times

The Incident Commander and other IMT personnel will likely mobilize to the EOC initially. The IMT's maximum expected arrival time during off-hours is less than one hour.

### 4.4 Unified Command System

A Unified Command (UC) will be utilized as a method of integrating federal, state and local agencies within IMT. The purpose of this system is to organize the variety of agencies that may be involved in a response into a consistent team that performs their duties in a concerted, unified effort.

For oil spills hitting water, the UC structure consists of three key On-Scene Coordinators: Federal On-Scene Coordinator (FOSC), State On-Scene Coordinator (SOSC), and the Responsible Party Incident Commander. These three entities will share decision-making authority as Incident Commander in the Command Center and will consult with each other regarding spill response management issues.

For a refinery emergency that is not an oil spill, the UC structure **may** consist of the refinery Incident Commander, Anacortes Emergency Manager and Anacortes Fire Chief, or other combination representing impacted stakeholders responding to the refinery emergency. Depending upon the size and complexity of the incident, additional federal and state agency personnel will be integrated into the other functions of the IMT.

#### 4.4.1 Roles and Responsibilities

The Corporate Emergency Preparedness Group has also provided an Incident Management Handbook (IMH), which provides guidelines and resources for managing an incident. The Incident Management Team positions and responsibilities at the Company are designed to correspond to those in the IMH. This provides the ability for Incident Management Team position holders to report to other Company assets and assist in their incident management in the same position, with minimal learning curve.

#### 4.4.2 Training Certification and Documentation

The Company maintains documentation for its Incident Management Team (IMT) members to demonstrate that they have received the required training are appropriately trained per OSHA HAZWOPER regulations or equivalent and are competent in emergency response procedures. Training records for local team members will be maintained at the Facility according to Federal, state, and local government requirements.

### 4.5 Incident Command Team Duties and Responsibilities

The Company positions and roles described below are intended to be representative of the positions and roles described in the Incident Management Handbook (IMH). For the purpose of training and/or role clarification we will refer to the ACP roles that apply to our ICS positions. Abbreviated role descriptions in the FRP are intended to help reduce the bulk of the plan. The Company may, from time to time, elect to fill certain ICS support positions with approved response contractor or contract personnel; **at no time will these individuals be cast in the role of IC or Section Chief**. The Company will follow a Planning Cycle consistent with the ACP. Refer to the Incident Management Handbook and position Job Aids for more information on organization and duties for each specific position.

Checklists for filling the ICS roles are found in the IMH. In addition, site specific checklists are provided at the end of this section.

#### **INCIDENT RESPONSE MANAGER**

**Incident Commander (IC):** Responsible for managing the crisis including the development and implementation of strategic decisions. The Incident Commander (IC) may designate a Deputy to delegate the duties and responsibilities found on the checklist of positions identified in the IMH.

**Deputy Incident Commander (DIC):** Assists the IC by carrying out assignments and duties as given by the IC. In the event the IC could no longer perform required duties the DIC would assume those duties. The DIC is trained to perform the role of the IC.

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### COMMAND STAFF

**Legal Officer:** Provides advice on all aspects of an oil spill incident. Ensures that information which may be relevant to the defense and/or settlement of future claims is gathered and preserved. Assists members of the IMT upon request in making legal judgments and decisions related to safe and expedient resolution of the response.

**Liaison Officer:** Responsible for communicating with local, state, and federal government agencies not involved in the unified command structure. Also advises interested groups, corporations, and organizations of the actions that the Incident Management Team (IMT) and/or Unified Command are taking to address concerns. This position may be filled by an agent of the WDOE rather than the Company unless otherwise directed by the Unified Command.

**Public Information Officer (PIO):** Responsible for the formulation and release of information about the incident to the news media. The Information Officer is expected to work in concert with other members of the Joint Information Center (JIC) when the magnitude of an event warrants formation of a JIC. Provides Company based information to be used in dissemination of facts and information regarding incident. This position may be filled by an agent of WDOE rather than the Company unless otherwise directed by the Unified Command.

**Safety Officer:** Responsible for monitoring and assessing hazardous and unsafe situations and developing measures for ensuring personnel safety. Follows prescribed guidelines detailed in the IMH and NWACP in an effort to anticipate potentially hazardous working conditions and prevent exposures to the public and response personnel.

**Intelligence Officer:** Responsible for addressing intelligence issues that arise during an incident

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### OPERATIONS SECTION

**Operations Section Chief:** Responsible for the management of all operations directly applicable to control, containment, recovery, clean up, and rehabilitation. Activates and supervises organizational elements in accordance with the response objectives set forth in the IAP. The Operations Section Chief follows the guidance of the NWACP by drafting primary and alternative response strategies, work assignments, and identifiable resources necessary to sustain a long-term response activity.

**Operations Specialist:** Assists and provides information for field operations

**Branch/Division Supervisors:** Responsible for the implementation of an assigned portion of the Incident Action Plan, assignment of resources within the progress of control operations and the status of resources.

**Air Ops Branch:** Primarily responsible for preparing the air operations portions of the Incident Action Plan. The plan reflects Company or Agency restrictions that have an impact on the operations capability of utilization of resources.

**Wildlife Branch Director:** Responsible for developing strategies and tactics to provide the best achievable care for impacted wildlife and to minimize wildlife losses. It is the policy of the NWACP that representatives of USFWS, or Washington Fish and Wildlife if USFWS is unavailable, will assume the role of director and deputy director.

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### PLANNING SECTION

**Planning Section Chief:** Responsible for the collection, evaluation, dissemination, and use of information about the development of the spill and status of resources. The information as needed to understand the current situation, predict the probable course of incident events and prepare alternate strategies and control operations for the incident. The Planning Chief will follow the Planning Cycle as outlined in the NWACP Section 2100.

**Resources Unit:** Responsible for establishing all check-in activities; preparation and maintenance of displays, charges, and lists that reflect current status; the preparation and processing of resources status change information and the location of incident resources.

**Situation Unit:** Collects and organizes spill status and situation information. Responsible for the evaluation, analysis, and display of that information.

**Documentation Unit:** Maintains accurate and complete historical files and provides duplicating services and stores incident files for legal, analytical, and historic purposes.

**Environmental Unit:** The Environmental Unit Leader position will initially be filled by an IC/RP designee until such time that Ecology or other trustee agency of the State of Washington arrives. At this point Unit Leader responsibilities may be passed to the State until it is deemed appropriate to return this function to the RP/IC designee, or until such time the RP/IC or U.C. directs the change to be made. The E. U. determines extent of environmental damage and evaluates the effects of clean-up methods on the environment; obtains necessary permits, coordinates with government agencies to arrange for disposal of recovered oil and waste and implements wildlife protection and treatment plans.

**Demobilization Unit:** Assists sections/units in ensuring that orderly, safe, and cost-effective demobilization of personnel and equipment is accomplished.

**Technical Specialist:** Technical specialists are advisors with special skills needed to support incident options. They may report to the Planning Section Chief; function within an existing unit such as the situation unit, form a separate unit if required, or be reassigned to other parts of the organization. Technical Specialists are filled by contract services personnel.

### **LOGISTICS SECTION**

**Logistics Section Chief:** Responsible for providing facilities, services, and materials in support of all phases of the incident response.

**Supply Unit:** Orders personnel, equipment, and supplies; receives and stores supplies; maintains inventories and distributes supplies as requested.

**Facilities Unit:** Provides for office work areas, living quarters and storage buildings; provides sanitation facilities, manages remote camps and general maintenance to facilities.

**Transportation Support Unit:** Provides for transportation of personnel, supplies, food, and equipment; performs fueling, service and repair work to vehicles and other ground support equipment; implements traffic plan for the incident.

**Medical Unit:** Develops a Medical Plan and renders medical aid for injured and ill personnel assigned to the spill.

**Food Unit:** Determines feeding requirements at all spill locations and facilities; provides drinking water and oversight.

**Communications Unit:** Develop plans for the effective use of spill communications equipment and facilities; installs and tests equipment and operates an Incident Communications Center.

**Security Unit:** Responsible for providing safeguards needed to protect personnel and property from loss and damage. Specific "Post Orders" are developed to custom fit the security needs of the crisis. Generally, keeps watch over areas defined by the Unified Command as limited or no access areas. The Security Officer may work directly with LOSC or other local authority upon request



## FINANCE SECTION

**Finance Section Chief:** Responsible for all financial and cost analysis aspects of the spill.

**Time/Cost Units:** Provides time/cost reporting of labor, materials and supplies used during spill containment and repair.

**Compensation/Claims Unit:** Manages claims activities and works with insurance company to ensure claims are accurately documented and evaluated. Initiates investigation and documentation on all claims other than personal injury and arranges for damage surveyors and adjusters.

**Procurement Unit:** Administers and establishes, as necessary, vendor contracts for operations support-related supplies, services, and technical consultants.

*Figure 4-1 Anacortes IMT - Leads*

NAME	POSITION	Response Time (hrs)
Cameron Hunt (Qualified Individual)	Incident Commander	1
Mike Shea (Alternate Qualified Individual)	Incident Commander	1
Mike Westbury	Incident Commander	1
Joe Gannon	P.I.O.	24
Jamal Kheiry	P.I.O.	24
Hamish Banks	P.I.O.	1
Matt Gill	Liaison Officer	1
Steve Konig	Liaison Officer	12
Casey Sullivan	Liaison Officer	12
Andrew Johnson	Safety Officer	1
Jedd Larson	Safety Officer	1
Kelly Codlin (Alternate Qualified Individual)	Safety Officer	1
Vanessa Vail	Legal	12
Ben Franz	Legal	12
Hugh Pierce (Alternate Qualified Individual)	Operations Section Chief	1
Craig Hyder	Operations Section Chief	12
Jason Mehlum	Operations Section Chief	1
Joe Stivala	Planning Section Chief	1
Craig Hyder	Planning Section Chief	12
Mike Shea	Planning Section Chief	1
Tara Havard	Logistics Section Chief	1
Keith Lively	Logistics Section Chief	1
Will Shaw	Logistics Section Chief	1
Rob Morris	Finance Section Chief	1
Jared Horstman	Finance Section Chief	1
Yvonne Craig	Finance Section Chief	12
Michelle Lee	Wildlife Branch Director	12
Jon Krause	Air Operations Branch Director	1
Kris Smith	Situation Unit Leader	1
Kyle Cassidy	Resources Unit Leader	1
Viv Cullup	Documentation Unit Leader	1
Shannon Logan (Alternate Qualified Individual)	Environmental Unit Leader	1

## 4.6 Emergency Response Team

### 4.6.1 General Information

The refinery is staffed by operators that are trained in initial recognition and notification for any emergency situations. If an emergency were to occur, a notification will be made to activate the Emergency Response Team for response.

The training for response personnel is covered in [Appendix A](#). Training records for the responders is maintained by the training department. Description of responsibilities under the ICS system are found in this section. The company has a regional Incident Management Team that would draw personnel from the refinery. In addition, the company has a Corporate Emergency Response Team that would draw personnel from other states that would cascade in to support the response. Names and information on the personnel is available upon request. Personnel would be notified of the need to respond through an Emergency Notification System (ENS).

Note: The team roster is current as of the update of this plan and is subject to change due to turnover of personnel. An updated roster is available from the emergency coordinator. The ERT is made up of operations and on call staff for immediate response, as well as a contingent of daytime employees. The response time for the crew to respond is approximately 10 minutes from notification to response. Each ERT member is notified for response by MPCAlerts activated by Security Control, so no phone numbers are provided.

#### 4.6.2 Emergency Releasable Operations Positions

Emergency Releasable Operations Positions serves as the initial Emergency Response Team for emergency situations that occur at the Marathon Anacortes Refinery. The Emergency Releasable Operations Positions are comprised of the Zone C Supervisor and 8 predetermined releasable operations positions from various areas of the Marathon Anacortes Refinery.

The dedicated Emergency Releasable Operations Positions are the following:

- Zone A: CFH/DHT Operator, ROSE/CGS Operator
- Zone B: CCU Boiler Operator, Treater Operator
- Zone C: Asphalt Operator, Effluent Operator, Loader/Gauger Operator, Tank Farm Operator, Shift Supervisor (Off-hours IC)

If the emergency incident originates in one of the process units (Zone A or Zone B) the available/releasable process unit Emergency Releasable Operations Positions personnel will respond. The Emergency Releasable Operations Positions personnel from the process unit that is affected will remain in their zone to attend to operational issues.

In the event that an Operator working one of the predetermined Emergency Releasable Operations Positions is unable to be released due to operational needs within the zone, the Zone Supervisor shall designate an alternate releasable Operator to respond, if available.

Off Hours emergency response communications will be initially on radio channel 1. After establishing IC and transitioning with the Safety department emergency communication will move to the dedicated emergency response channels.

Responding EROP personnel should respond on radio channel 1 unless instructed by the IC.

#### 4.6.3 Advanced Exterior Fire Brigade

The Advanced Exterior Fire Brigade is a division within the Emergency Response Team (ERT). The Advanced Exterior Fire Brigade works under the direction of the Incident Commander during all emergency response operations. The Advanced Exterior Fire Brigade responds to emergency situations within the Marathon Anacortes Refinery for the purpose of protecting life, the environment, and property. The Advanced Exterior Fire Brigade will work within the Hot, Warm and Cold Zones wearing

appropriate PPE mainly to perform offensive firefighting utilizing manual fire suppression tactics concentrated on reducing the size of a fire or release to accomplish containment and extinguishment.

Advanced Exterior Fire Brigade Members are expected to use the training they have been provided to respond safely, and to select and utilize the appropriate PPE for the incident. The Advanced Exterior Fire Brigade Members, while acting as part of an organized response, may take offensive actions within the hot and warm zones (as required to mitigate an incident). Advanced Exterior Fire Brigade Members should not take offensive actions near the incident scene unless responding as part of an organized effort under the direction of the Incident Command Team. Advanced Exterior Fire Brigade Members may take defensive actions from a safe distance if circumstances place them at the scene of an incipient stage incident or place them at the scene prior to the Incident Command structure being established.

#### **4.6.4 Rescue Squad**

The Rescue Squad is a division within the Emergency Response Team (ERT). The Rescue Squad works under the direction of the IC during all emergency response operations.

The Rescue Squad's main function is to provide personnel aid and rescue assistance utilizing specialized equipment and techniques in both high angle and confined space rope rescue scenarios. Technical rescue operations are inherently dangerous, and rescuers are often required to perform rigorous activities in adverse conditions. Therefore, the expectation of the Rescue Squad is to execute rescues in a safe and effective manner utilizing technical skills and specialized equipment. This skills and equipment for performing high angle or confined space rescues are specific to rope rescue operations.

#### **4.6.5 Hazardous Materials Team (HazMat)**

The HazMat Team is a division within the Emergency Response Team (ERT) that is comprised of selected members from the ERT. The HazMat Team works under the direction of the IC during all emergency response operations.

The function of the HazMat Team is to provide technician level hazardous materials response. The HazMat Team will be knowledgeable in performing air monitoring and/or isolation of equipment in hot/warm zones that require PPE exceeding that which operations level personnel can utilize.

#### **4.6.6 Emergency Medical Team (EMT)**

The Medical Team is a division within the Emergency Response Team (ERT) that is comprised of selected members from the ERT. The Medical Team works under the direction of the IC during all emergency response operations.

The purpose of the Medical Team is to provide medical first aid treatment to injured employees and/or prepare injured persons for medical transport. Medical Team members have the knowledge and skills to manage many medical and trauma-related emergencies. Medical Team members are expected to perform on-scene first aid medical treatment, within their training certification levels. Medical Team members are expected to maintain their certification through the Washington State on-line training curriculum and skills-based evaluations.

#### **4.6.7 Oil Spill Response Team**

The Oil Spill Response Team works under the direction of an IC who oversees the management of the entire response for the company, serving as the liaison with corporate management and working with local, state and federal on-scene coordinators within a unified command structure. Refer to the Marathon Anacortes Oil Spill Response Plan for more information on the Marathon Anacortes Refinery Oil Spill Response Organization.

#### 4.6.8 Auxiliary Support Team

The Auxiliary Support Team is a division within the Emergency Response Team (ERT). The Auxiliary Support Team works under the direction of the Incident Commander during all emergency response operations.

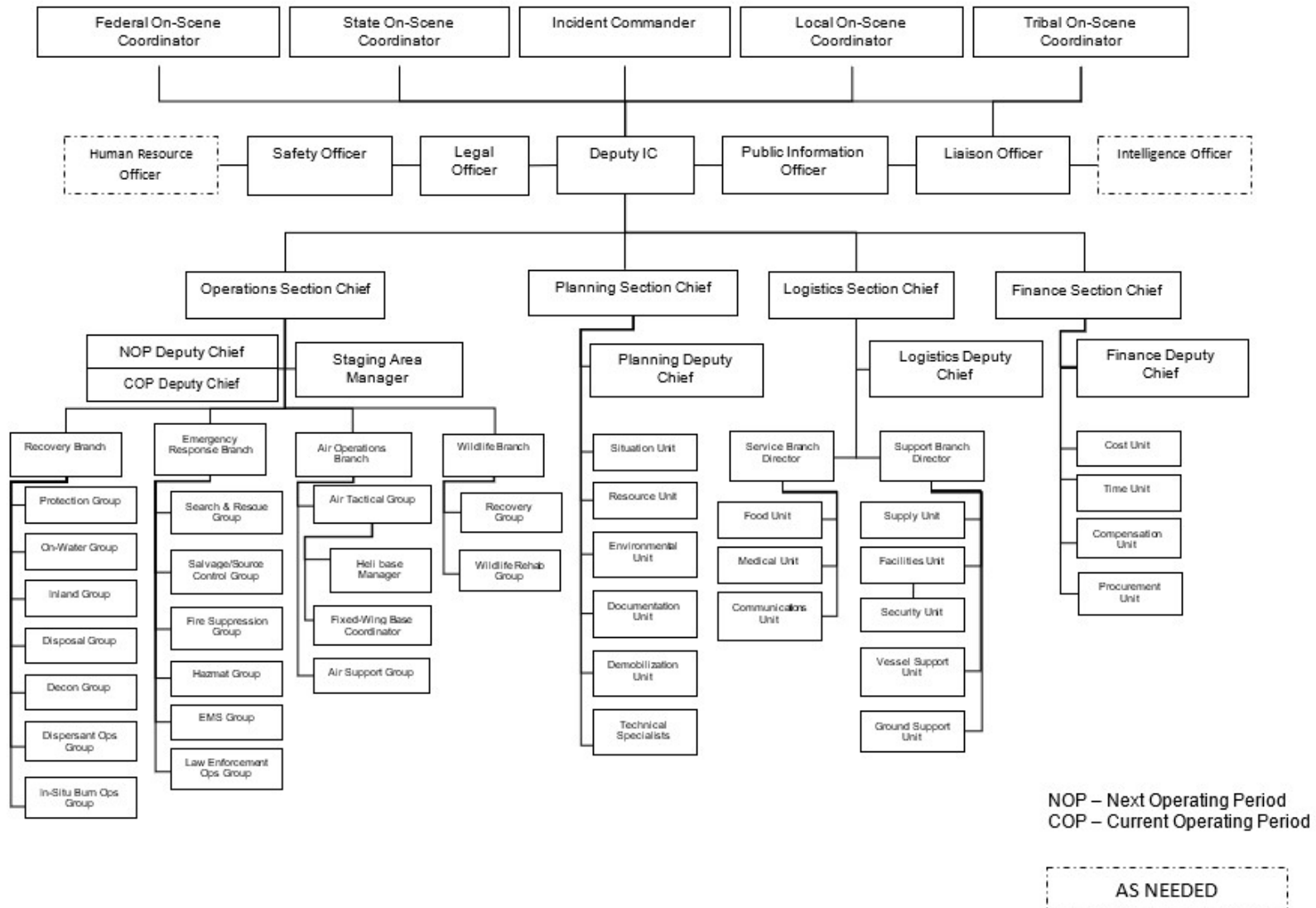
The purpose of the Auxiliary Support Team is to provide additional resources for emergency response actions from outside the hot or warm zones in supporting roles. The Auxiliary Support Team Members can participate in duties, such as the following: staging, dispatch, documentation, rehab, supporting decontamination, transportation, scribe, or liaison. These Auxiliary Support Team Members will not be provided with specialized PPE for emergency response actions, as their duties would not place them in the warm/hot zones. The Auxiliary Support Team will respond to emergency call outs to aid in a supporting role. Auxiliary Support Team Members must be familiar with the Incident Command Structure and knowledgeable on the various roles and responsibilities they could fill.

*Figure 4-2 Anacortes Emergency Response Team Roster*

Name	Depart.	FIRE	Rescue	Medical
Alejandro , Kenji	Zone-A			
Barber, AJ	Zone-C	Fire	Rescue	Medical
Birch, Paul	Zone-C	Fire	Rescue	Medical
Bitterman , Chris	Zone-B			
Brown, Tim	Zone-B	Fire	Rescue	
Cartwright, Jess	Maint.	Fire	Rescue	Medical
Cassidy, Kyle	Tech	Fire	Rescue	
Chilcote, Steven	Zone-A	Fire	Rescue	
Colvin, John	Zone-A	Fire	Rescue	
DeVall, Adam	Maint.	Fire		
Eastwood , Aaron	Zone-B			
Eastwood, Derick	Zone-C	Fire		
Edgecombe, Jeff	Lab	Fire	Rescue	
Emmons, Brady	Maint.	Fire	Rescue	
Goodin, Nate	Zone-A	Fire	Rescue	
Graham, Frannie	Engr			
Graves, Matt	Maint.	Fire	Rescue	
Henkin , Dustin	Zone-B			
Holewinski, Ryan	Zone-A	Fire		
Hong, Garrett	Maint.	Fire		
Ingram, Eric	Zone-A	Fire	Rescue	Medical
Job, Chase	Zone-C	Fire	Rescue	
Johnson, Dennis	Zone-C	Fire		
Johnson, Dylan	Maint.	Fire	Rescue	
Kies, Trent	Safety	Fire		
Larson, Jedd	Safety	Fire	Rescue	
Levine, David	Safety	Fire	Rescue	
Macy, Dylan	Zone-A	Fire	Rescue	
Markee, Leroy	Maint.	Fire	Rescue	
Mehlum, Jason	Zone-C	Fire	Rescue	
Miller, Robbie	Maint.	Fire		
Morris, TJ	Maint.	Fire	Rescue	Medical
Myers, Stephen	Zone-C	Fire		
Nelson, Scott	Maint.	Fire	Rescue	Medical
Payne, Kyle	Lab	Fire		
Pefferman, Frank	Zone-A		Rescue	
Petrie, Marc	Zone-A	Fire	Rescue	Medical
Schoen , Eric	Engr			Medical
Seebeck, Kenneth	Zone-C	Fire		
Stickel, Nate	Zone-B	Fire	Rescue	

Name	Depart.	FIRE	Rescue	Medical
Stocking , Cordell	Zone-C			
Stringfellow , Jake	Engr	Fire		
Swenson, Chris	Safety	Fire	Rescue	Medical
Tanner, Stewart	Safety	Fire	Rescue	Medical
Thomas, Ryan	Maint.	Fire	Rescue	
Vaiiau, Josshua	Zone-B			
Vaquero, Jose	Maint.	Fire	Rescue	
Wood, Jeff	Safety	Fire	Rescue	
Zeller, Mike	Maint.	Fire	Rescue	Medical

Figure 4-3 Incident Response Team Organization



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## **Emergency Operations Center (EOC)**

The EOC is responsible for the entire facility and all its activities, including providing strategic direction to the On-Scene Incident Commander. The EOC is the primary focus of all activities external to the incident.

- Open the EOC and establish communication with the Incident Commander:
  - Radio Emergency Channel #99
  - Telephone
- Obtain briefing from the On-Scene Incident Commander, to include:
  - Are all personnel accounted for?
  - Extent of injuries
  - Type and level of incident?
  - Extent of damage to facility?
  - Status of non-involved areas/units?
  - Have 911 notifications been made?
  - Is the current level of response adequate? If not, what resources are needed?
  - Did MPC Alerts call out system work properly?
  - Have all Senior Management Team (SMT) Members been notified?
- As Team Members start to arrive, assign roles within the ICS as needed.
  - Information Officer
  - Agency Liaison
  - Scribe/documentation
  - Logistics Chief
  - Finance Chief
  - Planning Chief
- Have proper notifications been made? (assign support staff to make notifications) (See ERM Attachment 3 for Outside Contacts)
- WA State Department of Ecology
- Washington Department of Emergency Management
- NW Clean Air Agency EPA Region X
- National Response Center (NRC)
- L&I, OSHA, and coroner (360) 336-9431?
- Refining and corporate notifications (email: Incident Reporting – Refining)
- Courtesy calls to Anacortes Mayor, County Commissioner, and March Point Residents
- Ensure that the incident map and documentation are updated regularly.
- Prepare (Information Officer) a fact sheet/holding statement and media release as soon as practical.
- Activate the Corporate Incident Management Plan as necessary.
- Initiate the incident investigation as soon as practical.



## **ICS Checklist: Public Information Officer**

### **Role Assignment: Human Resource Manager or Designee**

#### **Emergency Response Role Description & Checklist:**

The Information Officer is responsible for the formulation and release of information about the incident to the news media and other appropriate agencies and organizations.

- Report to the EOC and obtain briefing.
- Open and staff the Communications Center.
  - Determine staffing needs
  - Serve as "host" to any on-site media and ensure media remain in approved area(s)
  - Respond to all outside inquiries
- Prepare initial information summary as soon as possible after arrival.
- Obtain approval for information release from the EOC Manager.
- Attend meetings to update information released.
- Make notification to Union Officials, as necessary.
- Identify and recommend appropriate staff to represent Marathon Anacortes Refinery, such as at family homes/hospitals.
- Has contract Public Affairs been notified? Are they needed?
- Maintain a written log of all information activities.

## **ICS Checklist: Logistics Section Chief**

### **Role Assignment: Maintenance Manager or Designee**

#### **Emergency Response Role Description & Checklist:**

The Logistics Section Chief is responsible for providing facilities, services, and material in support of the incident. The Logistics Section Chief participates in development and implementation of the Incident Action Plan (IAP) and activates and supervises the branches and units within the Logistics Section.

- Report to the EOC and obtain briefing.
- Report to the Incident Command Post and obtain briefing.
- Assure that security procedures have been activated.
- As resources and staff arrive, assign roles within the section to include:
  - Facilities Unit
  - Communications Unit
  - Food Unit
  - Rehab
  - Resources and manpower (esp. Maintenance)
- Coordinate and support the efforts of the Planning and Operations Sections
- If necessary, set up a Maintenance Resource Center in Shop 1. Appoint a Maintenance Resource Coordinator with communications to the Incident Command Post.
- Verify that electrical, radio, and telephone systems are operating.
- Initiate set up of the EOC in the cafeteria, if requested by the Refinery Manager or Management Duty Person.
- Maintain written documentation of Logistics Section activities. Maintain regular updates to the Information Officer and EOC information board(s).

## **ICS Checklist: Finance Section Chief**

### **Role Assignment: Refinery Controller or Designee**

#### **Emergency Response Role Description & Checklist:**

The Finance Section Chief is responsible for all financial and cost analysis aspects of the incident.

- Report to the EOC and obtain briefing.
- Coordinate all financial and purchasing activities to include:
  - Oversight of procurement & contracting activities
  - Administrative support
- Develop insurance claims, as required.
- Provide support to Logistics and Planning Sections, as necessary.

## **ICS Checklist: Planning Section Chief**

### **Role Assignment: Process Engineering Superintendent**

#### **Emergency Response Role Description & Checklist:**

The Planning Section Chief is responsible for the collection, evaluation, dissemination, and use of information about the development of the incident and status of resources. Information is needed to:

- Understand the current situation
  - Predict probable course of incident events
  - Prepare alternative strategies and control operations for the incident
- 
- Report to the EOC and obtain briefing.
  - Coordinate activities with the Logistics Section
  - As resources and staff arrive, assign roles within the section to include:
    - Resource/Situation Unit
    - Technical Support Unit
    - Demobilization Unit
  - If Mutual Aid is requested, coordinate with the Logistics Section and contact:
    - HFSinclair
    - BP Cherry Point
    - Phillips 66
    - U.S. Oil
    - Refer to ERP Section 3 for Mutual Aid Contact Information.

## **ICS Checklist: EOC Liaison Officer**

### **Role Assignment: Manager Technical**

#### **Emergency Response Role Description & Checklist:**

The Liaison Officer is a member of the EOC and is the point of contact for the assisting and cooperating agency representatives.

- Report to the EOC and obtain briefing.
- Ensure appropriate agency notifications are being made by EOC Support Personnel.
- Provide a point of contact for assisting/cooperating agency representatives.
- Identify agency representatives from each agency, including communications link and location.
- Accompany Skagit County Department of Emergency Management Representative to Incident Command Post.
- Maintain a list of assisting and cooperating agency and stakeholder contacts.
- Assist in establishing and coordinating interagency contacts.
- Respond to requests from incident personnel for inter-organizational contacts.
- Monitor incident operations to identify current or potential inter-organizational issues and advise EOC and Incident Commander as appropriate.

## **ICS Checklist: EOC Support Personnel**

### **Role Assignment: EOC Support Personnel**

#### **Emergency Response Role Description & Checklist:**

- Coordinate activities with the Information Officer.
- As resources and staff arrive, assign roles within the section to include:
  - Verification of notification
  - Process and technical support to operations
  - Survey the incident scene and identify environmental issues.
- Notify governmental agencies and corporate contacts as appropriate:
  - Verify that 911 has been notified and CAER notification has been made or updated
  - State Department of Ecology
  - NW Air Pollution Authority
  - EPA Region X
  - National Response Center
- In the event of mass injuries or fatalities, verify that the Refinery Nurse has been contacted (or on-site Medical) and notify:
  - Department of Labor and Industries
  - OSHA
- Notify corporate contacts as appropriate.
- Make courtesy call to Anacortes Mayor, County Commissioner, and March Point Residents, if appropriate.

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## SECTION 5 DOCUMENTATION

### 5.1 Documentation

Detailed documentation must be kept for all aspects of an emergency response. It ensures that corresponding company records are correct, and that accurate reports can be provided to government agencies and the media. The following considerations will ensure that effective documentation practices are followed.

Documentation of an emergency will provide a record of the events as they occur. Thorough documentation of all events will aid in determining the adequacy of the emergency response plan, if any modifications are needed, and what potential improvements could be made for future response operations.

Documentation should begin immediately upon notification of an emergency and continue until post emergency assessments have been made. A member of the IMT will be assigned the duty of documentation during each operational period, which will rotate throughout the emergency event. This will include compiling notes and other documentation from other members of the IMT.

The type of information to be documented includes, but is not limited to, the following:

- Section, Unit, and Personnel Activity Logs.
- Emergency response status/Incident Action Plans.
- Emergency scenario.
- Correspondence with government agencies and other entities.
- Weather information.
- Costs incurred.
- Photographs.

**The IMT uses ICS forms consistent with the National Incident Management System (NIMS) forms. All Company ICS forms can be found online.**

#### 5.1.1 Emergency Response Status

Information relating to the status of ongoing response operations should be maintained and posted in the central and field command posts, if possible. Status boards are a valuable tool to ensure that all response team members are kept informed of the status of the response operation. This aids in efficiency and communications between team members by reducing the length and number of informational briefings required. This also helps to reduce duplicated efforts or ordering of services and improves the ability of team members to function effectively since they can stay informed without being interrupted from their required duties. The type of information that is useful to maintain includes:

- Maps which detail emergency location, location of environmental and socioeconomic sensitivities, and location of deployed equipment.
- Activity logs
- Resource availability and status
- Personnel counts
- Current and forecasted weather information



### 5.1.2 Emergency Scenario Information

All information pertaining to the emergency and why it occurred should be documented throughout the event. Information should include the following:

- Person(s) and equipment that caused the emergency.
- Details on equipment failure and/or human error.
- Person(s) discovering the emergency.
- Date and time emergency occurred.
- Location(s) of emergency.
- Effectiveness of response operations.

### 5.1.3 Meteorological Reports

Meteorological data to be gathered for the affected areas during the incident would include:

- Temperature.
- Precipitation.
- Wind direction and speed.
- Sunrise/Sunset times.

### 5.1.4 Correspondence with Government Agencies

The person in charge of documentation should record all correspondence with regulatory agencies. This correspondence may include permitting, requests for permitting, notifications, and orders from the agencies.

In addition to documenting conversations with government agencies, each response team member should document all conversations, meetings, and actions. The Incident Commander must utilize an assistant or recording secretary to accomplish this. ICS Form 214a is a form that can be utilized for response team members to document their conversations and actions.

### 5.1.5 Costs Incurred

Documentation of all costs incurred should be recorded. This may include claims, legal services, equipment rental and purchases, contract services, and support costs (transportation, meals, lodging). Emergency Response Requisitions form the basis for tracking costs for resources required for the spill.

### 5.1.6 Photographs

Photographs provide excellent documentation of emergency response operations and should be utilized if conditions permit. To ensure adequate documentation, all photographs should be labeled to include location, date, time and direction.

### 5.1.7 Logs

Copies of personal logs that individuals maintained during response operations should also be gathered as part of the documentation record. This information would be particularly useful during the post-emergency assessment in determining the strengths and weaknesses of the response efforts.

## 5.2 Site Safety Health Plan

In addition to assessing the dangers of explosion and fire, the Safety Officer will ensure the protection of worker health and safety. This protection is achieved by assessing and establishing exposure control zones to which only appropriately trained and equipped personnel may enter.

The criteria for establishing safety zones and respiratory protection requirements for petroleum products handled at the Refinery may use emergency response limits for petroleum distillates. Personal equipment recommended for protecting SKIN includes PVC gloves and boots for hands/feet, and PVC rain suit or Tyvek coveralls for the body.

At a minimum, safety glasses should be worn for EYE protection. Chemical goggles or a face shield should be used if a splash hazard is present. Eye protection is not required if a full-face respirator is worn.

Local police and fire departments will be notified of all major emergencies and, if necessary, their on-site assistance will be requested to ensure personnel health and safety.

The Safety Officer will prepare an incident-specific Health and Safety Plan. The format to be followed in developing an incident-specific Site Safety & Health Plan is provided at the end of this section and found online.

Safety Data Sheets (SDS) are available online. At a minimum, the following Federal safety standards will be addressed in the development of the incident-Specific Health and Safety Plan:

- 29 CFR 1910, Occupational Health & Safety Standards
- 29 CFR Part 1904, Record Keeping & Reporting Occupational Illnesses
- 29 CFR Part 1910.120, Hazardous Waste Operations and Emergency Response
- 29 CFR Part 1910.132-37 Subpart 1, Personal Protection Equipment
- 29 CFR Part 1920.38, Employee Emergency Action Plans & Fire Prevention

In addition, the following can be used to supplement the Site Health and Safety Plan:

- R-11-005, Safe Work Permits
- R-14-004, Industrial Hygiene & Air Monitoring Equipment
- R-11-017, Entry into Permit Required Confined Spaces
- R-11-019, HazCom/SDS
- R-11-023, Personal Protective Equipment Guidelines & Requirements
- R-11-030, Hot Work Operations
- Job Site Audit Program
- Not in My House/Bring Your A Game Program

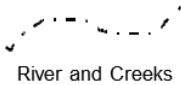

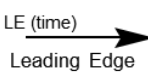






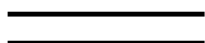


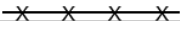

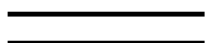


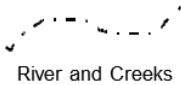

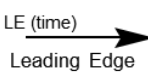






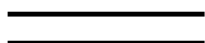


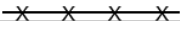

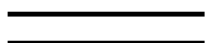


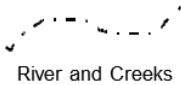

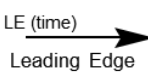






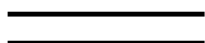


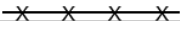

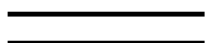


The Safety Officer should establish a dialogue with applicable Emergency Managers to ensure that safe workplaces are established for all responders that comply with local regulations.

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<b>1. Incident Name</b>	<b>2. Prepared by (Name)</b> Date: _____ Time: _____	<b>INCIDENT BRIEFING</b> <b>ICS 201</b>
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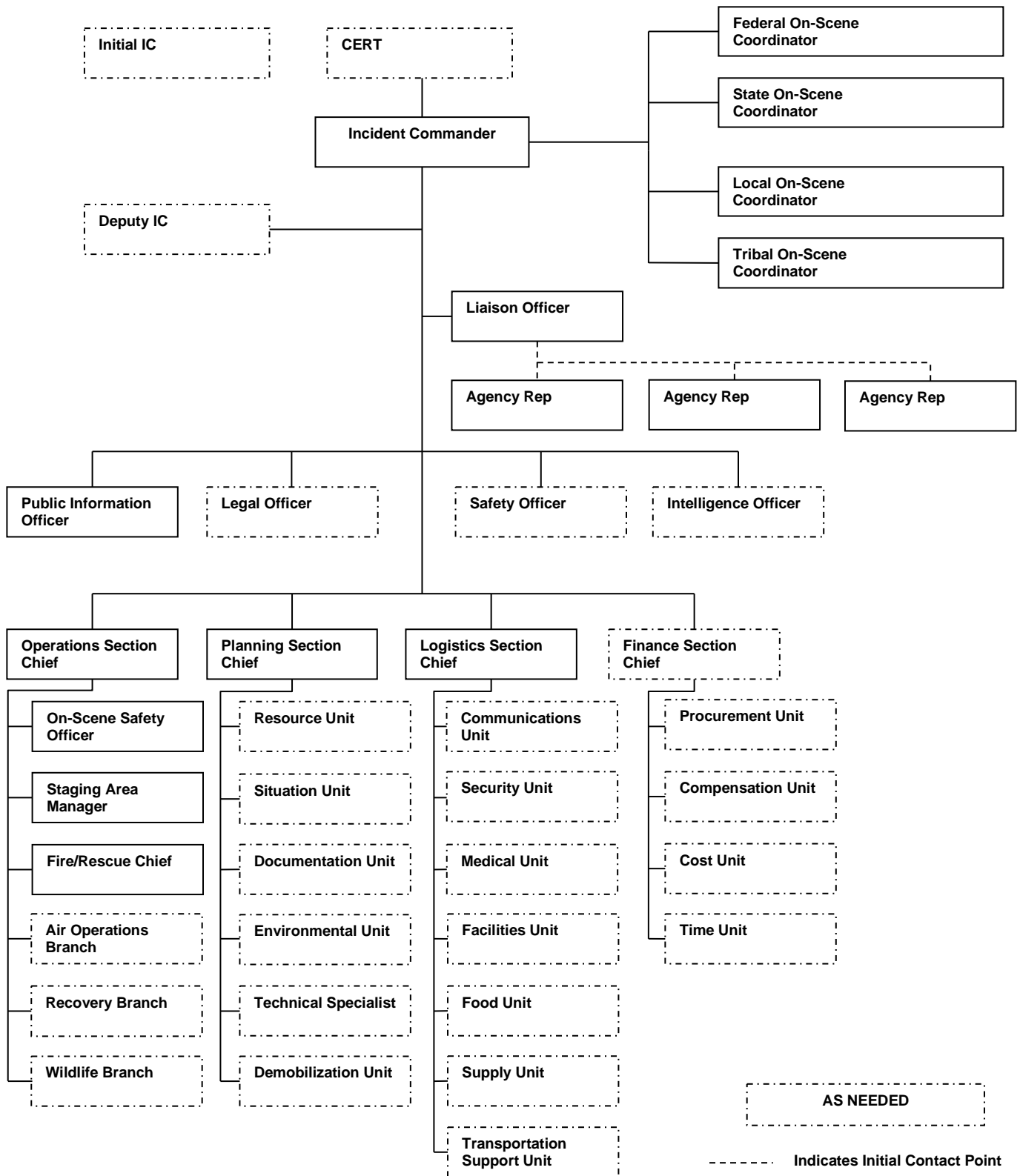
**3. Map / Sketch** (Include maps drawn here or attached, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines, or other graphics depicting situational and response status)



Wind Speed/Dir: ____ / ____ Air Temp: ____ Wind Chill: ____ Precipitation: ____ Ceiling: ____ Visibility: ____ Sunrise/Sunset: ____ / ____ Wave Ht/Dir: ____ / ____ Current Speed/Dir: ____ / ____ High Tide Time/Ht: ____ / ____ Low Tide Time/Ht: ____ / ____ High Tide Time/Ht: ____ / ____ Low Tide Time/Ht: ____ / ____ River Stage (ft): ____	<p><b>Legend:</b></p> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"> River and Creeks</td> <td style="text-align: center;"> Incident Area</td> <td style="text-align: center;"> Leading Edge</td> <td style="text-align: center;"> Date Time</td> <td style="text-align: center;"> Pipeline Below Ground</td> </tr> <tr> <td style="text-align: center;"> Staging Area</td> <td style="text-align: center;"> Containment Site</td> <td style="text-align: center;"> Wind Arrow</td> <td style="text-align: center;"> Hazard Origin</td> <td style="text-align: center;"> Pipeline Above Ground</td> </tr> <tr> <td style="text-align: center;"> Decontamination Site</td> <td style="text-align: center;"> Task Force</td> <td style="text-align: center;"> Absorbent Material</td> <td style="text-align: center;"> Boom</td> <td style="text-align: center;"> Roads and Highways</td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;"> In Progress Boom</td> <td style="text-align: center;"> Safety and Security Zone</td> </tr> </table>	 River and Creeks	 Incident Area	 Leading Edge	 Date Time	 Pipeline Below Ground	 Staging Area	 Containment Site	 Wind Arrow	 Hazard Origin	 Pipeline Above Ground	 Decontamination Site	 Task Force	 Absorbent Material	 Boom	 Roads and Highways				 In Progress Boom	 Safety and Security Zone
 River and Creeks	 Incident Area	 Leading Edge	 Date Time	 Pipeline Below Ground																	
 Staging Area	 Containment Site	 Wind Arrow	 Hazard Origin	 Pipeline Above Ground																	
 Decontamination Site	 Task Force	 Absorbent Material	 Boom	 Roads and Highways																	
			 In Progress Boom	 Safety and Security Zone																	



## 6. Current Organization





## 8. Site Safety and Control Analysis

### Site Control:

1. Is Site Control set up? <input type="checkbox"/> Yes <input type="checkbox"/> No Comments/Name:	2. Is there an on-scene command post? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, where:
3. Have all personnel been accounted for? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	Injuries: _____ Fatalities: _____ Unaccounted: _____ Trapped: _____
4. Are public observers involved? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, who and where:	5. Is a decon area set up? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, where:

### Hazard Identification, immediate signs of: (if Yes, explain in remarks)

1. Electrical hazards? <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Products identified? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, what:
3. Wind Direction <input type="checkbox"/> Away from your position Wind speed: <input type="checkbox"/> Towards your position	4. Is a safe approach possible? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Any abnormal odors or smells? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, what:	6. Vapors visible? Color: <input type="checkbox"/> Yes <input type="checkbox"/> No
7. Tide Times: Low _____ High _____	8. Ignition sources nearby? <input type="checkbox"/> Yes <input type="checkbox"/> No
9. Is local traffic a potential problem? <input type="checkbox"/> Yes <input type="checkbox"/> No	10. Product placards, color codes visible <input type="checkbox"/> Yes <input type="checkbox"/> No
11. Other Hazard(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No	12. As you approach the scene from the upwind side, do you note a change in status of any of the above? <input type="checkbox"/> Yes <input type="checkbox"/> No

### Hazard Mitigation: (Have you determined the necessity for any of the following)

1. Entry Objectives:			
2. Are warning signs or barricades required? <input type="checkbox"/> Yes <input type="checkbox"/> No Identify Type:			
3. Atmospheric Testing? <input type="checkbox"/> Yes <input type="checkbox"/> No	a. Initial Results: LEL _____ H2S _____ O2 _____ CO _____ Benzene _____ Other _____ Time: _____	b. Sampling Equipment:	
c. Sampling Location(s):	d. Sample Frequency:	e. Personal Exposure Monitoring:	
Time/Location: _____	LEL _____ H2S _____ O2 _____ CO _____ Benzene _____ Other _____		
Time/Location: _____	LEL _____ H2S _____ O2 _____ CO _____ Benzene _____ Other _____		
Time/Location: _____	LEL _____ H2S _____ O2 _____ CO _____ Benzene _____ Other _____		
Time/Location: _____	LEL _____ H2S _____ O2 _____ CO _____ Benzene _____ Other _____		
4. Protective gear/level:	a. Gloves:	b. Clothing:	c. Boots:
d. Respirators:	e. Chemical cartridge change frequency:		
5. Decon			
a. Instructions:			
b. Equipment and Materials			
6. Emergency Escape Route Established <input type="checkbox"/> Yes <input type="checkbox"/> No			
7. Field responder briefed on hazards? <input type="checkbox"/> Yes <input type="checkbox"/> No			
8. Remarks:			



## INCIDENT BRIEFING (ICS FORM 201-OS)

**Purpose.** The Incident Briefing form provides the Unified Command (and the Command and General Staffs assuming command of the incident) with basic information regarding the response situation and the resources allocated to the incident. It is also a permanent record of the initial incident response.

**Preparation.** This briefing form is prepared under the direction of the initial Incident Commander for presentation to the Unified Command. This form can be used for managing the response during the initial period until the beginning of the first operational period for which an Incident Action Plan (IAP) is prepared. The information from the ICS form 201-OS can be used as the starting point for other ICS forms or documents.

- Page 1 (Map/Sketch) may transition immediately to the Situation Map
- Page 2 (Summary of Current Actions) may be used to continue tracking the response actions and as the initial input to the ICS form 215-OS and the ICS form 232-OS
- Page 3 (Current Organization) may transition immediately to the Organization List (ICS form 203-OS) and/or Organization Chart (ICS form 207-OS)
- Page 4 (Resources Summary) may be used to continue tracking resources assigned to the incident and as input to individual T-Cards (ICS form 219) or other resource tracking system.
- Page 5 (Site Safety and Control Analysis) Purpose: The 201-5 is used as a basis for safety 'tailgate briefing' to clear personnel entering a scene and is a predecessor to the Site Safety Plan.

**Distribution.** After the initial briefing of the Unified Command and General Staff members, the Incident Briefing is duplicated and distributed to the Command Staff, Section Chiefs, Branch Directors, Division/Group Supervisors, and appropriate Planning and Logistics Section Unit Leaders. The sketch map and summary of current action portions of the briefing form are given to the Situation Unit while the Current Organization and Resources Summary portion are given to the Resource Unit. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Prepared By Date Time	Enter the name and position of the person completing the form. Enter date prepared (month, day, year). Enter time prepared (24-hour clock).
3.	Map/Sketch	Show the total Area of Operations, the incident site, overflight results, trajectories, impacted shorelines, or other graphics depicting situation and response status on a sketch or attached map.
4.	Initial Incident Objectives	Enter short, clear, concise statements of the objectives for managing the initial response.
5.	Summary of Current Actions	Enter the actions taken in response to the incident, including the time, and note any significant events or specific problem areas.
6.	Current Organization	Enter on the organization chart the names of the individuals assigned to each position. Modify the chart as necessary, using additional boxes in the space provided under the Sections. Two blank lines are provided in the Unified Command section for adding other agencies or groups participating in the Unified Command and/or for multiple Responsible Parties.
7.	Resources Summary Resource Needed  Time Ordered Resource Identifier  ETA  On-Scene Location /Assignment / Status	Enter the following information about the resources allocated to the incident: Description of the resource needed (e.g., open water boom, skimmer, vac truck, etc.). Time ordered (24-hour clock). Identifier for the resource (e.g., radio call-sign, vessel name, vendor name, license plate, etc.). Estimated time for the resource to arrive at the staging area. Checkmark upon the resource's arrival.  Location of the resource, the actual assignment, and the status of the resource (if other than working).

Item #	Item Title	Instructions
8.	Safety Requirement	Before entering a potentially hazardous work environment, IT MUST BE EVALUATED BY A COMPETENT PERSON to establish safe work practices, personal protective equipment, and other control procedures. At a minimum, lower explosive limit (LEL), Oxygen, and Benzene levels must be evaluated. Spill cleanup areas shall be controlled as "regulated areas." If Benzene vapors are or may be expected to equal the action level of .5 ppm, then the area must be posted with the following warning: Danger – Benzene Cancer Hazard – Flammable – No Smoking – Authorized Personnel Only – Respirator Required (Reference 201 Page 5 Safety and Control Analysis Instructions below)
		<i>NOTE: Additional pages may be added to ICS form 201-OS if needed.</i>

## 201 Page 5 Site Safety and Control Analysis Instructions

### **Purpose:**

The intent of the 201-5 is to document and communicate the Site Control, Hazard Identification, and Hazard Mitigation measures in order to safely execute all actions within the emergency phase of the incident. It is the emergency phase site safety and control analysis plan.

### **Site Control:**

1. Site Control includes an isolation perimeter and access control points.
3. List numbers for each non-zero category. Describe each occurrence either in Remarks (#8) or reference applicable accident report(s).
5. Say whether the "decon" area is depicted on the 201-1. (It should be)

### **Hazard Identification (and immediate signs of)**

1. If 'Yes' is indicated, explain in Remarks (#8)
4. If 'Yes' is indicated, explain in Remarks (#8)
5. Only smells that are not natural, not normally present
6. If 'Yes' is indicated, include the color
8. If 'Yes' is indicated, circle which fire hazards are present. Continue explanation in Remarks (#8) starting with 'Haz ID #8'
9. If 'Yes' is indicated, continue explanation in Remarks (#8) starting with 'Haz ID #9'
10. If 'Yes' is indicated, list placards and color codes seen. Also note type of container, manufacturer label(s)
11. If 'Yes' is indicated, explain in Remarks (#8)
12. If 'Yes' is indicated, explain in Remarks (#8)

### **Hazard Mitigation**

1. Describe simply stated objectives.
  2. For example, benzene and no smoking signs
  3. All atmospheric monitoring results should be logged on the Atmospheric Monitoring Results Sheet
    - 3a. Equipment can include combustible gas indicator, O2 monitor, coulometric tubes (type) HNU/OVA, etc.
    - 3b. Enter initial monitoring results from the 201-1
    - 3c. If the location(s) is/are depicted on the 201-1, so state
    - 3d. Frequency can be continuous, hourly, etc.
    - 3e. Describe the procedures in effect for personal (sampling for on-site personnel) and medical monitoring.
  4. List the Protection Level (A-D) including the specific PPE needs. For APRs, estimate the life of the respirator cartridge.
  6. Describe the route. If the route is depicted on the 201-1, so state.
  7. Use Worker Declaration Log to ensure all field responders are briefed on hazards.
  8. Use 'Remarks for further explanations of the above items. Start with the item number (SC#X, HazID#X, HM#X).
- Prepared by: Print the name/company/ICS position of the person preparing the form.

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## CHECK-IN LIST Personnel (ICS FORM 211p)

**Special Note.** This form is used for personnel check-in only.

**Purpose.** Personnel arriving at the incident can be checked in at various incident locations. Check-in consists of reporting specific information that is recorded on the form.

**Preparation.** The Check-In List is initiated at a number of incident locations including staging areas, base, camps, helibases, and ICP. Managers at these locations record the information and give it to the Resource Unit as soon as possible.

**Distribution.** Check-In Lists are provided to both the Resource Unit and the Finance Section. The Resource Unit maintains a master list of all equipment and personnel that have reported to the incident. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Check-in Location	Check the box for the check-in location.
4.	Name	Enter the name of the person.
5	Company/Agency	Enter the company or agency with which the individual is associated.
6.	ICS Section / Assignment / Qualifications.	Enter ICS Section and assignment, if known and note any other ICS qualifications if needed.
7.	Contact Numbers (Cell)	Enter the contact information for the person.
8.	Initial Incident Check-in?	Check if this is the first time a person has checked in for this incident.
9.	Time In/Out	Enter the time the person checks in and/or out (24-hour clock). If the person is leaving on a regular basis for document runner or attending a meeting in another room, it is not necessary to log them out.
10.	Prepared By Date/Time Prepared	Enter name and title of the person preparing the form. Enter date (month, day, year) and time prepared (24-hour clock).
11.	Date/Time Sent to Resource Unit	Enter date (month, day, year) and time (24-hour clock) the form is sent to the Resource Unit.

INCIDENT NAME: \_\_\_\_\_ DATE PREPARED: \_\_\_\_\_

OPERATIONAL PERIOD: \_\_\_\_\_

# Site Safety & Health Plan

APPROVED BY:

_____	IC	_____	DATE
_____	FOSC	_____	DATE
_____	SOSC	_____	DATE
_____	LOSC	_____	DATE
_____	TOSC	_____	DATE

COMMENTS:

## Table of Contents

SECTION 1 – INCIDENT DESCRIPTION .....	3
1.1 EVENT DESCRIPTION .....	3
Type of Event:.....	3
Event Description:.....	3
1.1 HAZARDS: .....	3
1.2 METEOROLOGICAL OUTLOOK .....	4
SECTION 2 – SAFETY GUIDELINES.....	5
2.1 SITE SAFETY.....	5
2.2 SAFETY DATA SHEETS.....	5
2.3 SAFETY EQUIPMENT – PPE .....	5
Conventional Safety Equipment.....	5
Respiratory Protection .....	6
2.4 DAILY DECONTAMINATION GUIDELINES FOR PERSONNEL .....	6
2.5 OFFSITE CONTROL.....	7
Response Zones.....	7
Community Safety: .....	7
2.6 COMMUNICATIONS .....	7
2.7 PERSONNEL AND ENVIRONMENTAL MONITORING.....	8
Personnel Monitoring.....	8
Environmental Monitoring .....	8
2.8 TRAINING .....	8
2.9 EMERGENCY PROCEDURES .....	8
Personnel Injury in the Hot Zone: .....	8
Personnel Injury in the Cold Zone:.....	9
Fire/Explosion: .....	9
Personnel Equipment Failure:.....	9
Other Equipment Failure:.....	9
Emergency Escape Routes: .....	9
SECTION 3 – RESPONDER SAFETY INFORMATION.....	10
3.1 GENERAL SAFETY PRACTICES .....	10
3.2 BOAT AND WATER SAFETY .....	11
Onboard Vessel.....	11
Capsized Craft.....	11
Overboard Victim .....	11
3.3 VEHICLE SAFETY .....	12
3.4 EQUIPMENT SAFETY .....	12
3.5 HELICOPTER SAFETY.....	12
3.6 CHEMICAL HAZARDS.....	13
3.7 PHYSICAL HAZARDS.....	13
Hypothermia .....	13
Noise.....	14
Dehydration and Heat Stress.....	14
Lifting hazards: .....	14
Slips, Trips, and Falls.....	15
3.8 DRUM HANDLING .....	15
3.9 PERSONAL PROTECTIVE EQUIPMENT .....	15

## ICS – SAFETY PLAN

3.10 PERSONAL HYGENE .....	16
3.11 DECONTAMINATION.....	16
3.12 SANITATION .....	17
3.13 ILLUMINATION AND VISIBILITY .....	17
3.14 CONFINED SPACES .....	17



**SECTION 1 – INCIDENT DESCRIPTION**

<b>WORK SITE:</b>	<b>INCIDENT:</b>
<b>DATE/TIME:</b>	<b>SHIFT:</b>
<b>PRODUCT:</b>	<b>SDS (Attached):</b>
<b>SAFETY OFFICER:</b>	<b>CONTACT RADIO FREQUENCY &amp; PHONE #:</b>
<b>INCIDENT COMMANDER:</b>	<b>CONTACT RADIO FREQUENCY &amp; PHONE #:</b>

**1.1 EVENT DESCRIPTION**

**Type of Event:**

PROCESS UNIT                       PIPELINE                       STORAGE TANK  
 OTHER: \_\_\_\_\_

**Event Description:**

**1.1 HAZARDS:**

**Check all that apply:**

- |  |   |
|--|---|
| <input type="checkbox"/> Oxygen                    | <input type="checkbox"/> Slips, Trips & Falls       |
| <input type="checkbox"/> Explosive Vapors >10% LEL | <input type="checkbox"/> Wind Chill                 |
| <input type="checkbox"/> Benzene                   | <input type="checkbox"/> High Winds                 |
| <input type="checkbox"/> H2S                       | <input type="checkbox"/> Working 4' Over the Ground |
| <input type="checkbox"/> High CO                   | <input type="checkbox"/> Night Ops                  |
| <input type="checkbox"/> Fire Hazard               | <input type="checkbox"/> Pinch Points               |
| <input type="checkbox"/> Skin Exposure             | <input type="checkbox"/> Hypothermia                |
| <input type="checkbox"/> Eye Hazards               | <input type="checkbox"/> Other (working on water)   |
| <input type="checkbox"/> Heat Stress               | _____   |

**1.2 METEOROLOGICAL OUTLOOK**

<p><b>Current Weather Conditions</b></p> <p>Wind Speed: _____ Wind Direction: _____</p> <p>Air Temperature: _____ Ceiling: _____</p> <p>Precipitation: Rain _____ Snow _____</p> <p>Comments: _____</p>	<p><b>Forecasted Weather Conditions</b></p> <p>Wind Speed: _____ Wind Direction: _____</p> <p>Air Temperature: _____ Ceiling: _____</p> <p>Precipitation: Rain _____ Snow _____</p> <p>Comments: _____</p>
<p><b>Current Water Conditions</b></p> <p>Water Temperature: _____</p> <p>Wave Height: _____ Wave Direction: _____</p> <p>Current Speed: _____ Current Direction: _____</p> <p>_____</p>	<p><b>Forecasted Water Conditions</b></p> <p>Water Temperature: _____</p> <p>Wave Height: _____ Wave Direction: _____</p> <p>Current Speed: _____ Current Direction: _____</p> <p>_____</p>
<p><b>Today's Sunrise/Sunset</b></p> <p>Sunrise Time: _____ Sunset Time: _____</p> <p>Comments: _____</p>	<p><b>Tomorrow's Sunrise/Sunset</b></p> <p>Sunrise Time: _____ Sunset Time: _____</p> <p>Comments: _____</p>
<p><b>Watches/Warnings/Advisories:</b></p>	

**1 knot = 1.15 mph**

## SECTION 2 – SAFETY GUIDELINES

### 2.1 SITE SAFETY

1. This initial plan is intended to provide guidance for the Site Supervisors, Responders and Contractors for post-emergency response to an oil spill.
2. No smoking, eating or drinking is allowed in contaminated areas; smoking will be allowed in the support zone (cold zone) in designated areas only.
3. Work sites and boats are limited to authorized personnel only.
4. A list of personnel on each job site will be kept for each shift showing arrival and departure from the site.
5. The operator of any vessel is responsible for the overall operation of the vessel and is in charge of all emergencies aboard that vessel.
6. Employees and contractors shall:
  - a. Report all injuries, illness or near miss incidents to the Site Supervisor, Safety Officer or Section Chief.
  - b. Read and sign the Site Safety Plan before starting work at the job site.
  - c. Sign the log sheet for each safety briefing.
  - d. Report all illness, injuries, or medications they are taking to their Site Supervisor prior to entry or upon exiting the job site.
  - e. Report unsafe acts or conditions to the Site Supervisor or the Site Safety Officer. If unsafe conditions or work practices are observed, stop those operations immediately.
  - f. Be responsible for inspecting their personal protection equipment (PPE) prior to entry into a job site.
  - g. Use the “buddy system” and monitor each other for job-related injuries, exposure to the elements, or any other abnormal behavior.

### 2.2 MATERIAL SAFETY DATA SHEETS

1. An SDS will be made available and reviewed by all employees and subcontractors at the job site as part of the Site Safety Plan.
2. Specific Information that should be noted from the SDS is: Product name, Date of SDS, Hazardous components, Chemical and Physical characteristics and Health hazards.

### 2.3 SAFETY EQUIPMENT – PPE

#### Conventional Safety Equipment

REQUIRED		PPE TYPE	COMMENTS
YES	NO		
		Personal Floatation Device	Over water/waters edge
		Hardhat	At all times
		Safety Glasses	Helo pad/wildlife handling
		Goggles	Clean up/chemical handling /splash hazards
		Hearing Protection	Helo pad/equipment operation
		Gloves (Material)	Nitrile/PVC when handling oils and/or chemicals/clean up operations
		Rubber Boots	Nitrile/PVC when handling oils and/or chemicals/clean up operations
		Rain Gear	Inclimate weather/handling oils and/or chemicals/clean up operations
		Other	Chemical Tyvek may also be used for oil clean up

**Respiratory Protection**

REQUIRED		PPE TYPE	COMMENTS
YES	NO		
		Half Mask Respirator	As required by air monitoring results
		Full Face Respirator	As required by air monitoring results
		Supplied Air	As required by air monitoring results
		Other	

PPE indicated above is required for entry into Hot Zone areas.

**2.4 DAILY DECONTAMINATION GUIDELINES FOR PERSONNEL**

1. Three zones will be established and identified as the Hot Zone, Decon Areas and Cold Zone. Decon of equipment and/or personnel will take place in the designated Decon Areas
2. Personnel working inside the Hot Zone must check in and out of the Hot Zone. The Buddy System is in effect for all work parties. No one is allowed to enter or leave the site alone.
3. Decon Areas are provided as a control point for decontamination of individuals leaving a contaminated area. It is key in preventing the spread of contamination as well as providing worker support. These areas are identified on the Spill Plan Worksheets.

4. Decon procedures will be explained to response personnel prior to starting work at the job site. This document provides an organized method by which levels of contamination are reduced.

## 2.5 OFFSITE CONTROL

### Response Zones

Control boundaries have been established and the Hot Zone (contaminated area), Decon Areas, and Cold Zone have been identified as follows, (refer to the Spill Plan Work Sheet):

- Hot Zone - areas involved with the clean up operations.
- Decon Areas/Warm Zone and Wildlife handling areas will be adjacent to the hot zones.
- Cold Zone - all areas immediately outside the Decon Area/Warm Zone.
- No unauthorized person should be within the Hot or Decon Area/Warm Zone. No persons shall be in the Hot Zones without proper PPE.

Coordinating access control and on site security will be coordinated by: Company Safety

The Onsite Command Post has been established at:

### Community Safety:

Roads:

Boaters:

Surrounding Community:

Sheriff:

Air:

## 2.6 COMMUNICATIONS

1. Channel \_\_\_\_\_ has been designated as the radio frequency for personnel in Hot Zone.

Other channels for spill activities are:

- Air Ops. –
  - Air medical to Ambulance –
  - Bird Rescue –
2. Personnel in the Hot Zone will remain in constant radio communication or within sight of the Site Supervisor. Any failure of radio communication requires an evaluation of whether personnel should leave the Hot Zone.

3. The emergency signal to indicate that all personnel should leave the Hot Zone is to announce “Evacuate” over all radio channels.
4. The following standard hand signals will be used in case of radio failure:
  - Hands on top of head: *Need assistance*
  - Thumbs up: *I am all right, I understand*
  - Thumbs down: *Negative*

**2.7 PERSONNEL AND ENVIRONMENTAL MONITORING**

Monitoring plan must include substance monitored, monitoring equipment and frequency.

HAZARD	MONITORING INSTRUMENT	FREQUENCY (*select one)			
LEL		continuous	hourly	daily	other
BENZENE		continuous	hourly	daily	other
H2S		continuous	hourly	daily	other
OTHER		continuous	hourly	daily	other

Personnel Monitoring \_\_\_\_\_

Environmental Monitoring \_\_\_\_\_

**2.8 TRAINING**

All Responders involved in these operations shall have been appropriately trained in emergency response procedures in accordance with the applicable Oil Spill Response Plan or Emergency Response Plan. They shall have been trained to the HAZWOPER level prescribed for them by the Company training database.

All Contractor personnel involved in these operations shall have been appropriately trained in emergency response and the appropriate HAZWOPER level.

**2.9 EMERGENCY PROCEDURES**

Onsite personnel will use the following standard emergency procedures. The Site Safety Officer shall be notified of any onsite emergencies and be responsible for ensuring that the appropriate procedures are followed.

**Personnel Injury in the Hot Zone:**

Upon notification of an injury in the Hot Zone, the designated emergency signal shall be sounded. All site personnel shall assemble at the decontamination line. The rescue team will enter the Hot Zone (if required) to remove the injured person to the cold zone. The Site Safety Officer, Operations Coordinator and Site Supervisor should evaluate the

nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement to the Cold Zone. The onsite first responders shall initiate appropriate first aid, and contact should be made for an ambulance. No persons shall reenter the Hot Zone until the cause of the injury or symptoms is determined.

### **Personnel Injury in the Cold Zone:**

Upon notification of an injury in the Cold Zone, the Operations Coordinator and Site Safety Officer will assess the nature of the injury. If the cause of the injury or loss of the injured person does not affect the performance of the onsite personnel, operations may continue. If the injury increases the risk to others, the designated Emergency Stop Alarm will be sounded and all site personnel shall move to the decontamination line for further instructions. Activities on site will stop until the added risk is removed or minimized.

### **Fire/Explosion:**

Upon notification of fire or explosion on site, or the need for rescue, the designated Emergency Stop Alarm will be sounded and all site personnel shall assemble at the decontamination line. Onsite coordinators will account for their personnel and all unaffected personnel will be moved to a safe distance from the involved area.

### **Personnel Equipment Failure:**

If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy shall immediately leave the Hot Zone. Reentry shall not be permitted until the equipment has been repaired or replaced.

### **Other Equipment Failure:**

If any other equipment on site fails to operate properly, the Operation Coordinator and Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents completion of the work plan tasks, all personnel shall leave the Hot Zone until the situation is evaluated and appropriate actions taken.

### **Emergency Escape Routes:**

The following emergency escape routes are designated for use in those situations where egress from the Hot Zone cannot occur through the Decon Area: Take the shortest, upwind evacuation route out of the HOT ZONE. Assembly point for evacuation is the closest, safest decon site.

In all situations, when an onsite emergency results in evacuation of the Hot Zone, personnel shall not reenter until:

- The conditions resulting in the emergency have been corrected.
- The hazards have been reassessed.
- The Site Safety Plan has been reviewed.
- Site personnel have been briefed on any changes in the Site Safety Plan.

## SECTION 3 – RESPONDER SAFETY INFORMATION

The ultimate responsibility for safety rests with the individuals. At all times, they should keep the following safety cycle in mind:

1. Decide to work safely.
2. Exercise good judgement and common sense.
3. Observe all safety regulations and instructions.
4. Think about prevention of unsafe acts.
5. Stop if unsafe conditions are observed.

It is also important to watch out for your fellow worker. When ever possible, the buddy system should be adopted. Keep an eye out for unsafe acts or unsafe conditions that your fellow worker may not be aware of.

During the conduct of response operations, there may be exposure to chemical and / or physical hazards such as:

- Inhalation of vapors
- Irritation of the skin
- Elevated or lowered body temperatures due to work environment.
- Exhaustion from long hours of demanding work.
- Stress, both physical and mental.
- Injuries due to lifting and body positioning.
- Cuts, bruises, sprains and strains.
- High levels of noise.

To eliminate or reduce these hazards to the maximum extent, it is imperative that the procedures prescribed in the following sections are followed.

### 3.1 GENERAL SAFETY PRACTICES

- Exercise good sound judgment and common sense
- Follow supervisor's instructions
- Be alert to health and safety hazards
- Attend all required safety meetings
- Wear proper safety equipment
- Set good examples for others
- Make sure tools and equipment are in good working condition.
- Use all tools and equipment as designed.
- Store tools and equipment safely after use.
- Avoid carrying loads that extend above eye level or otherwise obstruct vision.
- Size up loads before attempting to lift. Get help when needed.
- Observe all warning signs.
- Report all injuries when they occur.
- Keep work areas clear. Good housekeeping is a must.



## 3.2 BOAT AND WATER SAFETY

When boarding a boat, each individual should:

- Have their hands free to ensure good balance
- Know who the vessel captain is. The vessel captain has ultimate authority over all persons on the boat.
- Become familiar with the layout of the boat.
- Know where emergency equipment is located and how to use it (i.e. fire extinguisher, life jackets, life rings, and life rafts).
- Board a vessel only with a U.S.Coast Guard approved personal floatation device. Wear the device properly.

### Onboard Vessel

While onboard the vessel:

- Watch out for slippery deck surfaces, especially if they are covered or stained with spilled oil. Use sorbant pads to clean up oil and/or to improve traction along walkways.
- Watch for erratic boat motions. Use safety lines when working on the deck.
- Avoid taking medicines for seasickness because they induce drowsiness
- Maintain awareness of other activities underway while performing your tasks.
- Maintain good housekeeping practices. Keep clear of ropes and lines.
- Wear gloves while handling ropes and cables.
- Wear a personal floatation device.
- Keep safety railings and/or chains in place until it is necessary to remove them to work. Replace railings/chains as soon as possible.

### Capsized Craft

If the craft capsizes:

- Make every effort to get out of the water and onto the hull of the craft. If the craft continues to float, it is usually better to remain with it.
- The craft will be seen, and more easily located by rescue personnel than a lone person.
- If you cannot get out of the water, remain calm. Conserve your energy. Float as still as possible with legs together, elbows close to sides, and arms folded across the front of your lifejacket.
- Try to raise an alarm.

### Overboard Victim

If a person sees someone fall overboard, the observer should:

- Watch victim constantly. Point to the victim while raising the alarm.
- Notify others by calling "Man Overboard".
- Obtain a life ring to assist in retrieving the victim.

If the overboard victim is rational but shivering when pulled onboard, have them remove wet clothes, put on dry clothing or a blanket, and rest in a warm environment.

If semiconscious or unconscious:

- Check for breathing and heartbeat. Administer CPR in necessary.
- Move victim to a warm environment
- Remove victim's clothes. Do not massage the skin
- Insulate the victim from further heat loss. Wrap in a blanket.
- Do not attempt aggressive warming.
- Gentle warming can be attempted by placing a bottle filled with warm water next to victims head, neck, arm pits, or groin
- Do not give the victim anything to eat or drink, and never offer alcohol.

### 3.3 VEHICLE SAFETY

All persons called upon to operate a vehicle should:

- Always carry a valid driver's license.
- Wear a seat belt.
- Be familiar with the vehicle's equipment and operation.
- Keep windows and mirrors clean and unobstructed at all times.
- Report any accident or unsafe condition to their supervisor.
- Obey all rules of the road.
- Never engage in horseplay.

### 3.4 EQUIPMENT SAFETY

The key to equipment safety is knowing how to operate a piece of equipment. If you have not been trained and understand how to operate a piece of equipment, notify your supervisor. While operating equipment, observe the following:

- Keep alert at all times. Know and follow signals of the operators.
- Wear the proper PPE.
- Do not wear loose fitting clothing. Keep hair tied up in such a way that it cannot come into contact with rotating parts.
- Know the safety features of the equipment. Know how to shut down and secure the equipment should an emergency occur.
- Do not operate electrical equipment while standing in water.
- Use walkways and steps where provided. Do not take short cuts.
- Use the proper tools. Do not use tools or equipment for something they were not intended.
- Follow manufactures recommendations and guidelines for equipment and tools.

### 3.5 HELICOPTER SAFETY

When approaching a helicopter, a person should;

- Look for the pilot to give a hand signal when it is safe to approach the helicopter.
- Always walk towards the front of the helicopter. Never walk towards or around the rear of a helicopter, even when it is idle.
- Wear a hard hat, and use one's hand to secure it to one's head.
- Wear proper eye protection.

- Ensure the pilot briefs the passenger on safety procedures before each flight.

### 3.6 CHEMICAL HAZARDS

Depending on the specific operations conducted at the spill scene, a person may be exposed to the following substances:

Safety Data Sheets (SDS), describing the specific hazards and precautions to be taken when handling each of these products will be available for inspection on the site. Follow precautions carefully.

All containers should be labeled as to their contents. If the containers are unidentified or unlabeled, they should notify their supervisor and not handle the container until it has been properly identified and labeled.

### 3.7 PHYSICAL HAZARDS

#### Hypothermia

Water Temperature and air temperature can be low enough to expose the body to rapid heat loss and a cooling of the body core temperature. In cold water, the body will lose heat many times faster than in the air. Even outside the water, wet clothing will conduct heat away from the body much faster than dry clothing. Normally a combination of climatic/environmental and body factors results in a person suffering from hypothermia.

Symptoms of hypothermia include:

- Continual shivering and paleness.
- Lack of coordination
- Slurring of speech
- Lack of concentration
- Dazed or confused behavior

When a person suffers from severe hypothermia, shivering will stop, blood pressure will drop substantially, consciousness will be clouded, respiration will decrease, and the victim's muscles will become rigid. Unconsciousness will ultimately occur, and death may be imminent.

To protect against hypothermia, a person should:

- Be aware of the weather, check the forecast
- Wear appropriate clothing
- If clothing becomes wet, remove it and dry it as much as possible before putting it back on
- Control sweating by removing layers of clothing so that a uniform body temperature is maintained
- Replenish energy by taking breaks for food and warm liquids

**Wind Chill Indicator**  
Temperature (F)

Wind (MPH)	30	25	20	15	10	5	0	-10	-15	-20	-25
5	25	19	12	7	1	-5	-11	-22	-28	-34	-40
10	21	15	9	3	-4	-10	-16	-28	-35	-41	-47
15	19	13	6	0	-7	-13	-19	-32	-39	-45	-51
20	17	11	4	-2	-9	-15	-22	-35	-42	-48	-55
25	16	9	3	-4	-11	-17	-24	-37	-44	-51	-58
30	15	8	1	-5	-12	-19	-26	-39	-46	-53	-60
35	14	7	0	-7	-14	-21	-27	-41	-48	-55	-62
40	13	6	-1	-8	-15	-22	-29	-43	-50	-57	-64
45	12	5	-2	-9	-16	-23	-30	-44	-51	-58	-65
50	12	4	-3	-10	-17	-24	-31	-45	-52	-60	-67
55	11	4	-3	-11	-18	-25	-32	-46	-54	-61	-68
60	10	3	-4	-11	-19	-26	-33	-48	-55	-62	-69

Frostbite occurs in 15 minutes or less

**Noise**

Response operations may require the use of generators, pumps, compressors, engines, and other equipment that generate high levels of noise. Short-term exposure to extremely loud noise and/or long-term exposure to low level noise can cause hearing loss. If a worker is assigned to a high noise area, they should wear proper hearing protection.

**Dehydration and Heat Stress**

Response operations can involve strenuous activities that can, even in relatively cool weather, lead to excessive sweating. This is even more likely to occur when wearing protective clothing that may reduce the body's ability to discard excess heat. This may lead to dehydration, heat rash, heat cramps, heat exhaustion, and possibly heat stroke.

Symptoms of dehydration:

- Cramping in arms, legs or abdomen
- Feeling faint, dizziness or fatigue

Need to take time to rest, preferably in a shady area, and rehydrate by drinking decaffeinated, non-alcoholic fluids

Symptoms of heat exhaustion:

- Faint, dizzy, nauseous feeling
- Sweating heavily or has pale skin color
- Rapid shallow breathing
- Dilated pupils, weak rapid pulse

Need to report to a first aid station immediately

Heat stroke is a life threatening condition. The body must be cooled down immediately. It is imperative to get medical attention at once.

**Lifting hazards:**

The following rules for safe lifting practices should be observed:

- Plan the lift and route to travel with the load prior to lifting.
- Know the approximate weight of the object prior to lifting.
- Lift with legs, keep back straight, knees bend, squat down to lift.
- Stand up slowly, keeping the load close to the body.
- Use wide balanced stance, with one foot ahead of the other.
- Move feet to change direction; do not twist at the waist.
- Avoid carrying loads that extend above the eye.
- If lifting/carrying with a partner, communicate all moves prior to performing.
- Push, do not pull heavy objects.
- Do not stand under a suspended load.

### **Slips, Trips, and Falls**

Oily surfaces are extremely slippery. Even in slip resistant footwear, walking through an oily area may be hazardous. The scene of shoreline protection and/or clean up operations and equipment in staging areas can contain numerous obstacles. When engaged in response operations:

- Be alert for oily surfaces.
- Use handrails and safety lines when available.
- Be aware of your surroundings. Identify tripping hazards and address the hazards appropriately.
- Keep all walkways, work surfaces, etc. free of debris, tools, or obstacles that could create a tripping hazard.
- Never engage in horseplay.

### **3.8 DRUM HANDLING**

All drums and containers should be properly labeled. Material in unlabeled drums should not be used. Any such drums should be reported to supervision for action.

Drums and containers should be in good condition prior to being moved. Drums larger than 5 gallons should be lifted and moved with mechanical equipment.

If a drum spill occurs, notify supervision and use appropriate absorbent material or other methods to contain the spill.

### **3.9 PERSONAL PROTECTIVE EQUIPMENT**

The primary objective of personal protective equipment is to prevent accidental contact with hazardous chemicals. Before a chemical can have an adverse effect, it must come into contact with a vulnerable area of the body. There are four methods of contact:

1. Injection - puncture wounds
2. Absorption - through healthy, intact skin or eyes
3. Inhalation - through the mouth or nasal passages. This is the most common route of entry.
4. Ingestion - direct or indirect consumption while eating or drinking

When engaged in response activities:

- Know how to don/doff personal protective equipment
- Know the limitations of the PPE
- Wear hearing protection when noise levels could cause hearing damage
- Safety glasses and splash goggles are not the same. Do not use safety glasses for protection against chemical.

Use only PPE that has been approved for use with the chemicals being handled. Leather gloves are not rated for use with oils, corrosive chemicals or hydrocarbons. Wear proper footwear. Steel toe shoes are recommended when working around heavy equipment.

### 3.10 PERSONAL HYGIENE

Good personal hygiene practices are essential to maintaining worker's states of health during response operations. Working with oils and oily wastes is dirty work. The nature of the work should not be allowed to lead workers to forsake basic personal hygiene considerations.

The following guidelines are recommended for all members of the response team:

- Shower and shampoo daily before reporting to work.
- While showering, check for unusual rashes, cuts, infections, etc.
- On sunny days, apply protective sunscreen to exposed skin.
- Use a barrier cream on hands before putting on protective gloves.
- If skin becomes contaminated with a hazardous chemical, report to a decontamination area and wash the affected area thoroughly with soap and water.
- If eyes become contaminated, report to a decontamination area and rinse the eyes for at least 15 minutes with clear water.
- If injured or ill at the work site, report to one's supervisor without delay.
- Do not touch food or drink with contaminated gloves or hands.
- Do not track oil into "clean" areas.
- Do not litter while on the work site.
- Ensure all toilet facilities are clean and sanitized to maintain healthy living conditions. Report any unhealthy conditions to your supervisor.
- Keep change rooms clean and orderly.
- Dispose of garbage and refuse in a sanitary manner.
- Water coolers or cans should be properly covered, labeled, and equipped with a spigot or valve.

### 3.11 DECONTAMINATION

One or more decontamination areas would be set up during response operations. These areas are to be used for decontamination at the work site, they are not to be used as a substitute for personal hygiene at home.

Decon areas are designed to protect the worker's health and to prevent the spread of contamination into "clean" areas. In the field it is not possible for a worker to remove all

contaminated clothes each time they take a break from work. It is essential that a worker cleans their hands and face to avoid injecting or spreading oil or other chemicals to otherwise protected parts of their body.

In the field, the workers will be provided with:

- Soap, water, paper towels, waterless hand cleaner, and/or other materials for washing their face and hands
- An impermeable surface to sit on
- Refuse containers
- Eyewash station

### 3.12 SANITATION

Proper sanitation facilities must be provided at the clean up site. Lack of proper sanitation can result in outbreaks of dysentery, food poisoning, or other debilitating diseases.

Adequate facilities need to be provided for:

- Potable water
- Non-potable water (clearly labeled)
- Toilet facilities
- Food handling
- Temporary buildings
- Washing facilities
- Shower and change rooms

### 3.13 ILLUMINATION AND VISIBILITY

Poor visibility can lead to accidents. Clean up workers performing night operations should have personal flashlights. All work areas performing night operations need to be well lit.

### 3.14 CONFINED SPACES

Any area, which may contain or have the ability to contain toxic/flammable atmospheres, or oxygen deficient or excess, shall be considered to be a confined space. When entry to confined spaces needs to be performed, a safe work permit needs to be issued. The Safety Officer shall issue the safe work permit. The following are hazards and procedures, which need to be addressed on the permit:

- Atmospheric Monitoring – (Toxic, Flammable, Oxygen Deficient or Excessive.)
- Energy Isolation – LO/TO
- Mechanical Hazards
- Electrical Hazards

Procedures needed:

- Training
- Qualified Standby
- Emergency Notification
- PPE requirements
- Rescue



ANACORTES REFINERY

# ZONE C

## Response to 333 Call

### GUIDANCE DOCUMENT

Page 1 of 2

REVISION: 0

Answer Emergency Phone (333): "Emergency Phone, what is the nature of the emergency?"

<b>Time:</b>	<b>Date:</b>	<b>Name of Person Reporting Emergency:</b>	
<b>Location of Emergency:</b>			
<b>Type of Emergency:</b>			
<input type="checkbox"/> Medical <input type="checkbox"/> Fire <input type="checkbox"/> Release <input type="checkbox"/> Spill <input type="checkbox"/> Security <input type="checkbox"/> Unit Upset <input type="checkbox"/> Other _____			
<b>Response Requested:</b>			
<input type="checkbox"/> Local Evac <input type="checkbox"/> Plant Wide Evac <input type="checkbox"/> Medical Group <input type="checkbox"/> Fire Brigade <input type="checkbox"/> Rescue Team <input type="checkbox"/> Spill Brigade <input type="checkbox"/> Ambulance <input type="checkbox"/> Outside Assistance			
<b>Actions:</b>			<b>TIME</b>
<b>Localized Zone Evacuation</b> (Small and controlled releases, Small incipient stage fires, Unit trips, Unit upsets)			
1. Activate localized zone evacuation alarm in DCS			
2. Activate the ALERTUS system			
3. Notify all areas via radio (All-Call – Ch.68) Ex. "Localized evacuation for A Zone, repeat Localized evacuation for A Zone."			
4. Initiate a MPC Alerts/Send Word Now message to the appropriate groups - if requested.			
5. Make CAER notification to 911. Call 911 or E-mail <a href="mailto:ECDISPATCH@skagit911.us">ECDISPATCH@skagit911.us</a> , Notify Safety Duty Person			
<b>Message:</b> CAER Low Level Incident. The Marathon Refinery is reporting an Operational upset at the Marathon site resulting in a local audible siren. This incident is a CAER LOW LEVEL incident. No Zone notification is required. No outside assistance is requested at this time.			
6. Following "All Clear" given by via <b>Radio</b> by the affected zone's <b>Operations Supervisor</b> or <b>IC</b> on the ALL-CALL channel, do the following: <ul style="list-style-type: none"> <li>• Activate the "All Clear" in the ALERTUS system</li> <li>• <b>DO NOT</b> initiate audible "All Clear" alarm system in DCS. This is intended only to be used following a plant wide evacuation, and not localized evacuations</li> </ul>			
7. Initiate an "All Clear" message in MPC Alerts/Send Word Now to all groups who were initially notified			
<b>Injury or Medical Assistance</b>			<b>TIME</b>
1. Call Safety on radio Ch.12 during regular work hours, Zone C Supervisor on Off-Hours			
2. If requested, call 911 to request ambulance/EMT Marathon Refinery 10200 Marches Pt Rd. Anacortes			
3. Call Main Gate x119 to notify of ambulance arriving and direct to incident			
4. Notify Zone C Supervisor to meet at main gate, unless otherwise instructed			
5. Ensure Nurse, Zone C Supervisor, and Safety duty person have all been notified			

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# ZONE C

## GUIDANCE DOCUMENT

ANACORTES REFINERY

Response to 333 Call

Page 2 of 2

REVISION: 0

Plant Wide Evacuation (Fires not immediately extinguished or beyond incipient stage, Uncontrolled release or spill, Event needing immediate vehicle traffic restriction)	TIME
1. Activate all plant evacuation alarm in DCS	
2. Activate the ALERTUS system	
3. Notify all areas via radio (All-Call – Ch.68) Ex. "Plant wide evacuation for a fire in the Alky unit, repeat Plant wide evacuation for a fire in the Alky unit."	
4. Notify Utility Board Operator to start the fire water pumps	
5. Initiate a MPC Alerts/Send Word Now message to the appropriate groups	
6. Notify Safety Duty Person / Zone C Supervisor of incident and details	
7. Make CAER notification to 911. Call 911 or E-mail <a href="mailto:ECDISPATCH@skagit911.us">ECDISPATCH@skagit911.us</a> and give the following information: <ul style="list-style-type: none"> <li>Your name</li> <li>Company name</li> <li>CAER notification to 911</li> </ul> <b>Message:</b> CAER Low Level Incident. The Marathon Refinery is reporting an Operational upset at the Marathon site resulting in a local audible siren. This incident is a CAER LOW LEVEL incident. No Zone notification is required. No outside assistance is requested at this time.	
8. Following "All Clear" given by IC or EOC on the ALL-CALL channel, do the following: <ul style="list-style-type: none"> <li>Activate the audible "All Clear" alarm in DCS</li> <li>Activate the "All Clear" in the ALERTUS system</li> <li>Initiate an "All Clear" message in MPC Alerts/Send Word Now to all groups who were initially notified.</li> </ul>	

**As time permits, gather the following information:**

Wind speed:	Wind direction:
Other information:	
What time was the "all clear" sounded?	

CAER Notification Table	MESSAGE
<b>Email -</b> <a href="mailto:ECDISPATCH@skagit911.us">ECDISPATCH@skagit911.us</a> <b>Or</b> <b>Call - 911</b>	CAER Low Level Incident. The Marathon Refinery is reporting an Operational upset at the Marathon site resulting in a local audible siren. This incident is a CAER LOW LEVEL incident. No Zone notification is required. No outside assistance is requested at this time.

Time	Date	Name of Person Reporting Emergency:
<b>Specific Location of Emergency:</b>		
<b>Type of Emergency:</b>		
<input checked="" type="checkbox"/> Medical <input type="checkbox"/> Fire <input type="checkbox"/> Release <input type="checkbox"/> Spill <input type="checkbox"/> Security <input type="checkbox"/> Other		
<b>Medical</b>		
Is an Ambulance Required?		<input type="checkbox"/> Yes <input type="checkbox"/> No
		If yes, call 911 and request ambulance. Notify Main Gate x119 that ambulance is in route or to call.
		Notify Unit 25 Zone C Supervisor to meet at the main gate, unless otherwise instructed.
		Ensure Nurse, Logistics Supervisor, and Safety Duty has been notified.
Is the Scene Safe for Responders to Enter?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Chief Complaint:		<input type="checkbox"/> Rescue Required <input type="checkbox"/> Unconscious <input type="checkbox"/> Bleeding <input type="checkbox"/> Chest Pains <input type="checkbox"/> Inhalation (i.e. Toxic) <input type="checkbox"/> Burn <input type="checkbox"/> Other:
<b>If Fire:</b>		
Is Everyone Accounted for?		<input type="checkbox"/> Yes <input type="checkbox"/> No
What is the Fuel Source?		<input type="checkbox"/> Hydrocarbon <input type="checkbox"/> Other:
		Activate the emergency notification system, MPC Alerts for appropriate group.
		Ensure Boiler House Board Operator has activated the proper evacuation alarm for the incident.
<b>If Release or Spill:</b>		
Is Everyone Accounted for?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the Release Toxic?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the Oil Spill Brigade Required?		<input type="checkbox"/> Yes <input type="checkbox"/> No
		Activate the emergency notification system, MPC Alerts for appropriate group.
		Ensure Boiler House Board Operator has activated the proper evacuation alarm for the incident.

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## SECTION 6 POST INCIDENT ISSUES

### 6.1 Emergency Termination Guidelines

Emergencies within the refining industry will often have two distinct phases:

- Emergency Phase - initial time frame of an emergency where employees and the Emergency Response Team quickly react to the emergency situation to minimize its impact. This phase continues until the emergency situation is stabilized and brought under control.
- Post-Emergency Phase - post-emergency operations, which occur after initial life and safety issues and hazardous conditions, have been controlled. At this point, the problem moves towards a more structured planning and implementation process.

The following are general guidelines for the safe termination of the "emergency phase" of an incident, and the command structure for "post-emergency" issues. Specific termination criteria are incident-specific, and will be based upon the nature (e.g., fire, hazmat release, oil spill) and location of the emergency, as well as any hazardous substances, which may be involved.

#### 6.1.1 Termination Criteria

Safely terminating the emergency phase requires that all direct threats to the health and safety of Anacortes personnel and contractors operating at the scene of the incident have been controlled and/or stabilized. Although operational health and safety hazards may remain, the problem(s) that initially created the emergency have been brought under control or isolated.

Atmospheric monitoring is a critical health and safety function in determining at what point it is safe to downgrade the level of the emergency. Decisions regarding the downgrading of personal protective clothing and equipment, changing the size of control zones, and evaluating any related employee protective actions shall be based upon the results of a continuous site monitoring program.

Suggested parameters for terminating the emergency phase are as follows:

1. Flammability - if dealing with a confined space or indoor release, monitoring readings have dropped below 10% of the lower explosive limit (LEL). If dealing with an open-air release, monitoring readings have dropped below 20% of the LEL. Areas above these action values should be isolated and regarded as the hot zone.
2. Oxygen - oxygen levels are greater than 19.5% oxygen and less than 23.5% oxygen. In evaluating an oxygen deficient atmosphere, consider that the level of available oxygen may be influenced by contaminants, which are present. Areas less than 19.5% or greater than 23.5% oxygen should be isolated and regarded as the hot zone.
3. Toxicity - toxicity monitoring readings are less than TLV/TWA or PEL exposure values. Control zones should be maintained for toxic materials using the following guidelines:
  - a. Hot Zone/Warm Zone Line - monitoring readings above STEL exposure values.
  - b. Cold Zone/Warm Zone Line - monitoring readings less than TLV/TWA or PEL exposure values.
4. Energy Sources - all sources of energy have either been isolated or restored to a safe state. This would include electrical, hydraulic, mechanical and high temperature sources.
5. Radioactivity - no positive readings above background level which would confirm the continued existence of a radiation hazard.

All hazardous areas remaining after the termination of the emergency must be identified, secured, and marked off with warning tape, signs, etc. Only essential personnel with the appropriate level of training and personal protective equipment should be permitted to work in the hazard area.

## 6.2 Post-Emergency Incident Management

If there are post-emergency issues that must be addressed, command should be formally transferred from the Incident Commander to the post-emergency point-of contact. This action is critical to ensure that all on-scene activities are coordinated, and that all appropriate health and safety concerns are addressed. The post-emergency point-of-contact will vary depending upon the nature of the emergency.

## 6.3 Recovery Procedures

Efficient recovery and comprehensive incident investigations allow the resumption of normal operations and assist in preventing similar incidents from occurring in the future. This section describes the requirements and responsibilities of accident investigation, identifies a systematic approach to damage assessment, discusses minimizing business interruption, describes the necessity of accident criteria and follow ups and presents some general guidelines on the Company's handling of claim procedures.

All recovery activities must be approved prior to commencement by the Safety Supervisor. Serious incidents normally are associated with legal and regulatory considerations that are placed on the physical site of the incident. The Safety Supervisor will ensure that the Company meets all regulatory requirements imposed by the responding agencies. The following activities should be considered during the restoration and recovery phase:

- Residual contamination of equipment, soil, pavement and/or groundwater may require assessment. Depending upon the nature of the incident, wipe samples may be necessary to determine whether the surfaces of unit structures or pavement require decontamination. It may also be necessary to sample soil, surface water, sediments, and/or groundwater to assess potential spill impacts on the environment.
- Sampling procedures should follow regulatory guidelines, including careful documentation, chain of custody, and quality assurance /quality control (QA/QC). If contamination is found which will require subsequent mitigation, a remedial action plan should be developed and implemented.
- It may be necessary to dispose of contaminated protective clothing, decontamination solutions, runoff water, or other materials that may be considered as hazardous waste following an emergency. The Environmental Department will be responsible for arranging for waste characterization and disposal, as appropriate.
- Restoration of process operations at all units is a priority following the stabilization of the emergency. The On-Scene Commander or the Incident Commander will declare an incident "under control", at which point discussion will take place to determine the prioritization for maintenance and operations activities to bring the units on-line.
- Personal protective clothing and equipment (PPE) requirements during restoration will be determined by the Incident Commander in consultation with the Safety Officer, and with Safety Department personnel. Requirements will be based upon the results of air monitoring, the potential for re-ignition, and other related factors. PPE requirements shall take into account the overall safety of restoration personnel, including considerations such as mobility, comfort, and heat stress.
- Prior to start-up, pre-checks, inspections, testing, start-up and process coordination procedures for returning idled units to normal operation should be reviewed, as appropriate. Refinery personnel

must monitor for leaks, pressure build-up, gas generation or failures in valves, pipe or other equipment during the start-up process.

#### 6.4 Documentation

Incident activities will be documented during the emergency using a combination of operational checklists, reporting forms, and logbooks. At major or significant emergencies, the Incident Commander should either designate an aide or assign the Planning Section to handle the documentation of events, site conditions, personnel present on the scene, and other pertinent information that can be used both during and after the incident.

#### 6.5 Incident Investigation

A thorough incident investigation is essential to effective emergency response planning. One of the primary goals of pre planning for emergencies is to minimize the potential for emergencies to develop. The purpose of investigating an incident is to identify the cause of the incident so that measures can be taken to reduce the potential for recurrences. It is the Company's policy that all incidents and near misses are reported. The following standards are used in the Refinery's Incident Investigation work process:

- RSP 1704: Incident Investigation
- RSP 1310: PSM/RMP Incident Investigation
- GEN 1006: Incident Reporting and Investigation Standard
- PS-07: Near Miss/Incident reporting and Investigation

#### 6.6 Critique and Follow Up

In the event of a formal response to a refinery-wide emergency, an incident response critique shall be completed. A critique of incidents is essential in helping to identify areas for improvement, as well as any positives. Participants in the critique should include anyone who was involved in the incident (including but not limited to: Operations, ERT members (including First Responders), EOC members if applicable, Maintenance personnel (including Contractors) if applicable, Security if applicable, Evacuation Wardens if applicable). The critique is open to anyone who would like to attend, and anyone who has additional information to add to the critique.

This critique will be used to identify and track action items resulting from responses to incidents. These items will be evaluated by management for inclusion into the location action item tracking database. It is the responsibility of the acting IC to ensure that the incident response critique is completed. This could be the off-hours Fire Chief if the event is a minor incident where the "all clear" has been activated prior to the arrival of the ERT or ES&S Department personnel. In the event of a more involved incident where the ERT is utilized, the incident response critique will be completed by the acting IC with assistance from the IC Staff and Responders.

The incident response critique shall be completed as soon as practical, but no later than 48 hours after the "all clear" has been sounded. Depending on the magnitude of the incident, more than one incident response critique may be needed to capture all response activities. In this case, multiple Incident Response Critique Forms will be completed. A blank Incident Response Critique Form can be found at the end of this section.

If anyone has critique items but are unable to attend the critique, please relay these concerns to the Fire Chief or the Safety Supervisor.

## 6.7 Claim Procedures

The Finance Department will coordinate the issuance of an in-plant incident number/work order number to capture response costs. In addition, the Finance Department will provide phone numbers and contact names for claims from outside of the plant.

## 6.8 Critical Incident Stress Management

Workers responding to emergency events and or disasters may see and experience events that will strain their ability to function. These events, which include having to witness or experience tragedy, death, serious injuries, and threatening situations, are called "Critical Incidents." The physical and psychological well-being of those experiencing critical incident stress, as well as their future ability to function through a prolonged response, will depend upon how they manage their stress reaction. These stress reactions may last a few days, a few weeks, a few months, or longer depending on the severity of the traumatic event. Most people recover from the stress reactions when they use positive coping and stress management skills. If left unmanaged, it may lead to more significant problems, including physical illnesses, relational distress, substance abuse, or even psychological concerns such as Acute Stress Disorder, Anxiety or Panic Disorders, Depression, or Post Traumatic Stress Disorder (PTSD).

If a situation occurs that requires critical incident stress response, resources will be brought in by the Human Resource department to support the responders and/or refinery employees.

# FIRE BRIGADE POST-INCIDENT CRITIQUE FORM

## *GENERAL INFORMATION*

Incident Name (for ICS purposes):	
Date of Incident:	Time of Incident:
Location:	
Type of Incident (fire, rescue, hazmat, medical):	
Level of Incident:	

## *INCIDENT MANAGEMENT SYSTEM*

Incident Commander:	Ops. Chief/BC:
Site Safety:	
Captains:	LTs:
Outside Agencies:	
Location of Command Post:	
Note: Attach sign-in sheet to this critique form.	

## *RESPONSE ACTIVATION*

How was the response activated?
Action Items:

## *OPERATIONS DEPARTMENT RESPONSE*

Any incipient response actions taken? (example: dry chem., steam hose, monitor, hose line, fixed system)
Did first responders wear proper PPE? (yes/no) Explain:
Action Items:

## *FIRE DEPARTMENT RESPONSE*

What pieces of FD equipment responded to the incident?
Did all equipment work properly? (yes/no)
Was there enough PPE available? (yes/no)
Action Items:

## *COMMUNICATIONS*

Was the communications effective and utilized properly? (yes/no)
Action Items:

## *EVACUATION*

Was the area evacuated?
Were all personnel accounted for? (yes/no)
Action Items:



## ERT Drill/Incident Critique Form

Date		Time	
Drill/Incident Description			

<b>Positives</b>	

Opportunities for Improvement	Item	Responsible Person	Date Due	Date Completed

Fire Chief Signature	
Date	



**Date:**

**Title of Incident:**

**Incident Response Critique:**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
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- 26.

**ATTENTION:** Printed copies should be used with caution.

The user of this document must ensure the current approved version of the document is being used.

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## SECTION 7 SPECIFIC RESPONSE ACTIONS

### 7.1 General Information

#### 7.1.1 Definitions and Applicability

The following criteria should be applied to assist in determining whether a release requires an Emergency Response:

- If the release does not result in exposure to safety or health hazards to employees, contractors, or the public, an emergency response is not required.
- If personnel trained in accordance with 29 CFR 1910.120, “Hazardous Waste Operations and Emergency Response (HAZWOPER)” in the immediate release area can contain or mitigate the release, an emergency response is not required. The immediate release area is the unit work area nearest to the release.
- If maintenance personnel trained in accordance with 29 CFR 1910.120, “Hazardous Waste Operations and Emergency Response (HAZWOPER)” can readily repair a small release caused by routine maintenance activity, or, if a release, regardless of the cause, does not need to be taken care of immediately, an emergency response is not required.

#### 7.1.2 Emergency Assessment

The emergency should be categorized based upon its size and nature (e.g., fire, spill, medical emergency), potential duration and severity, and the ability to be managed with available resources. On-scene personnel must begin to address the issue of matching the nature of the problem and its potential impacts, with the level of resources and expertise available within the refinery and through mutual aid. The incident response level will be determined by the IC based on the criteria in [Section 2](#).

### 7.2 Roles and Responsibilities

#### 7.2.1 Overall Responsibility

The Anacortes General Manager has overall responsibility to direct all Marathon Anacortes Refinery operations.

#### 7.2.2 Environmental, Health & Safety

The EHS Manager has been given the responsibility to develop and implement the site-specific Safety and Health Program, and to verify Marathon Anacortes Refinery’s compliance.

#### 7.2.3 Area Team Leads, Supervisors, and Foreman

Designated Area Team Leads, Supervisors, and Foreman have the responsibility to oversee day-to-day compliance with this manual.

#### 7.2.4 Operations Personnel

Unit process operators play a critical role in the quick and effective control of emergency situations. Upon recognizing or being notified of an emergency involving the release of flammable vapor, process operators must shut down all operating portable equipment having gasoline or diesel internal combustion engines or electric motors (e.g., portable air compressor, light plants, generators) in the area. Also, as part of their response, process operators may take actions to isolate valves, activate fire protection systems, and initiate unit shutdowns prior to the arrival of the emergency Response Team (ERT) providing the following conditions are satisfied:

- Personnel are wearing adequate personal protective clothing and equipment for the task at hand.

- Personnel have been provided adequate training in the tasks and procedures they are to perform.
- Personnel are using the buddy system.

These limited actions assume that the ERT has been alerted and that the actions taken are necessary to prevent the incident from increasing in severity. Once the ERT arrive on-scene, operators will be restricted to performing those actions that are allowed based on their respective level of training (e.g., HAZWOPER, etc.).

Field operations employees of the area involved with the emergency must report the emergency to the unit supervisor. The Field Operator must call for help and take incipient response measures to control and suppress the emergency and secure the unit if it is safe to do so. The Field Operator is responsible for evacuation of non-essential personnel and accounting for all personnel in their process area.

Field operations employees of the area not immediately involved in the emergency are responsible for reporting to their Console Operator or their designee for further instructions. The Field Operator or their designee is responsible for determining the level and location of the emergency, accounting of all workers in their process area, and reporting of that information to the Security Operations Center.

The unit supervisor is responsible for directing activities to secure the unit. The Console Operator is responsible to remain at the controls until instructed to evacuate by an appropriate supervisor or ERT leader and is to remain in radio contact with the unit supervisor.

If operator's and other employees lack the capabilities to respond in a safe manner, they should evacuate the area and report to their evacuation assembly point.

#### **7.2.5 Maintenance Personnel**

Maintenance employees working on process units during an emergency are responsible for immediately stopping work, including shutting down all hot work, proceeding upwind to the primary evacuation point for the area where they are conducting work, checking in with the evacuation point coordinator, and awaiting further instructions. Area maintenance supervisors are responsible for accounting of all maintenance personnel under their direction and reporting the number of employees accounted for and not accounted for to the Field Operator or designee.

Maintenance employees working in shops are responsible for immediately stopping all work, shutting down any hot work, and reporting to the evacuation area.

#### **7.2.6 Contractor Personnel**

The Company Contract Sponsor is responsible for ensuring that companies that contract to the Company receive a site-specific safety orientation for all their employees who work on-site. This orientation covers the facility rules and procedures including emergency alarms, evacuation points, and evacuation procedures along with general policies and programs.

During an emergency, Contractors are responsible for stopping all work, which includes shutting down all hot work, proceeding immediately (upwind) to the primary evacuation point for the area they are conducting work in and badge in at the reader for accountability. If you are driving: Pull over, get out of the vehicle and report to the nearest evacuation point if it is safe to do so.

Contract supervisors are responsible for accounting of all employees under their direction and reporting, to the Field Operator of each unit or their designee, the number of their employees accounted for and not accounted for.

### 7.2.7 Skilled Support & Specialist Personnel

Skilled support and specialist personnel are any employees who are called upon to assist during an emergency due to training, knowledge, or work experience.

### 7.2.8 Visitor Responsibilities

Company employees bringing visitors to the facility are responsible for the health and safety of those visitors during an emergency. Those visitors who will be doing work within the Refinery without continuous escort by a Company employee must be given the site-specific Safety Orientation provided to Contractors working within the facility.

## 7.3 Response Actions and Limitations

### 7.3.1 Response Actions & Limitations

When an emergency occurs, prompt and appropriate action by Marathon Anacortes Refinery personnel is essential to a safe and efficient resolution to the emergency. This section defines the appropriate actions and limitations of the following personnel during an emergency:

- Non-Essential Personnel
- Unit Operators
- ERT Members

### 7.3.2 Non-Essential Personnel

Non-essential personnel are personnel, other than ERT Members, that are assigned duties other than direct operating responsibility for process units and process areas (Ex: Wharf, Tank Farm). This group includes maintenance personnel, support groups, and contractors.

Non-essential personnel are expected to follow the evacuation procedure when in the refinery. Refer to *Section 2* for guidelines on evacuation of Non-essential Personnel.

### 7.3.3 Unit Operators Response Actions

Unit Operators are refinery personnel that are assigned direct operating responsibility for process units and process areas (Ex: Wharf, Tank Farm). Unit Operators are provided annual training at the Incipient Industrial Fire Brigade level. Specifically, they are trained to operate dry chemical extinguishers, fixed and portable fire monitors, and handle hoses and carts under incipient or defensive modes. Additionally, Unit Operators are trained in the use of PPE, including SCBA, which may be required to perform their job during emergency situations.

Operators are expected to perform prompt and safe actions to mitigate emergency conditions and prevent an incident from becoming worse. However, failure to take appropriate protective measures can lead to serious injury or exposure to response personnel. Unit Operators are expected to perform the actions described below, in accordance with 29 CFR 1910.120.

#### 7.3.3.1 Operations actions prior to IC establishment

Prior to Incident Command establishment, the Shift Supervisor or person in charge shall perform the following actions:

- Assure all personnel are accounted for
- Ensure non-essential personnel have evacuated the area
- Evaluate the emergency
- Determine the appropriate response
- Proceed to implement the response up to and including shutting down and securing the unit

- Determine the appropriate PPE for all responding Operations personnel within the affected area. The on-site Operations Supervisor is the acting Incident Commander and will have ultimate control over the response until relieved of those duties by the Logistics Supervisor, Safety Department personnel or a ranking ERT member.

#### **7.3.3.2 Operations actions upon IC establishment**

Once the Incident Command system is established as part of the response, then the IC will have ultimate control over the incident. All actions by operations shall be coordinated through the IC within the effected zone. Operations actions upon Incident Command establishment include the following:

- Operations Supervisor or designee will liaison between operations and IC in securing the unit.
- Operators will work through operations supervision coordinating actions with the IC.
  - Area Operations personnel are required to report to the Command post or directed location to integrate and coordinate actions required by either Operations or the Emergency Response Team.
- At the conclusion of the emergency, the IC will turn control back over to operations supervision for recovery and/or normal operations.

### **7.3.4 Limitations on Individual Operator Actions**

#### **7.3.4.1 Operator actions outside hot zones**

- Operators must consider their personal safety as well as their co-workers safety prior to taking actions during an emergency.
- PPE must be utilized as appropriate to minimize risk.
- Activation of fixed deluge systems, operation of fixed fire monitors, portable monitors, or foam carts are acceptable if the operation of the equipment can be done from outside the hot zones. The hot zone areas are where personnel would reasonably be considered to be involved in the incident as it currently exists, or as it could exist if conditions change, and includes the following:
  - Contact with heat, flame or smoke if the release ignites.
  - Contact with hazardous levels of H<sub>2</sub>S or benzene from the release, including if the wind changes.
    - Air Monitoring needs to be completed and analyzed for potential exposure concerns.
    - Operators must use supplied air (SCBA) when entering incident areas with the potential for inhalation hazards (including during air monitoring)
  - Contact with hazardous materials, including direct contact or secondary splash or drip contact (spray or splash)
    - Operators may enter a toxic atmosphere if PPE is evaluated, and if proper PPE is available.
- Use of fixed and portable monitors. This equipment can be left unattended, if necessary.
- Isolation of valves, shutdown of pumps, and other actions to secure the incident that can be safely accomplished from outside the hot zone.

#### **7.3.4.2 Operator actions within hot zones**

- Personal safety is the top priority.
- Activities which must occur to secure the incident within the hot zone are limited.
- Industrial regulations recognize that well timed actions by Operators are sometimes necessary to prevent incident escalation, but even so, they are permitted only under specific restrictions. Operators intending to enter the hot zone during an incident are permitted to do so only under the following conditions:
  - They have already activated an emergency response (i.e., called x333).
  - They are wearing appropriate PPE, which includes SCBA for hydrocarbon or other hazardous material releases.

- The 2 in - 2 out rule needs to be followed. That is 2 people working within the hot zone requires 2 additional people located outside the hot zone equipped with the same level of PPE and in visual contact to perform rapid response actions if a rescue situation arises.
- They are trained in actions that will be performed and are knowledgeable on the unit and emergency shutdown procedures.

**Note:** Operators that do not have knowledge of the unit, zone and emergency shutdown procedures should respond in a safe manner and in accordance with standard operating procedures are to evacuate the hot zone.

- The actions they are taking can be accomplished safely.
- These actions must be transferred to the Emergency Response Teams when they arrive on scene.
- Operators shall report and provide support to the IC and ERT as deemed necessary.

### 7.3.5 Zone C Shift Supervisor

The Zone C Supervisor will fill the role of Off-Hours Incident Commander. It is their responsibility to assume the role of IC during incidents that occur off-hours. The Off-Hours IC is responsible for:

- Accountability of all personnel, responders and essential personnel, within the incident area
- Perform an initial size-up of the incident
- Work with Operations to establish a hot zone.
- Develop an initial containment plan for the incident
- Direct and lead the Emergency Releasable Operations Positions group and Fire Brigade

The role of IC can be transferred to a member of the Health & Safety Department or to a Fire Brigade Officer, upon their arrival. The Zone C Shift Supervisor will remain at the Incident Command Post in a support role until released.

If the Zone C Shift Supervisor needs to leave the refinery during off-hours, they shall do the following prior to leaving:

- Designate a Zone C Temporary Shift Supervisor as the Off-Hours IC until the Zone C Shift Supervisor returns.
- If a trained Zone C Temporary Shift Supervisor is not on-shift to fill the position, notify the Safety Duty Person of their departure and who will fill the Off-Hours IC position. If no one is available, the Safety Duty Person will fill the Off-Hours IC position.

## 7.4 Emergency Response Team Operations Framework

As a guide for managing an incident, both at the scene of the incident and in the Command Post, information from Eight Step Incident Management Process© is provided as a framework.

- a) Site Management and Control
- b) Identify the Problem
- c) Evaluate the Hazards and Risks (RECEO)
- d) Select the Proper Level of Personal Protective Clothing
- e) Coordinate Information and Resources
- f) Implement Response Objectives
- g) Decontamination and Clean-up Operations
- h) Terminate the Emergency



### Step 1 – Site Management and Control

- During approach to the incident scene, avoid committing or positioning personnel and apparatus in a hazardous position or situation. Assess the situation and consider having an escape route out of the area if the situation should suddenly deteriorate.

*CAUTION: ERT personnel must be aware that certain chemical releases may travel throughout the refinery property and impact ERT response routes. In addition, some chemicals may produce vapor clouds, which may be mistaken for fog or other normal weather and environmental conditions. Examples of such chemicals would include anhydrous ammonia and LP gas.*

- Establish command of the incident and establish a field command post. Initial responsibilities should include receiving a briefing from unit supervisor or operator, including a status of the incident, and initial control and countermeasures presently being used/implemented.
- Determine the following information:
  - Is the unit/process area manned or unmanned?
  - Are all refinery personnel (e.g., process, maintenance, contractors, visitors) accounted for?
  - Number and location of injured personnel.
- Restrict access to the emergency site to only authorized essential personnel; all non-essential personnel should be isolated from the problem. The location of the restricted area (hot zone) should be identified and communicated by radio to all personnel operating on the site. Methods of identifying the restricted area would include barricade tape, traffic cones, visible landmarks, etc.
- Establish a Staging Area for responding mutual aid equipment and personnel.
- Initiate refinery protective actions (evacuation or protection-in-place), if necessary. Confirm that all employees, contractors and visitors are accounted for.

### Step 2 – Identify the Problem

- Identify the nature and severity of the immediate problem, including the recognition, identification and verification of the material(s) involved and any potential or existing life hazards. If multiple problems exist, prioritize them and make independent assignments.
- As necessary, determine the following:
  - What unit(s) is involved and what materials are burning and/or being released?
  - What process equipment is involved (e.g., pumps, heater, pipe rack, etc.)?
  - Who is the Unit Supervisor (specify by name and title)?
- Determine the Level of Incident according to the Anacortes Refinery incident classification system.

### Step 3 – Evaluate the Hazards and Risks (RECEO):

- Evaluate the overall incident situation, including:
  - Previous and current status of the incident.
    - Were there any abnormal operating conditions immediately before the emergency?
  - Were there any equipment problems or changes immediately before the emergency (e.g., changing over pumps, etc.)?
- Overall condition of the HAZMAT and/or process containment systems.
  - Is fireproofing present?
  - Is the process isolated?
  - What is structural stability and potential failure of the unit (5, 10, 15-minute rule)?
    - Instrumentation = 5 minutes
    - Vessels and containers = 10 minutes
    - Structural steel = 15 minutes
  - Is the process stable (i.e., temperatures, pressures and reactions)?

- Are relief valves present? Operating?
- Is there a flare system? Is it operational?
- Is there an emergency shutdown system? Is it operational?
- Have power and all other energy sources been isolated?
- Environmental conditions, including runoff, wind, precipitation, topography, etc.
  - Is drainage control in-place? What is the capacity?
  - Are hydrocarbons floating on water?
  - Is the runoff hazardous to emergency response personnel?
- Exposures, including people (facility personnel, emergency responders and the public), property (other process units), environment and systems disruption (i.e., shutdown of ship channel traffic).
- Has an isolation strategy been developed?
- Modifications to the suggested size and perimeters of the hazard control zones.
- Monitor the emergency scene to determine the concentrations of contaminants present (e.g., toxicity, flammability, oxygen deficiency) and their approximate locations.

**CAUTION: Emergency responders taking air samples must use personal protective equipment and SCBA to match the potential hazard.**

- Based upon the hazard and risk assessment process, determine the appropriate strategy, tactics and mode of operation. Remember that offensive tactics increase the risks to emergency responders.
- It is often helpful when evaluating strategies to consider RECEO.
  - R = Rescue of people unaccounted for is the 1<sup>st</sup> priority, this can include responders
  - E = Protection of exposures that could fail, adding to the incident.
  - C = Containing the incident to the smallest area possible, and the prevention of hazardous materials spreading to area's outside the involved area. This can include maintaining open oily water sewers, diking and sand bagging operations. Additionally, containing the incident can include asking about remote shutoffs.
  - E = Large pressure releases or fires generally can only be controlled by shutting off the source of fuel or chemical. Some spills or may be controlled by the proper application of Hazmat foam blankets. Spill or tank fires may be extinguished by the proper application of Class B foam blankets.
  - O = Overhauling is to prevent a re-release or re-kindle; this can be accomplished by removing either the hazardous material and or the ignition source and re-applying a foam blanket.
- Offensive Operations – Require responders to control/mitigate the emergency from within/inside the area of high risk. Examples would include entering the hot zone to isolate a valve or unit in a contaminated atmosphere, aggressive fire attack and firefighting foam operations, applying leak control devices on leaking railroad cars, etc.
- Defensive Operations – Permits responders to control/mitigate the emergency remote from the area of highest risk. Examples would include exposure protection, spill control, the placement of booms, the use of water steams to disperse vapor cloud releases, etc.
- Non-Intervention Operations – Pursuing a passive attack posture until the arrival of additional personnel or equipment or allowing the fire to completely burn itself out.

#### Step 4 – Select the Proper Level of Personal Protective Clothing

- The selection of personal protective clothing will depend upon the hazards and properties of the materials involved, and the response objectives to be implemented (i.e., offensive, defensive and non-intervention). In evaluating the use of specialized protective clothing, the following factors must be considered:
  - The hazard to be encountered, including the specific tasks to be performed.

- The level and type of specialized protective clothing to be utilized.
- The user or the individual(s) who will use the PPE in a hostile environment. Remember – specialized protective clothing places a great deal of both physiological and psychological stress on an individual.
- The following levels of personal protective clothing shall be utilized by ERT personnel, as appropriate:
  - Structural Firefighting Clothing (helmet, fire retardant hood, turnout coat, running pants and gloves) and positive-pressure, self-contained breathing apparatus (SCBA) should be considered the minimum level of protective clothing.

*CAUTION: Structural firefighting clothing is NOT designed to offer any chemical protection, and turnout boots will provide only limited protection against liquids in-depth. Personnel should be aware of the potential chemical burn hazards associated with the runoff water and accumulated liquids, which exist at refinery emergencies, and should avoid kneeling in areas where such hazards exist.*

- Chemical Vapor Protective Clothing – This is specialized chemical protective clothing which, when used in conjunction with air supplied respiratory protection devices, offers a sealed, integral level of full-body protection from a hostile environment. It is primarily designed to offer protection from both gases and vapors, as well as total body splash protection. It may also be referred to as EPA Level A chemical protective clothing.
- Chemical Splash Protective Clothing – This is specialized protective clothing that protects the wearer against chemical liquid splashes but not against chemical vapors or gases. It is primarily designed to provide personal protection against both liquid splashes, solids, dusts and particles. It can be found in both single and multi-piece garment arrangements and may also be referred to as EPA Level B chemical protective clothing.
- Ensure that all emergency response personnel are using the proper protective clothing and equipment equal to the hazards present. Do not place personnel in an unsafe emergency condition.
- Order mutual aid and other specialized equipment and expertise early in the incident. If you are unsure what your requirements are, always call for the highest level of assistance available. Do not wait to call for emergency assistance.
- Full protective clothing and SCBA will be considered the minimum level of protective clothing for hazmat operations.

#### Step 5 – Coordinate Information and Resources

- Confirm that the Incident Command Post (ICP) is in a safe area. The ICP must be physically separated from all ERT personnel and units involved in the tactical operation. All personnel not directly involved in the overall command and control of the incident should be removed from the ICP area.
- Expand the IMT and create additional sections and sectors, as necessary.
- Ensure that all appropriate internal and external notifications have been made. Remember that Federal and State regulations require the refinery to make proper and prompt notification of regulatory authorities.
- Coordinate strategic action plans with local authorities (e.g., Fire Department, U.S. Coast Guard, state agencies), as appropriate.
- Confirm emergency orders and follow through to ensure that they are fully understood and correctly implemented. Maintain strict control of the situation.
- Make sure that there is continuing progress toward solving the emergency in a timely manner. Do not delay in calling for additional assistance if conditions appear to be deteriorating.
- What level(s) of firefighting foam concentrate, or hazmat concentrates are available in case of re-ignition or re-release? Are back-up supplies available?

- Provide regular briefing sessions for all IMT Command and General Staff on the status of the incident at regular intervals. All IMT Section Chiefs, in turn, are responsible for briefing their Section personnel, as necessary.
- Provide regular updates to the Emergency Operations Center and refinery management personnel, as appropriate.

### Step 6 – Implement Response Objectives

- Implement response objectives. Remember that offensive tactics increase the risks to emergency responders; evaluate the risks of offensive control tactics before sending emergency response crews into the hazard area.
  - Offensive Operations – Require responders to control/mitigate the emergency from within/inside the area of high risk. Examples would include entering the hot zone to isolate a valve or unit in a contaminated atmosphere, aggressive fire attack and firefighting foam or hazmat foam operations, applying leak control devices on leaking railroad cars, etc.
  - Defensive Operations – Permits responders to control/mitigate the emergency remote from the area of highest risk. Examples would include exposure protection, spill control, the placement of booms, the use of water steams to disperse vapor cloud releases, etc.
  - Non-Intervention Operations – Pursuing a passive attack posture until the arrival of additional personnel or equipment or allowing the fire to completely burn itself out.
- Ensure that properly equipped back-up personnel wearing the appropriate level of personal protective clothing are in-place before initiating operations.
- Entry Teams have been briefed prior to being allowed to enter the hot zone. For hazmat emergencies, this should include the following:
  - All watches, jewelry and personal valuables have been removed
  - Objects of the entry operation
  - Radio communications, SCBA and PPE checks
  - Emergency escape signals
  - Decontamination area location, set-up and procedures
- Are exposures continuing to be protected? Have automatic fixed protection systems (i.e., water, foam) been activated? Has manual exposure protection been initiated? Cooling streams on types of exposures, including:
  - Unprotected vessels
  - Unprotected structural components (e.g., pipe bridges, support structures)
  - Unprotected hazards (e.g., compressed gas containers, valves, piping and flanges, special hazards, etc.)
- Application of adequate firefighting foam to form an enough blanket, which covers and cools the liquid fuel and other exposed surface areas.
- Fire department will try to minimize and control foam run-off during an emergency. Clean-up efforts will be managed through environmental department to minimize waste.

*DANGER: Just because you see a visible foam blanket on the spill does not ensure adequate vapor suppression. The area should be regularly monitored with a combustible gas monitor (CGM) to confirm the effectiveness of the foam blanket.*

### Step 7 – Decontamination and Clean-Up Operations

- The Emergency Response Team is responsible for the set-up and establishment of decon operations at a hazmat emergency. Ensure that the decontamination operations are coordinated with fire and/or entry operations. This should include the following tasks:
  - The decontamination area is properly located within the warm zone, preferably up-slope and upwind of the incident location.

- The decontamination area is well-marked and identified.
- The proper decontamination method and the type of personal protective clothing to be used by the Decontamination Team have been determined and communicated, as appropriate.
- Ensure proper decontamination of emergency personnel before they leave the scene. For example, H<sub>2</sub>S vapors, flammable gases, and some toxic and corrosive gases can saturate protective clothing and be carried into “safe” areas.
- Establish a plan to cleanup or dispose of contaminated supplies and equipment before cleaning up the site of a release. Federal and state laws require proper disposal of hazardous waste.

### Step 8 – Terminate the Emergency

- Account for all personnel before securing emergency operations.
- Conduct an incident debriefing session for all ERT personnel. Provide any background information necessary.
- Ensure that the following elements are documented:
  - All operational, regulatory and medical phases of the emergency, as appropriate.
  - All equipment or supplies used during the incident.
  - Obtain the names and telephone numbers of all key individuals. This should include contractors, public officials and members of the media.
- Ensure that all emergency equipment is re-serviced, inspected and returned to proper locations.
- An incident critique should be conducted within two weeks of all major and significant incidents.

## 7.5 Fire Emergencies

### 7.5.1 Responsibilities

#### Person Discovering Fire

The first person discovering the fire shall:

- Notify operations and/or supervisor of the fire. Call x333 to report the fire after informing operations/supervisor. If it is safe, initiate incipient response actions to the level of training received. These actions can include:
  - Turning on fire monitors and directing the stream at the fire
    - If the fire is from an LPG source, do not direct a stream at the fire. Instead, direct the stream on the surrounding tanks or vessels to keep them cool.
  - Using a fire extinguisher
- If the scene is unsafe, evacuate the area and establish a barricade to prevent entry.
- If ERT is called to respond, provide information on the fire, including material on fire and actions taken.

#### Operations Supervisor

Upon notification, the Operations Supervisor shall:

- Assume responsibility of IC until relieved by Emergency Response IC.
- Evaluate the situation and take necessary actions to contain/extinguish the fire within the level of training provided.
- If additional resources are needed, request Security to activate the emergency notification system for an appropriate Level for ERT response.
- If additional resources (ERT) are not deemed necessary, notify Safety/ERT.

#### Tank Farm Operator

- Ensure that the Firewater Pumps are activated manually if needed to maintain adequate firewater system pressure.

- Firewater pressure must be maintained with the firewater pump to provide adequate firewater pressure (i.e., 125 psi) throughout the plant.

#### Site Safety Officer

In order to maintain a high degree of safety during fire responses, the IC shall designate a Site Safety Officer to monitor accountability of all personnel at the incident site. The Site Safety Officer is responsible for ensuring that all precautions are taken by emergency responders and that only authorized personnel are permitted near the emergency scene. The Site Safety Officer must correct and/or advise the IC and/or the Officer of any unsafe acts, conditions, or situations.

The Site Safety Officer will use monitoring data to establish and/or alter the hazard control zones and shall ensure actions are taken to maintain the established hazard control zones.

#### Emergency Medical Support

Specific responsibilities of EMS personnel include the following:

- Establish a Medical Group, at the direction of the IC.
- Provide technical assistance to ERT personnel in the development and analysis of EMS-related data and information. This shall include signs and symptoms of exposure, medical treatment procedures, patient handling guidelines, transportation recommendations, and medical resource requirements.
- Designate a treatment and triage area in proximity to the Decontamination Area.
- Coordination and supervision of all patient handling activities, including decontamination, treatment, handling and transportation of contaminated victims. This shall include recommendations for the protection of all EMS personnel.
  - Communications and coordination with local hospitals and specialized treatment facilities, including the Poison Control Center, as necessary.

#### 7.5.2 Hazard Control Zones

The following perimeters (control zones) will be established by the Site Safety Officer at all incidents. The shape and dimensions of the control zones shall depend upon such factors as the size and nature of the release (liquid vs. vapor, instantaneous vs. continuous release), chemical concentrations present and related health exposure values, wind direction and velocity, surrounding topography and/or adjacent exposures, etc.

##### Hot Zone – (Restricted, High Hazard Area)

Immediate hazard area surrounding the problem/release site, which extends far enough to prevent adverse effects from hazardous materials releases to personnel outside of the zone. Only to be entered by a minimum of 2 trained fire brigade personnel under monitored conditions. During both entry and reconnaissance operations, a back-up team (minimum of two personnel) with appropriate protection will be stationed at the edge of the hot zone or in a location where they can quickly gain access to the entry team in an emergency.

***DANGER: Only those individuals directly involved in the emergency response effort, wearing the proper level of personal protective clothing, and working in pairs under the control of the IC shall be allowed access into the hot zone.***

##### Warm Zone – (Limited Access Area, Decontamination Zone)

Area surrounding the hot zone and bounded by the cold zone where entry support and decontamination operations, if required, take place. It includes a corridor with access control points to assist in reducing the spread of contamination. Entry is restricted to ERT personnel, as well as those assigned by the IC. Individuals entering the warm zone must be wearing appropriate personal protective clothing.

### Cold Zone – (Support Area)

Area surrounding the warm zone, which presents no hazard to emergency response personnel and equipment. Reserved for emergency services functions only, such as the command post and other support functions deemed necessary to control the incident. Refinery management and related support personnel without the proper level of personal protective clothing shall be limited to only the cold zone. The outer boundary of the hazard control zones will be the fire/security lines that should be established at major emergencies and tightly controlled. Neither the public at large nor refinery personnel not directly involved in the management of the emergency should have access to the cold zone, under most circumstances.

### Action Levels for Control Zones

Action levels for the establishment of control zones are as follows:

- Flammability – if dealing with a confined space or indoor release, the IDLH/action level is 10% of the lower explosive limit (LEL). If dealing with an open-air release, the initial action level is 20% of the LEL.
- Oxygen – an IDLH oxygen deficient atmosphere is 19.5% oxygen or lower, while an oxygen-enriched atmosphere contains 23.5% oxygen or higher. In evaluating an oxygen deficient atmosphere, consider that the level of available oxygen may be influenced by contaminants, which are present.
- Toxicity – unless a published action level or similar guideline (e.g., Emergency Response Planning Guideline – ERPG) is available, the STEL or IDLH values should initially be used. If there is no published IDLH value, ERP may consider using an estimated IDLH of ten-times the TLV/TWA. Control zones can be established for toxic materials using the following guideline:
  - Hot Zone – monitoring readings above IDLH exposure values.
  - Warm Zone – monitoring readings equal to or greater than TLV/TWA or PEL exposure values.
  - Cold Zone – monitoring readings less than TLV/TWA or PEL exposure values.
- Radioactivity – any positive reading above background level would confirm the existence of a radiation hazard and should be used as the basis for initial actions.

### 7.5.3 Hot Zone Safety Operations

The following safety considerations apply to all operations within the hot zone:

- a) Entry into the hot zone shall be restricted to trained personnel or individuals possessing knowledge of the problem or situation, under monitored conditions. All personnel shall be in the appropriate type and level of protective clothing and will function under the direct control of the IC or the Site Safety Officer.
- b) The type and level of personal protective clothing for the hot and warm zones shall be specified by the IC or the Site Safety Officer.
- c) The Site Safety Officer should be in radio communications with the entry and back-up teams, and if possible, have an unobstructed view of their locations.
- d) For operations inside of confined areas, a complete search shall be made of the hazard area to collect as much data as possible.
- e) All personnel on the scene must remain alert for members in distress while in personal protective clothing. The emergency evacuation signal is indicated by blowing the sirens on the emergency response vehicles.



The following safety considerations apply to emergency operations within the hot zone at hazardous materials emergencies.

- a) Prior to donning turnout gear, personnel should inspect one another's equipment to ensure that it is in good working order
- b) All reconnaissance and attack operations at fire emergencies shall only be conducted as directed by the IC.
- c) Prior to entry into the hot zone, all entry teams should receive a briefing session from the IC and/or the Site Safety Officer. Subject matter shall include expected operating conditions, objectives of the entry operation, control techniques and procedures, decontamination operations, and any other pertinent emergency procedures as the situation warrants.
- d) Airline hose unit with back-up air capability – as determined by the IC or the Site Safety Officer.
- e) All personnel on the scene must remain alert for members in distress while in personal protective clothing. The emergency distress signal is indicated by waving both arms directly above the head. The emergency evacuation signal is indicated by blowing the sirens on the emergency response vehicles.

#### 7.5.4 Fire Pre-Plans

The following generally describes the actions to be taken in response to all emergencies.

- 1) All responses should be approached from the upwind direction. It is important to understand that inside the battery limits of a process unit the wind direction will vary greatly, and the fire fighter should not assume he/she is safe from hazards.
- 2) During a fire incident, the IC must use a thorough and on-going size-up to make the appropriate intervening decisions. These decisions must be based on the fundamental priorities of the fire service and they include life safety protection, incident stabilization and property conservation. These three basic priorities can be further broken down and remembered by the simple acronym, RECEO, which stands for: Rescue, Exposures, Confinement, Extinguishment and Overhaul. RECEO is a simple tool that can be used by the officer-in-charge to help organize the wealth of information obtained in size-up and to get the incident focused towards a safe and successful conclusion.
- 3) Response to all potential hazardous materials emergency incidents will require the use of SCBA by all emergency responders until it has been determined through air monitoring that a decreased level of respiratory protection will not result in hazardous exposures to emergency responders.
- 4) The first response apparatus will respond in a defensive manner to all emergency incidents. They will utilize water streams from a safe distance to protect exposures and prevent fire extension.
- 5) If there are no operations representatives available to conclusively identify the material and associated hazards, NO emergency response team member shall enter the unit until an evaluation has been made by a fire department officer from a safe distance.
- 6) Only the IC has the authority to change PPE requirements. This will be done with input from the Safety Officer.
- 7) As early in the incident as practical, the on-scene officer should inform both on-scene and responding personnel the known facts pertaining to the incident:
  - a) Personnel accountability/injury information
  - b) Material involved
  - c) PPE requirements

*Note: Operations emergency shutdown and evacuation procedures are available thru Sharepoint and are reviewed annually by operations.*



The Pre-Plans provide additional details for use in response to specific potential emergency scenarios at Anacortes. These pre-plans can be used to facilitate a response by the Incident Management Team and ERT during an actual incident. The pre-plans may also be used as a training aid during drills and exercises. Additions or changes to the pre-plans should be considered as part of the annual plan review, following PHA updates and in response to lessons learned from exercises or an actual incident response. The detailed Pre-Plans are maintained and held by the Fire Chief. The pre-plans are also available on ERT Sharepoint.

**7.5.5 Scenario**

<b>SCENARIO – Pump Seal Fire at Vac Unit</b>			
This scenario depicts the representative emergency response activities for a pump seal fire at a unit at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this size and location.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Fire (Anacortes ERT/EOC Staff)		Pump Seal Fire	
<b>SCENARIO</b>			
An operator at the Vac Flasher discovered a small fire at the P-120 pump. The operator was able to safely shut down the pump and attempted to extinguish the fire with a fire extinguisher. The attempt failed, so the operator evacuated the area and called Security on the radio to report the fire and request ERT response.			
<b>TIME:</b>	0900	<b>WIND:</b>	15 NW
<b>SEASON:</b>	October	<b>TEMPERATURE:</b>	35 Degrees
<b>VISIBILITY:</b>	5 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the fire has no impact on the size or duration of the emergency.</li> <li>• The fire is contained within the unit.</li> <li>• No injuries are associated with the fire.</li> <li>• The ERT is able to respond to the fire within thirty minutes with the response equipment onsite.</li> </ul>			

**7.6 Medical Responses**

**7.6.1 Reporting Medical Emergencies & First Aids**

Refer to R-11-006 for details on medical emergencies, and first aid administration and reporting.

**7.6.1.1 Emergency Telephone**

For emergency first aid, dial x333. Give the location, nature of accident, and extent of injuries. Verify with the receiving person that they correctly understand the information before hanging up. When dialing x333, the Logistics Board or Utilities Board Operator will answer and gather the emergency information then initiate the emergency response systems.

**7.6.1.2 Medical Surveillance**

Marathon Anacortes Refinery shall make available, a Medical Surveillance Program administered by the refinery Medical Clinic to employees who:

- Are or may be exposed to hazardous substances or health hazards at or above the permissible exposure limits, or if there is no permissible exposure limit, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year;
- Wear a respirator for 30 days or more a year and are injured, become ill or develop signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation.

**7.6.2 Need for Ambulance**

If an outside ambulance is required, call x333 to complete in-plant notifications. A follow up call to x119 needs to be made to notify the Main Gate Security Guard that an ambulance is needed or has been

called. Notify the Zone C Supervisor of the call so they can arrange to have the ambulance met at the Main Gate where they can be escorted to the location of the person needing assistance.

Emergency Medical Responders will be utilized to prepare injured personnel for mobilization to a hospital. Emergency Medical Responders can be notified via Radio on the ALL-CALL channel.

In the event of a medical or rescue emergency, the Logistic or Utilities Board Operator will send out an announcement over the Marathon Anacortes Refinery ALL-CALL that directs Emergency Medical Responders and Rescue Team Responders to radio channel 12 where additional information concerning the emergency would be available.

Outside Ambulance Service	
Facility	Number
Emergency Number – Anacortes	8-911
Island Hospital – Anacortes	293-3181
Skagit Valley Hospital – Mount Vernon Ambulance	336-3131
Emergency Room	428-2165 or 424-4111
United General Hospital - Sedro Woolley Ambulance	336-3131
Emergency Room	856-7110
Island Hospital Emergency - Emergency Room (Room is staffed 24 hours/day with an Emergency Room Physician.)	299-1311

**7.6.3 Notification of Family in Case of Accident**

In order to assure that an individual's family is properly notified in the event of an on-the-job injury, the following is set forth for your information. The Nurse, First Aid Attendant, or designee will resolve the need for notification with the Manager of Human Resources. Normally, notification is necessary only in case of serious injury or when the employee will be delayed in returning home following completion of their regular shift. In such an instance, notify the Manager of Human Resources to determine the need for notifying the injured employee's family, and follow through when necessary.

**7.6.4 Triage**

Should a multiple trauma/injury situation occur during the regular dayshift hours, the Physician's Assistant (PA) or Nurse would become the triage person. Until a Physician arrives on the scene to take over the triage responsibilities, it is up to the PA/Nurse to classify the injured into three categories (i.e. highest, second, or lowest. The following are examples of typical injuries and how they would be classified.

Injury Classification		
Highest Priority	Second Priority	Lowest Priority
Respiratory arrest	Severe burns	Minor bleeding
Airway obstruction	Injuries to the spine	Minor fractures and soft tissue injuries
Cardiac arrest	Moderate bleeding	Moderate and minor burns
Uncontrolled severe bleeding	Injuries to the spine	Obvious mortal wounds where survival is not expected
Severe head injury	Conscious with head injury	Obvious death
Open chest wounds		
Open abdominal wounds		
Severe shock		
Burns of the respiratory tract		
Unconscious		

When injured persons are being categorized, triage tags will be attached to the injured in a conspicuous place so that injured with highest priority is treated and transported first. The county wide multiple casualty/disaster plan is put into action once the EMS system 911 has been contacted. They are responsible for sending all professional staff needed for dealing with the medical emergency. Off-site services include the following: Emergency Medical System, transportation services, hospitals, and Physicians.

#### **7.6.4.1 Emergency Medical System**

In the event of a multiple trauma/injury event, the Emergency Medical System is to be activated by calling 911. The EMS System will make the determination, based on the types and amount of injuries, on which of the services are to be activated. This is all done out of one location and is available county wide.

#### **7.6.4.2 Transportation Services**

- Ambulances: The Anacortes Fire Department has two fully equipped medic units available, capable of transporting two patients each. Primary Attendants on Anacortes Fire Department Medic Units are Advanced Life Support Paramedics. They are supported by Emergency Medical Technicians (EMTs), as necessary. Island Hospital ambulance drivers are EMTs employed by the hospital. Primary attendants on Skagit Valley and United General Medic Units are Paramedics supported by EMTs.
  - Island Hospital has one ambulance available.
  - Skagit Valley Hospital has two fully equipped medic units.
  - United General Hospital has two fully equipped medic units.
- Helicopters: A helicopter is available from a private contractor (Med Flight) based at St. Luke's Hospital in Bellingham. Landing zone coordinates that were established by Airlift Northwest are the following:
  - Place: On a baseball field outside of Marathon Anacortes Refinery.
  - Area: Approximately 300 feet by 300 feet ground level. Approximately 24 feet above sea level.
  - Longitude: N48 degree 29.915'
  - Latitude: W122 degree 30.060'

#### **7.6.4.3 Hospitals**

- Island Hospital - Anacortes
- Skagit Valley Hospital and Health Center - Mt. Vernon
- United General Hospital - Sedro Woolley
- St Luke's Hospital - Bellingham
- Harborview Hospital - Seattle

All patients in our response area are taken to Island Hospital unless directed otherwise by the patient, attending Physicians, or hospital emergency personnel. Head injury patients are transported to Island Hospital where it could be possible that transportation to another facility via helicopter would be necessary. Normally, severely burned patients would be taken to Island Hospital and taken by helicopter to Harborview Hospital in Seattle where the largest burn unit in the state of Washington is located.

#### **7.6.4.4 Physicians**

Marathon Anacortes Refinery contracts physicians to provide remote medical support 24/7 and should be consulted for medical emergencies.

The Emergency Medical System in Skagit County is set up to handle mass casualties. Skagit County has a county wide plan in which other agencies are used if the need arises.

**7.6.5 Emergency Medical Operations Protection**

- Personnel
  - Prior to any contact with patients, employees shall cover all areas of abraded, lacerated, chapped, irritated, or otherwise damaged skin with adhesive dressings.
  - Any employee who has skin contact with body fluids shall thoroughly wash the exposed area immediately using water or saline on mucosal surfaces, and soap and running water on skin surfaces. If soap and running water are not available, alcohol or other skin cleaning agents that do not require running water shall be used until soap and running water can be obtained.
- Infection Control Garments and Equipment
  - Medical gloves shall be single-use, disposable, and meet the requirements of ASTM D 3578.
  - ERT personnel engaging in any emergency patient care shall don medical gloves prior to initiating such care due to the variety of diseases, modes of transmission, and unpredictable nature of the work environment. Medical gloves shall be a standard component of emergency response equipment.
  - Medical gloves shall be removed as soon as possible after the termination of patient care, taking care to avoid skin contact with the glove exterior. Gloves shall be disposed of and hands shall be washed as specified in the Cleaning, Disinfecting and Disposal Section.
  - Structural firefighting gloves shall be worn by ERT personnel in any situation where sharp or rough surfaces are likely to be encountered, such as rescue or extrication.
  - ERT personnel shall not eat, drink, smoke, apply cosmetics or lip balm, or handle contact lenses while wearing gloves.
  - Masks, splash-resistant eyewear, and fluid-resistant clothing shall be donned by ERT personnel prior to any patient care situations during which contamination of the eyes, mouth or nose with body fluids, or large splashes of body fluids can occur. Examples would include spurting blood and childbirth.
  - Resuscitation equipment, including pocket masks and bag-valve masks, shall be used when providing airway management.

**7.6.6 Scenario**

<b>SCENARIO – Cardiac Arrest in Admin Building</b>			
This scenario depicts the representative emergency response activities for a medical emergency at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Medical (Anacortes ERT/Anacortes City Fire Department)		Medical Emergency	
<b>SCENARIO</b>			
An engineer in the Administration Building reported to his supervisor that he was feeling faint and pain in his chest and left arm. He then collapsed in the doorway of the supervisor’s office.			
<b>TIME:</b>	1300	<b>WIND:</b>	10 NW
<b>SEASON:</b>	August	<b>TEMPERATURE:</b>	70 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the medical emergency has no impact on the size or duration of the emergency.</li> <li>• The ERT is able to respond to the medical emergency within thirty minutes with the response equipment onsite.</li> </ul>			

**7.7 Hazardous Materials Incident - Mercaptan**

Due to the variability of response actions per a release of ethyl mercaptan, this section focuses on aspects to consider when responding a release from primary containment. This is meant to provide

important items of note for response; however, it is not prescriptive and specific to every response to a release of mercaptan. Ethyl Mercaptan is used at the Refinery to odorize propane at the LPG loadout rack. The storage tank of mercaptan is located near the long propane bullets.

### 7.7.1 Immediate Action Considerations

- If the release requires facility evacuation or shelter in place
  - Follow evacuation notification procedures from Section 2.
    - If an evacuation or shelter in place occurs, ensure that all employees and contractors are accounted for.
  - For evacuation, proceed to the designated muster area upwind of the release location
- All hot work must be stopped. All vehicles must be stopped safely, and engines shut off.
- Assign personnel to meet first responders at the access gate
  - Limit responder access from hot zones and warm zones
  - Ensure first responders are fully aware of the emergency and the material released.

### 7.7.2 Notification and Reporting

- Always report any spill, leak, drip of this material to your supervisor.
  - Based on the amount of release, response actions and notifications will vary. The key is to report and allow the ERT and EOC to determine the actions required for response.
- Community Impact
  - If volumes released are impacting the community or has the potential to impact the community refer to the notifications section of this plan.
  - Contact 911 to assist with community outreach and CTEH for air monitoring if community impact is possible or occurring.
  - Consider a courtesy call to local utility companies to make them aware of the situation.

### 7.7.3 Personnel Safety Considerations

- Hydrogen Sulfide and LEL are the greatest responder health and safety concerns.
- Always approach upwind
- Establish control zones (hot, warm, and cold) per conditions early and adjust as needed
- Safety personnel shall provide continuous gas monitoring in the area.
- Always upgrade to the highest level of respiratory protection and body protection when working around unknown concentrations of mercaptan.
- Standard-issued personal gas monitors and multi-gas monitors may require a correction factor to for accurate readings.
- Personnel exiting the hot zone must be decontaminated per standard Hazmat protocol.

#### Respiratory Protection Guidance for Mercaptan

Up to 5 ppm	Half face respirator with organic vapor cartridge or greater
Up to 12.5 ppm	Powered air purifying respirator with an organic vapor cartridge or greater
Up to 25 ppm	Full face respirator with organic vapor cartridge or greater
Anything greater than 25 ppm or unknown	Supplied air with pressure demand, SCBA
<b>Note:</b> per the odor threshold an SCBA will likely be the choice of respiratory protection regardless of concentration.	

### 7.7.4 Response Considerations

- If tank is damaged, you must develop a plan to transfer product to a safe tank or container.
- Utilize all possible secondary containment options to limit any material from contacting a permeable surface, water, or sewer.

- All containers that are not specifically designed for mercaptan must have a nitrogen blanket placed on them.
- Water or moist air may cause hazardous gases or vapors to occur.
- All drums/containers used for materials must be sealed and placed in over pack before transportation on public highways.
- Changing weather conditions/forecast should be monitored, as it can impact response capabilities.
- Once a spill is contained, minimize dissipation of odors and absorb the gas odorant. Commercial powder absorbents, pads, kitty litter, clay, sand, dirt or sawdust can be utilized. (Large spills can be controlled with aqueous film forming foam (AFFF) and re-applied continually as necessary.)
- Neutralize and Mask the Odor. Chemical oxidation is very effective for neutralizing mercaptans. The most commonly used materials are household liquid bleach (5% Sodium Hypochlorite), Hydrogen Peroxide (3%), and live bacteria.
  - Consider the resulting materials when introducing a chemical to another.
- Disposal of Materials. Absorbents, rags, gloves or pads used to clean or absorb odorants should be placed in proper containers and disposed of.

**7.7.5 Scenario**

<b>SCENARIO – Mercaptan Release</b>			
This scenario depicts the representative emergency response activities for a mercaptan release at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Release (Anacortes ERT/EOC)		Mercaptan Release	
<b>SCENARIO</b>			
An operator near the propane bullets began to smell a strong odor of mercaptan. Upon investigation, he found that mercaptan was leaking from a gasket on the mercaptan tank.			
<b>TIME:</b>	1300	<b>WIND:</b>	5 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	65 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the release has no impact on the size or duration of the emergency.</li> <li>• The ERT is able to respond to the release within thirty minutes with the response equipment onsite.</li> </ul>			

**7.8 Hazardous Materials Incident – Hydrogen Sulfide (H<sub>2</sub>S)**

**7.8.1 H<sub>2</sub>S Description**

- H<sub>2</sub>S Locations
  - Hydrogen Sulfide is found in high concentrations in several process units within the Refinery. The highest concentrations are likely in Zone A in the DHT (rich amine) as well as Zone B in the CCU Treaters (rich MDEA). Excess H<sub>2</sub>S is sent via pipeline to ChemTrade located to the south of the refinery.
- H<sub>2</sub>S Physical and Chemical Properties
  - Appearance: Colorless
  - Odor: Rotten egg odor
  - Boiling Point: Gas
  - Vapor Density: 1.19 (air=1)
  - Flash Point: <1° F
  - Flammability Range: 4.3% - 45%
  - TLV TWA: 10 ppm

- OSHA STEL: 15 ppm
- IDLH: 300 ppm
- H<sub>2</sub>S Health Hazards
  - Deadens the sense of smell at concentrations between 50-150 ppm.
  - Do not depend on odor for warning.
  - May paralyze the respiratory system and cause death at high concentrations over a short period of time.

### 7.8.2 Actions

#### Initial Assessment – Quickly assess the situation

- Safety
  - Has anyone been injured?
  - What is the source of the leak?
  - How much was spilled?
  - Could this spill affect neighboring communities?
- Environmental
  - Is there potential that the spill has or will reach a drain or ditch which leads off-site?
- Critical Systems
  - Could this affect any critical systems in the plant, therefore creating a more serious hazard? (power, water, communication, production)

#### Communicate – Immediately report

- First Person on Scene: Announce Emergency by calling ext. 333.
  - Announcement: Name, Location, and the Emergency
- Employee - Notify the Shift Supervisor or IC.
- Shift Supervisor – Perform initial Incident Commander role.

#### Respond or evacuate

All responses will be coordinated by the on-scene Incident Commander.

- Hydrogen sulfide is a highly flammable, explosive gas, and can cause possible life-threatening situations if not properly handled. In addition, hydrogen sulfide gas burns and produces other toxic vapors and gases, such as sulfur dioxide
- Sense of smell becomes rapidly fatigued & can NOT be relied upon to warn of the continuous presence of H<sub>2</sub>S.
- Anyone responding or attempting to shut off valves shall be properly trained and wear the proper protective equipment / respiratory or supplied air
- If safe, determine the source of the leak or damage to tank or piping from an upwind location.
- Hydrogen Sulfide vapors may collect and stay in poorly ventilated, low-lying, or confined areas (e.g., sewers, basements, and tanks).
- Hazardous concentrations may develop quickly in enclosed, poorly ventilated, or low lying areas. Keep out of these areas. Stay upwind.
- Hydrogen sulfide is very reactive with strong oxidizers, strong nitric acid, and metals.
- Stop / restrict traffic in release area through barriers or persons directing traffic
- Ensure responders have the proper PPE and equipment needed to respond.
- Spill evacuations should be made upwind or crosswind from incidents or spill to the nearest meeting area or the next nearest area if access to primary area is blocked. Refer to *Section 2* for evacuation information.



- Document information and be prepared to turn over information to the oncoming Incident Commander, if required.

**Contain and Clean Up Spill**

All responses will be coordinated by the on-scene Incident Commander

- Do not enter the gas plume. Call an outside contractor to repair damage. Leaks in the Hydrogen Sulfide system should be addressed by personnel with appropriate training and protective equipment. Run-off from fire control may cause pollution

**Notification to Regulatory Agencies**

- Make notifications per *Section 3* of the ERP.
- Contact CTEH to assist with community outreach and air monitoring if community impact is possible or occurring (see *Section 3* for phone number).
- Notification contact information is in *Section 3*

**Sustained Action**

Once the incident has been stabilized, the Site Safety / Incident Action Plan will be re-evaluated to estimate the remaining response tasks. If necessary, additional resources will be utilized to address the remaining tasks.

**Documentation of the Response**

Consolidate documentation as soon as possible after the incident. The Incident Commander, Shift Supervisor, and other staff should also review and evaluate the response.

**7.8.3 Scenario**

<b>SCENARIO – H2S Release Worst Case Release</b>			
This scenario depicts the representative emergency response activities for an H2S Release at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Release (Anacortes ERT/EOC)		H2S Release	
<b>SCENARIO</b>			
<ul style="list-style-type: none"> <li>• <b>Assumptions</b></li> <li>1) Assume that a ¾ inch schedule 80 pipe bleeder was sheared off, resulting in a release diameter of 0.742 inches.</li> <li>2) Release estimates were calculated for various streams containing Hydrogen Sulfide, taking into account the pressure and temperature of the stream.</li> </ul>			
<b>TIME:</b>	1300	<b>WIND:</b>	5-7 SW
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	70 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the release has no impact on the size or duration of the emergency.</li> <li>• The ERT is able to respond to the H2S release within thirty minutes with the response equipment onsite.</li> </ul>			

**7.9 Hazardous Materials Incident – Small Spills Not to Water**

In the event of a minor terrestrial spill that, in the opinion of the Incident Commander, can be adequately contained and clean up with in-house equipment and personnel, the following procedures will apply:

1. Ensure personnel safety.
2. Stop the flow of the spill as outlined in the Emergency Action Checklist.
3. Begin the necessary containment and cleanup procedures. Use Response Contractor to implement the necessary techniques to limit the spread of oil



In the event of a potential leak from process piping, refer to and complete the Managing Minor Hazardous Leaks Assessment that is included at the end of this section.

**PROCEDURES FOR FIRST RESPONDER**

- \_\_\_\_\_ ▪ Contact the appropriate operational control room to report the emergency and activate the Emergency Response Plan.
- \_\_\_\_\_ ▪ Attend to injured personnel, protect them, or remove them.
- \_\_\_\_\_ ▪ Request medical assistance, if needed.
- \_\_\_\_\_ ▪ For a spill, remove or shutdown any ignition sources. These include electrical, open flame, vehicles, etc.
- \_\_\_\_\_ ▪ Prevent new ignition sources from entering the area for potential explosion and fire hazard.
- \_\_\_\_\_ ▪ Use a multi-gas detector to monitor the area for potential explosion and fire hazard.
- \_\_\_\_\_ ▪ Locate the source of the fire or spill, notify operations personnel or call the control room for permission to isolate.
- \_\_\_\_\_ ▪ Determine if the fire can be extinguished with available steam hoses or portable fire extinguishers and, if it is safe, do so.
- \_\_\_\_\_ ▪ Review the situation with the Supervisor. Remain until relieved.

**PROCEDURES FOR SUPERVISOR**

- \_\_\_\_\_ ▪ Ensure safety of personnel.
- \_\_\_\_\_ ▪ Ensure that the Security Operation Center has initiated the “Emergency Notification Procedures”.
- \_\_\_\_\_ ▪ Designate personnel to use monitoring equipment (Multi-Gas Detectors) to establish a restricted safety zone.
- \_\_\_\_\_ ▪ Evacuate area if appropriate.
- \_\_\_\_\_ ▪ Secure the area to keep non-emergency personnel out.
- \_\_\_\_\_ ▪ If possible, stop or control a spill or fire. A fire or spill must be contained before it can be brought under control. Attempt to restrict the spread of the spill or fire.
- \_\_\_\_\_ ▪ Prepare to coordinate a fire response with local fire department
- \_\_\_\_\_ ▪ Maintain Unit Log: Document activities and actions including equipment and personnel requested and on-scene, chronology of events, current staffing, and notification.
- \_\_\_\_\_ ▪ The initial incident commanded has the authority to activate the Company Incident Management Team, Fire Department, Oil Spill Recovery Organization (OSRO), and act as IC if the designated IC, Deputy IC, or a more senior Company Manager cannot be located. Remain until relieved.

**PROCEDURES FOR SAFETY COORDINATOR**

- \_\_\_\_\_ ▪ Don appropriate PPE
- \_\_\_\_\_ ▪ Use gas monitors to evaluate the potential explosion and fire hazard.
- \_\_\_\_\_ ▪ Take actions to assure that appropriate PPE is being worn.
- \_\_\_\_\_ ▪ Establish HOT, SAFE, and DECONTAMINATION work zones.
- \_\_\_\_\_ ▪ Receive report from the Area Supervisor of all emergency response efforts underway.
- \_\_\_\_\_ ▪ Coordinate response efforts with the local Fire Department and the ERT.



### Operations

- Ensure area is barricaded a minimum of 40' and appropriate signs are posted.
- Keep all personnel out of an area where there is potential for over-exposure.
- Notify the Radiation Safety Officer (RSO) in the safety department or through the Mobile Incident Command Post
  - Have security or shift supervisor contact RSO during off-hours.
- In case of a fire, refer to 7.10.2 below.

### Radiation Safety Officer

- Survey the area for radiation, assess the unit (source) for damage and perform any actions required to safely mitigate the situation.
- In the case of a fire, coordinate with the IC to identify exposure hazards for emergency response personnel.
- Survey and assess for damage to the source.
- Collect data from onsite personnel and assess for possible exposures.
- Advise on the removal of damaged sources, installation of additional shielding if required, or any repairs that may be required.
- In all cases the RSO must contact the manufacturer for further assessment and in the case of source heads that have been severely damaged, for shipping and disposal instructions.
- The RSO shall collect all data and file all reports as required.

### 7.10.2 Fire or Explosion near a Radiation Source Holder

- Immediately after the emergency situation has stabilized (i.e., fire is extinguished, leak has stopped, etc.) rope off or barricade an area at least 40 feet in all directions from the last known location of the source holder until the Radiation Safety Officer (RSO) completes a radiation survey. No one except the RSO and essential personnel is permitted in the barricaded area until the survey is completed.
- Notify the RSO to perform a radiation survey. If the RSO is not available, contact the alternate RSO. If an alternate is not available call the HESS Duty phone.
- If the RSO surveys the area and finds the radiation field is equal to or less than the installation survey, the RSO will:
  - Check the shutter mechanism for proper functioning.
  - Examine the source holder environment for any damage to the mounting structure (bolts, brackets).
  - Complete a Shutter Check/Field Inspection.
- If the RSO surveys the area and finds the radiation field is greater than the installation survey, the RSO will:
  - Barricade the area and post the appropriate radiation area signage at the two mR/hr level.
  - Contact the source holder manufacturer for assistance in removal, packaging, and disposal.
  - If the source holder exhibits leakage, then use plastic gloves and tongs to place plastic bags over the holder to prevent spreading the radioactive material.
- The RSO will conduct leak tests following an emergency which may have damaged a source holder.
- The RSO will analyze those swabs using a calibrated survey meter. The source housing is considered to be leaking if the meter indicates the dose rate from the swabs is above background. If the meter indicates the dose rate from the swabs is equal to background, the source housing is considered to be not leaking.
- Another leak test will be performed immediately and sent to an accredited facility in either case. A typical Cs-137 source capsule should withstand a temperature of at least 1475°F before distorting

and possibly leaking radioactive material. The lead shielding may be affected at lower temperatures, however.

**7.10.3 Scenario**

<b>SCENARIO – Radiation Source Emergency</b>			
This scenario depicts the representative emergency response activities for a radiation source emergency at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Release (Anacortes ERT/RSO)		Radiation Emergency	
<b>SCENARIO</b>			
After a fire was extinguished at the Coker Unit, an ERT member noticed that the fire had caused damage to one of the sources in the unit.			
<b>TIME:</b>	1300	<b>WIND:</b>	5-7 SW
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	70 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the emergency has no impact on the size or duration of the emergency.</li> <li>• The ERT and RSO is able to respond to the emergency within thirty minutes with the response equipment onsite.</li> </ul>			

**7.11 Truck Rack Response**

**7.11.1 LPG Fires**

- CAUTION!** *Fire extinguishment should only be accomplished by fuel elimination. If the source of fuel cannot be isolated, let the fuel burn until depressured.*
- Water streams should be applied to cool all areas that have flame impingement to vessels and piping.
- Water streams should be utilized to protect fire fighters attempting to isolate the leak.
- If flame impingement to a vessel is above the liquid level, time is of the utmost importance as failure of the vessel wall can result in a "BLEVE" (Boiling Liquid Expanding Vapor Explosion).
- If a potential for a BLEVE exists, evacuate all personnel at least 3000' minimum from the emergency location.

**7.11.2 LPG Leaks**

- Approach only from the upwind direction with SCBA and water spray to protect personnel and help disperse the vapor cloud.
- Wind direction is very important. If the leak threatens downwind facilities, evacuation may be necessary as well as shutting down of equipment.
- All personnel not needed to set up water sprays and assist in closing valves should be kept at a safe distance from the area.
- Water spray should be continued until the leak is de-pressured completely.

**7.11.3 Hydrocarbon Pool Fires**

Pool fires are often small and occur after leaks or other instances that enable product to pool in a particular area. Given product is in the open there are multiple potential ignition sources. Potential places for pool fires to occur are the fill gantry, pump slabs, drum platforms, drains and bundle areas. All pool fires use similar tactics but may also require particular extra techniques. These are discussed in sections below.

Pool fires can vary in nature depending on the pool depth (The depth of the product pool will have a major impact on the nature of the fire):

- Shallow pools: Shallow pools develop where product is able to spread over a large area. Due to the shallow depth of product, fires will burn intensely but only for a short period as product will burn off quickly.
- Deep Pools: Deep pools will develop in areas such as drains or interceptors where product is contained to a smaller area. These fires will typically be contained to a defined area but will burn for longer periods.

#### 7.11.4 Scenario

<b>SCENARIO – Truck Rack Fire</b>			
This scenario depicts the representative emergency response activities for a fire at a truck rack at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Fire (Anacortes ERT/EOC)		Truck Rack Fire	
<b>SCENARIO</b>			
The driver of a propane truck contacted security to report a fire coming off of a vapor hose connected to one of the trucks at the rack.			
<b>TIME:</b>	1800	<b>WIND:</b>	5 N
<b>SEASON:</b>	July	<b>TEMPERATURE:</b>	75 Degrees
<b>VISIBILITY:</b>	5 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• No reported injuries.</li> <li>• The cause of the release has no impact on the size or duration of the emergency.</li> <li>• The ERT is able to respond to the fire within thirty minutes with the response equipment onsite.</li> </ul>			

#### 7.12 Rail Response

The CROF has a rail system that can accommodate up to 250 rail cars with a combined possible inventory of 7,000,000 gallons of product. A propane, butane or similar product leak may not be identified until the vapors have ignited. If ignited, the response actions taken will then be the same as those for fire. However, if the cloud does not ignite, then the following procedure should be implemented.

##### 7.12.1 Special Hazards

- Always assume that the cloud may ignite/explode at any moment. Keep all "unprotected" (i.e., no turn outs and no water fog pattern) personnel well away from the incident scene.
- The extremely flammable nature of these materials makes it unlikely that an unignited leak will not ignite with explosive force unless the vapors are dispersed with water or steam. The static electricity generated by steam coming through a nozzle at high velocity may itself be an ignition source; therefore, steam should be applied in moderation.
- While water is effective in dispersing the flammable vapors, water should not be applied to accumulated propane or butane liquid because this will increase the vaporization rate.
- Besides their flammability, these materials are also asphyxiants and require breathing air to be worn (with water fog protection) when it is necessary to approach the cloud. The materials may also cause frost bite burns from the low temperature they create when vaporizing. Turn out gear and leather gloves may help provide insulating protection.
- Boiling Liquid Expanding Vapor Explosion (BLEVE) is a blast, often accompanied by a fire ball, resulting from the sudden release and nearly instantaneous vaporization of a liquid under greater-than-atmospheric pressure at a temperature above its atmospheric boiling point.

### 7.12.2 Response Actions

1. The first person to notice a release must immediately report the release with the following information:
  - a. Location of leak
  - b. Size of opening/leak
  - c. Apparent wind direction of vapor cloud
2. The railcar loading racks are equipped with both an Emergency Shutdown System (ESD) and deluge systems. Prompt action to activate these systems and stationary monitors to disperse the vapor cloud are necessary. The first personnel on site that are familiar with these systems and can safely activate them should do so to help prevent ignition and/or spread of the vapor cloud.
3. The activation of disaster valves requires careful consideration. These are spring loaded valves on the lines leading to and from the tank. When the source of the leak is downstream of the valve (that is, on the side away from the tank), these valves can quickly isolate the leak from the bulk of the material stored in the tank. However, if the leak is in the tank itself, or between the tank and the disaster valve, activation of the disaster valves could inadvertently eliminate any alternate method of removing product from the tank except to let it all escape through the leak.
4. Security Control shall call x333 to initiate an all call on the radio to evacuate through main gate and Gate 20 and page/notify the ERT as appropriate. Page/notification information MUST emphasize that a flammable vapor cloud may be forming and that the area must be approached from the east side of the refinery.
5. Security should then notify the control room of the situation, reminding them that there is a FLAMMABLE VAPOR CLOUD.
6. Prior to dispatching to scene, the first emergency personnel should confirm wind direction/speed from SOC and also confirm visually using wind socks.
7. The first emergency personnel to arrive on the scene should confirm over the ERT/fire brigade radio channel the safe access routes, wind direction and whether or not the vapor cloud is likely to affect the public roadway.
8. If the Incident Commander determines that there is any possibility of the vapor cloud reaching public roadways, SOC should be instructed to notify the County Emergency Dispatch (911) Operator to begin the County's emergency response. SOC should indicate to the 911 dispatcher that there is an unignited (propane or butane) vapor leak. SOC should then relay information on safe access routes as confirmed by the Refinery ERT.
9. Typical Brigade Member activities include:
  - a. Supply additional water for vapor dispersal
  - b. Provide protective fog coverage for personnel that must approach the vapor cloud
  - c. Establish/maintain safe perimeters
  - d. Stand by in case vapors ignite
10. Responding personnel must take great caution in avoiding the vapor cloud, ensuring that the cloud is not inadvertently entered or ignited. A wide perimeter must be established and maintained to protect uninvolved and response personnel. The first emergency personnel on the scene are responsible for establishing/maintaining this perimeter until relieved. No motorized vehicles should be allowed to operate within this perimeter, and electrical equipment within the area should not be energized OR DEENERGIZED (activation of electrical switches often creates an electrical arc, a source of ignition).
11. An existing vapor cloud must not be entered under any circumstances as the potential for personnel injury is too great. If it is necessary to approach the escaping vapor to open/close valves, isolate equipment, activate fire suppression equipment or rescue purposes, the cloud must first be

dispersed with water. Personnel entering the area must wear turn-out gear, be supplied breathing air, and be protected with a fog pattern spray.

### 7.12.3 Scenario

<b>SCENARIO – Rail Car LPG Release</b>			
This scenario depicts the representative emergency response activities for an LPG release at the rail rack at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Release (ANR ERT/EOC)		LPG Release	
<b>SCENARIO</b>			
The operator at the rail rack noticed a vapor cloud coming from the bottom of one of the rail cars at the rail rack during offloading operations.			
<b>TIME:</b>	1300	<b>WIND:</b>	20 W
<b>SEASON:</b>	August	<b>TEMPERATURE:</b>	85 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the release has no impact on the size or duration of the emergency.</li> <li>• The ERT is able to respond to the release within thirty minutes with the response equipment onsite.</li> </ul>			

### 7.13 Rescue

For response to specialized technical rescue emergencies, including confined space and high angle rescue, the refinery will rely upon the Rescue Team (ERT) with possible assistance from Anacortes Fire Department. Additional information on Rescue techniques and procedures, refer to the Rescue Squad Handbook.

- Ensure that the Emergency Response Team has been notified by calling 333.

#### 7.13.1 Confined Space Entry

Confined space entry and rescue procedures shall be in accordance with Anacortes's procedures for permit required entries into confined spaces. Emergency responders conducting a rescue operation in a confined space (e.g., storage tank, vessel, furnace, sewer, etc.) shall perform the following:

- Conduct gas monitoring of the area
- Wear a supplied air respirator (SAR) with 5-minute escape bottles and the appropriate level of protective clothing to enter the hazardous area.

**DANGER:** *Do not depend upon the sense of smell to detect gases, as few of the gases within the refinery have a detectable odor. Also, the sense of smell is frequently deadened by refinery gases (especially H<sub>2</sub>S) in a very short period of time.*

- All confined space entry operations require, at a minimum, three confined space rescue personnel to be onsite at the refinery during the operations.
- All confined space rescue operations are conducted with, at a minimum, three personnel in accordance with RSP-1127.
- Remove the victim to an uncontaminated area.
- Begin providing medical treatment as appropriate.
- If required, decontaminate the patient before transport to a hospital or medical center.

**DANGER:** *Rescue in confined areas containing acids or corrosive materials should only be attempted with the use of chemical protective clothing and a self-contained breathing apparatus.*

#### 7.13.2 Inert Atmosphere Confined Space Entry

ERT shall not enter into any inert atmosphere to perform rescue. ERT shall be on hand to provide support to the inert entry contractor as appropriate.

**7.13.3 High Angle Rescue**

Rescue from high angle or high elevation shall be conducted by Rescue Team Members trained in High Angle Rescue. A minimum of two rescue personnel is required for any high angle rescue. Other ERT members who are not trained in High Angle Rescue may provide assistance but shall be directed by the trained High Angle Rescue team members.

**7.13.4 Water Rescue**

Rescue from water shall be conducted by Anacortes Fire Department, with ERT members on standby for support as needed.

**7.13.5 Scenario**

<b>SCENARIO – Man Down on top of Tank 165</b>			
This scenario depicts the representative emergency response activities for a rescue operation at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Rescue/Medical (Anacortes ERT/Anacortes FD/Ambulance)		Rescue	
<b>SCENARIO</b>			
Security received a report of an operator collapsing on the top of Tank 165. The cause of the collapse is initially unknown during the report.			
<b>TIME:</b>	1300	<b>WIND:</b>	20 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	50 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the collapse has no impact on the size or duration of the emergency.</li> <li>• The ERT is able to respond to the rescue within ten minutes with the response equipment onsite.</li> </ul>			

**7.14 Thunderstorms**

In the event of a Thunderstorm or the National Weather Service (NWS) or local weather service have indicated a Thunderstorm **Watch** or **Warning**, the refinery will assume a lightning event, with the current and upcoming weather conditions, is possible. The following guidelines are from R-11-031 Lightning Protection and RSP-1706-000 Lightning Safety. Refer to those instructions for additional details.

**7.14.1 Initial Monitoring**

Security monitors the early warning weather service station. If lightning is verified to be inside of the 6-mile zone of the refinery, **Security** will notify all personnel via all call notification. **All Non-essential Work without overhead protection shall cease until further notice)**

Lighting Strike Communication Process		
Department	Miles	Action
Security	6	Shall notify all personnel via all call notification
Permit Issuer/Operator	6	Shall ensure all Non-Essential Work permitted is stopped and the jobsite secured.
Security	All Clear	Shall notify all personnel upon all clear determination.



### 7.14.2 Roles and Responsibilities.

Operations Shift Foreman/Supervisor, Maintenance/Turnaround Coordinator, and Safety	<p><b>(a)</b> Upon notification of a Lightning Warning, communicate to the site work to discontinue any work outside of a Protective Space per the Lightning Safety Guidance Drawing in RSW-1716-KE.</p> <p><b>(b)</b> Maintain awareness of weather conditions and determine if jobs are “Essential Work”.</p> <p><b>(c)</b> Ensure that all stakeholders agree on any confined space entry job that will continue through a Lightning Warning has proper protection for the confined space attendant and rescue personnel.</p> <p><b>Note:</b> Safety Department representation may be involved in making <b>Essential Work</b> determination.</p>
Security	Monitor Early Warning Detection System and communicate “All Call Alert/All Clear” announcements to the site.
MPC Permit Issuer	Upon notification of a Lightning Warning, the Owning Department Permit Issuer must ensure that all work described in RSW-1716-KE has been stopped, the Safe Work Permits suspended, and personnel seek shelter. Once the “All Call” lightning alert is cancelled via “All Clear” announcement, the Owning Department Permit Writer must determine if the Safe Work Permit can be reinstated with the appropriate air monitoring and communication with the Servicing Group or whether a new Safe Work Permit will be required to get the work stated again.

### 7.14.3 Work Continuation Determination

- Work in a Protective Space can continue during a lightning event using the R-11-031 diagram as guidance. This would include work under **Overhead Protection**, such as:
- Work on pumps, compressors, equipment below the fin fan deck,
- Work on removing a blind from a scaffold that is below the pipe rack,
- Work on exchangers that is not upper most level,
- Confined space entry work with Overhead Protection for the hole watch and emergency responders,
- Work in an Analyzer Building,
- Work in Pump houses and other buildings

The Operations Shift Foreman/Supervisor and Maintenance/Turnaround Coordinator in cooperation with Safety Supervisor are responsible for determining work activities, not in **Protective Spaces**, meet the definition of “**Essential Work**” and may continue during a Lightning Warning.

Examples of **Essential Work** that may continue include but are not limited to:

- Responding to a process unit upset with potential of PSM consequences,
- Completing a Hot Tap, stopple job, or clamping job already in progress,
- Responding to a plant emergency event,
- Work activities required to safe the unit to prevent eminent PSM consequences,
- Ground-level movement to or between Protective Shelters (e.g., building to building, building to vehicle), or
- Evacuation.

Examples of **Non-Essential Work** that must be terminated during a **Lightning Warning** include but are not limited to:

- Any work on the upper most level of a structure without Overhead Protection,
- Any work on the top level in the pipe rack,
- Work in open areas with no Overhead Protection,
- Confined space entry that cannot provide Overhead Protection for the hole watch and emergency responders, including tank entry or work on the roof of a tank,

- e) Crane or picker operations, or
- f) Elevated loading activities on the loading racks where no Overhead Protection is provided.

All crane work shall be stopped, and the booms be lowered to less than thirty (30) feet above grade when possible. If a Lightning Warning is made during a lift, it is acceptable to continue the lift until the load is in a safe position. Operators of cranes and lifts may evacuate the equipment and seek refuge in a Protective Shelter.

**7.14.4 Sheltering**

Upon receiving the communication that lightning has been detected within six (6) miles of the site, all Employees and Contractors performing Non-Essential work shall secure their job sites immediately and shall take cover in a Protective Shelter.

Take shelter in locations such as:

- a) Safe locations in process unit as defined by R-11-031.
- b) Permanent/substantial buildings (metal construction is acceptable if properly grounded),
- c) Blast trailers or blast resistant tents, if designed for lightning protection and properly grounded,
- d) Fully enclosed all-metal vehicles, or
- e) Maintenance shops.

Do Not Take Shelter in the following locations:

- a) Open areas,
- b) Close proximity to ungrounded metal objects,
- c) Inside smoke shacks, or
- d) On rooftops building or tanks.

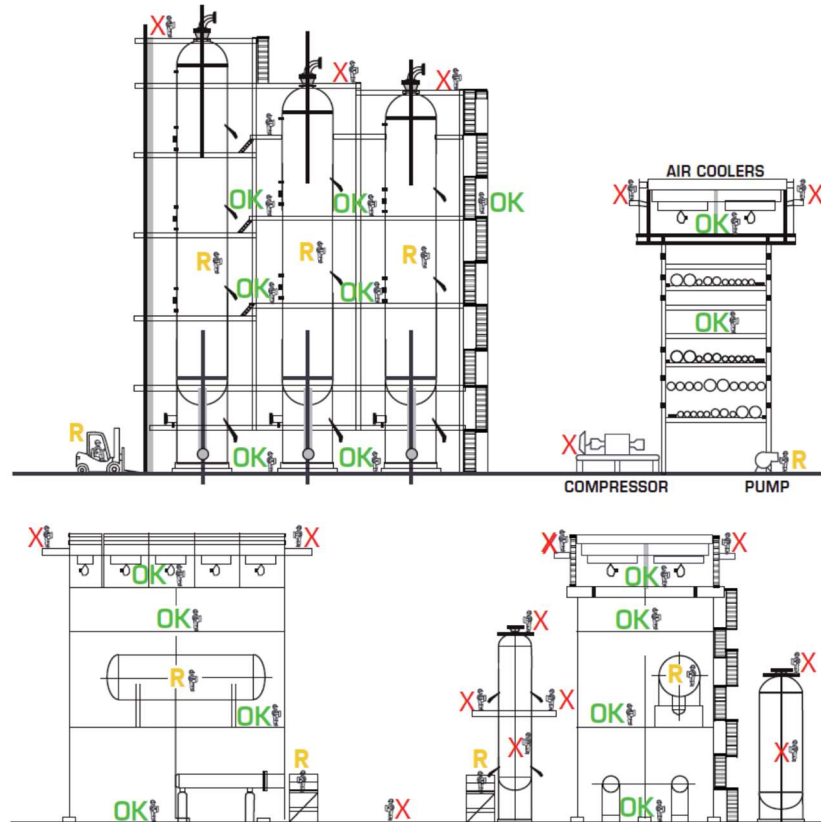
**7.14.5 Scenario**

<b>SCENARIO – Thunderstorm Event</b>			
This scenario depicts the representative emergency response activities for a thunderstorm emergency at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Weather (Anacortes ERT/Security/Employees)		Thunderstorm	
<b>SCENARIO</b>			
Security receives notice of a thunderstorm and lightning with 6 miles of the refinery.			
<b>TIME:</b>	1300	<b>WIND:</b>	35 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	60 Degrees
<b>VISIBILITY:</b>	4 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to commence response operations.</li> <li>• The cause of the emergency has no impact on the size or duration of the emergency.</li> <li>• The ERT is able to respond to the emergency within thirty minutes with the response equipment onsite.</li> </ul>			

**7.14.6 Lightning Safety Guidance Drawing**

The following drawings are provided as guidance for approved work during a lightning alert. Sites should develop site specific drawing or plot plans of safe locations.

<b>X</b>	Work that shall be stopped in a Lighting Warning if not deemed essential work.
<b>R</b>	<ul style="list-style-type: none"> <li>• Review for adequate Overhead Protection for hole watch and emergency responders for confined space work to continue.</li> <li>• Review equipment manufacture requirements necessary before proceeding.</li> </ul>
<b>OK</b>	Work allowed to continue in a Lighting Warning



## 7.15 Earthquake

### 7.15.1 General

The purpose of this section is to provide general guidelines to assist Anacortes personnel in both preparing for and taking appropriate actions during and after a major earthquake. Keep in mind that most of the earthquakes in this area are of a relatively minor nature and will not require all of the following steps. For the purposes of this plan, an earthquake requiring implementation of the actions discussed involves ground movement that can be felt. Most cases will simply require surveying the possible damage to the unit. If no damage is found, carefully resume normal operations, keeping in close communications with all areas of the Refinery, wharf, CROF and truck rack.

In the event of a major earthquake this procedure is a guideline for quickly and safety securing the units, keeping in mind that in the worst case the following possibilities could arise.

1. Limited or no outside help is available for the refinery due to possible road damage. There may be limited or no phone communication with outside areas or between units.
2. Outside fire department help is limited or not available, due to other emergencies.
3. Alarms for the unit or plant may not work.
4. Utilities, such as electric power, fuel gas, OS, N<sub>2</sub>, steam, fire water, cooling water, drinking water and service water may be limited or unavailable.
5. The employees on duty at the time of a major earthquake will have a real wish and need to go home and check on their families as soon as possible.
6. The actual movement of the ground in an earthquake is seldom the direct cause of injury or death. Most casualties result from falling objects and debris or collapsing structures. Injuries are commonly caused by the following:

- a. Partial building collapses
- b. Flying glass from broken windows
- c. Overturned bookcases, light fixtures, and other furniture and appliances
- d. Fires from released flammable materials.
- e. Fallen power lines

With all of the above listed possible problems, a complete and orderly shutdown of all facilities may not be possible. However, the steps below should be used as a guideline to ensure that the most important actions are taken first to minimize the possible hazards to everyone and limit further damage to the units.

1. During any earthquake keep calm.
2. Life safety is the number one priority. Account for all people in or around the unit.
3. Under no circumstances should anyone take any chances that would endanger themselves or other personnel.
4. Take a few moments to assess the situation, communicating with all the units and areas in the refinery, truck rack and wharf. Check for known problems. If none are reported, a closer inspection should be made of each unit or area.
5. Refer to the Unit Emergency Procedures for additional guidance and instructions.
6. ERT and EOC should be staffed without waiting for page or alarms to be sent. The location for the EOC is dependent on any concerns for building integrity or accessibility.
  - a. If travel between the sites is difficult, multiple EOC's may need to be established to address the local facility concerns.
  - b. The EOC may need to be set up in the parking lots or alternate locations within the plant if the primary EOC location is compromised or the building integrity is questionable.

### 7.15.2 Guidelines

#### *During an Earthquake*

Earthquakes come without warning. The most important factor is to shield yourself from falling objects:

- If you are outside when an earthquake occurs, stay outside. Move away from buildings, utility wires and other tall structures. The area near exterior walls of a building or below tall structures has the greatest danger for falling objects. Move away from buildings and structures to an open area, get down low, and stay there until the shaking stops.
- If inside a building – STAY THERE!
  - If you are inside when an earthquake occurs, then stay inside. Do not go outside or even go to other rooms during the shaking. In most situations you will reduce your chances of injury during an earthquake by immediately dropping, covering, and holding on.
  - Drop down onto your hands and knees. This position protects you from falling but allows you to still move, if necessary.
  - Cover your head and neck, and your entire body if possible, under the shelter of a sturdy table or desk. If there is no shelter nearby, get down near an interior wall or next to low-lying furniture that will not fall on you, and cover your head and neck with your arms and hands.
  - Hold onto your shelter &/or your head and neck, until the shaking stops. Be prepared to move with your shelter if the shaking shifts and moves it around.
  - Do not stand in a doorway. You are much safer under a shelter. Doorways are no stronger than any other portion of the structure you are in. Most earthquake related injuries are caused by falling or flying objects. A doorway does not protect you from the falling or flying objects.
  - You can take additional action that could help reduce your chance of injury during an earthquake by:

- If possible, move away from windows, hanging object, shelves, bookcases or other large furniture that could fall.
- If possible, grab something to shield your head and face from falling debris and broken glass.
- If you are in a moving car:
  - Stop as quickly as safety permits in the best available space and stay in your car. Don't stop on a highway overpass or bridge. Don't stop where buildings can topple down on top of you. A car is an excellent shock absorber and will jiggle fearsomely on its springs during an earthquake, but it's a fairly safe "cocoon" from which to assess your situation.
  - If you are in your car and live electric wires have fallen across the car, remain where you are. Your car is usually well insulated and unless you touch charged metal, will protect you from electricity. The best advice for most situations is to remain in your car until help arrives.

### *After an Earthquake*

- General Items of Concern
  - Be prepared for possible additional aftershocks.
  - Do not touch any downed power lines or electrical wiring of any kind. Never assume that electrical lines are dead. PEOPLE, METAL and DAMP OBJECTS are good conductors of electricity. To avoid shock and serious burns, stay well back. A wrong move in trying to rescue someone else could kill you.
- Personnel
  - Account for all personnel within your work area. Make a quick initial check for injuries or trapped people.
  - Provide emergency care, if needed. Do not try to move seriously injured persons unless they are in immediate danger of further injury.
  - Operations Shift Supervisors, in coordination with process operators, must conduct an inspection of the units under their responsibility to look for leaking flanges, structural damage or any other abnormal conditions.
  - Tank Farm must conduct tank inspections to look for leaking flanges, leaking seals, structural damage, or any other abnormal conditions. Inform your supervisor of the status of your area, including any missing personnel.
  - In all areas, any emergency steps required to prevent injury or equipment damage should be taken as soon as possible. Don't wait for Manager Approval.
  - If damage has occurred due to the earthquake which would make it hazardous to try to continue to operate a unit or area, the emergency procedures for each area should be followed as closely as the situation in each area requires and permits.
  - Should any lines rupture they should be isolated as promptly as possible but not before all required safety precautions are taken so it can be done safely.
  - If any hydrocarbon leaks ignite, it may become impossible to fight the fire properly with limited or no water pressure. So, if possible, any leaks should be isolated as far away from the fire as is safely possible.
  - Where possible Unit depressurizing should be carefully controlled to reserve flare capacity for vessels/units where there may be fires, leaks, or automatic depressurization. The designated Operations Shift Supervisor will coordinate flaring priorities as required.
  - Procedures specific to each operating unit are included in the Operating Manual for the respective area.
- Check for the following hazards and/or conditions in your area:
  - Obvious structural failures
  - Fire or fire hazards

- Spilled hazardous materials
- Gas leaks
- Electrical damage
- Loose ceiling items
- Stairway strength
- Open any cabinets or closets very carefully
- Sewage line breaks, especially before flushing the toilet
- Communications
  - Telephones and radios should be limited to emergency use, as appropriate. If the telephone system is inoperative, radios should be limited to emergency communications as appropriate. Cell phone service may be interrupted but texting services may still be available. All other communication should be done on a face-to-face basis. Emergency response satellite phones are located in the EOC and fire hall to support communications if cell and radios fail.

**7.15.3 Scenario**

<b>SCENARIO – Earthquake</b>			
This scenario depicts the representative emergency response activities for an earthquake at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Weather (Anacortes ERT/EOC)		Earthquake	
<b>SCENARIO</b>			
An earthquake of magnitude 6.5 has just occurred with an epicenter located in Sequim, WA. Intense shaking and ground movement is felt at the refinery, marine terminal and truck terminal.			
<b>TIME:</b>	1300	<b>WIND:</b>	5 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	50 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>● No initial reports of injuries</li> <li>● Safe to commence response operations.</li> <li>● The ERT is able to respond to the emergency within thirty minutes with the response equipment onsite.</li> </ul>			

**7.16 Flooding**

**7.16.1 Heavy Rainfall Flooding**

During heavy rainfall, parts of the refinery may experience increased water that can impact the different units. Management will assess the flooding to determine if any curtailment of operations or maintenance activities is necessary due to unsafe road or work conditions.

**7.16.2 Scenario**

<b>SCENARIO – Flooding</b>			
This scenario depicts the representative emergency response activities to a flooding emergency at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Weather (Anacortes ERT/EOC)		Flooding	
<b>SCENARIO</b>			
The refinery has experience 7 days of continuous rain exceeding the normal for the season, resulting in flooding at several locations throughout the plant. Operations has reported that the storm drains are backing up into the units, impacting operations. Reports are coming in that roads are flooded in low areas.			
<b>TIME:</b>	1300	<b>WIND:</b>	10 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	50 degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>● Onsite personnel are able to respond with no injuries</li> </ul>			

## 7.17 Tsunami

### 7.17.1 Tsunami Center Message Definitions

**Tsunami Warning** - a tsunami warning is issued when a potential tsunami with significant widespread inundation is imminent or expected. Warnings alert the public that widespread, dangerous coastal flooding accompanied by powerful currents is possible and may continue for several hours after arrival of the initial wave. Warnings also alert emergency management officials to take action for the entire tsunami hazard zone. Appropriate actions to be taken by local officials may include the evacuation of low-lying coastal areas, and the repositioning of ships to deep waters when there is time to safely do so. Warnings may be updated, adjusted geographically, downgraded, or canceled. To provide the earliest possible alert, initial warnings are normally based only on seismic information.

**Tsunami Advisory** - a tsunami advisory is issued due to the threat of a potential tsunami which may produce strong currents or waves dangerous to those in or near the water. Coastal regions historically prone to damage due to strong currents induced by tsunamis are at the greatest risk. The threat may continue for several hours after the arrival of the initial wave, but significant widespread inundation is not expected for areas under an advisory. Appropriate actions to be taken by local officials may include closing beaches, evacuating harbors and marinas, and the repositioning of ships to deep waters when there is time to safely do so. Advisories are normally updated to continue the advisory, expand/contract affected areas, upgrade to a warning, or cancel the advisory.

**Tsunami Watch** - a tsunami watch is issued to alert emergency management officials and the public of an event which may later impact the watch area. The watch area may be upgraded to a warning or advisory - or canceled - based on updated information and analysis. Therefore, emergency management officials and the public should prepare to take action. Watches are normally issued based on seismic information without confirmation that a destructive tsunami is underway.

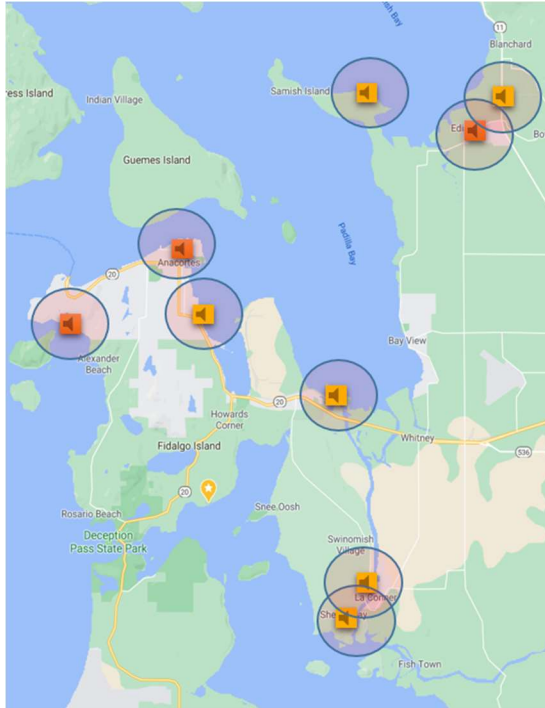
**Tsunami Information Statement** - a tsunami information statement is issued to inform emergency management officials and the public that an earthquake has occurred, or that a tsunami warning, watch or advisory has been issued for another section of the ocean. In most cases, information statements are issued to indicate there is no threat of a destructive tsunami and to prevent unnecessary evacuations as the earthquake may have been felt in coastal areas. An information statement may, in appropriate situations, caution about the possibility of destructive local tsunamis. Information statements may be re-issued with additional information, though normally these messages are not updated. However, a watch, advisory or warning may be issued for the area, if necessary, after analysis and/or updated information becomes available.

### 7.17.2 Skagit County/Salish Sea Region Tsunami Alert System

Sirens are located throughout various locations in Skagit County and the Salish Sea region. Sirens are tested the First Monday of each month at 12:00 PM. Examples of the sirens and how they sound are found at this website: <https://www.skagitcounty.net/Departments/EmergencyManagement/sirens.htm>

Locations of the sirens are found on the following diagram.





**7.17.3 Response Actions**

- If the berth is empty, close the loading valves and control pressure by periodically cracking the valve open.
- If a ship is berthed, immediately alert the ship Master, close the abutment valve and disconnect the loading arms.
- Request the ship Master to depart the dock and move to a safe area.
- Monitor Operations Channel and keep a log of activities at the other area facilities.
- Departure from the various docks will be coordinated by the ship Master.

An earthquake off the Washington coast could send a tsunami as high as 18 feet toward Anacortes at a speed of about 23 mph, inundating lower elevation areas for more than eight hours. You should not return to low-lying areas until the tsunami threat has passed and the “All Clear” is announced by the proper authorities.

**7.17.4 Scenario**

<b>SCENARIO – Tsunami</b>			
This scenario depicts the representative emergency response activities to a tsunami emergency at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Weather (Anacortes ERT/EOC)		Tsunami	
<b>SCENARIO</b>			
The refinery has received a Tsunami Watch alert for Salish Sea region.			
<b>TIME:</b>	1300	<b>WIND:</b>	10 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	60 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Onsite personnel are able to respond with no injuries</li> </ul>			



### 7.18 Volcano

The closest active volcano that could impact the refinery is Mt. Baker, located 40 miles to the northeast.







Once receiving notification through the Skagit County LEPC, Company environmental and safety advisors will monitor volcanic activity at the following web site: [Volcanoes and Lahars | WA - DNR](#)

Once a specific threat is determined through a non-typically high level of seismicity and a notice is issued, the active volcano will be monitored on web page specifically for the mountain.

Volcanoes will not remain monitored until reaching a level of seismicity in the ORANGE WATCH range and will continue to be monitored until returning to yellow. Illustrations and descriptions below are for general information.

#### Allowed Combinations for Volcano Updates

**Aviation Color Code**

	Green	Yellow	Orange	Red
Normal				
Advisory				
Watch				
Warning				

Increasing level of concern

- **WATCH / ORANGE** - The WATCH / ORANGE icon is used when a Volcano is exhibiting heightened or escalating unrest with increased potential of eruption, timeframe uncertain OR an eruption is underway that poses limited hazards including no or minor volcanic-ash emissions.
- **WARNING / ORANGE** - The WARNING / ORANGE icon is used when a major eruption is imminent, underway, or suspected but it poses limited hazards to aviation because of no or minor volcanic-ash emissions (e.g., an eruption with only substantial lava flows).
- **WATCH / RED** - The WATCH / RED icon is used when an eruption is underway that poses limited hazards to ground-based communities but includes significant emission of ash into the atmosphere that could affect aviation.
- **WARNING / RED** - The WARNING / RED icon is used when a major eruption is imminent, underway, or suspected with hazardous activity both on the ground and in the air.

#### 7.18.1 Personnel Safety

As always, the safety of staff and personnel remains the first priority. An actual Red eruption, resulting in significant ash fall conditions at any of the facilities would result in an assessment by Safety of the following:

- Is the prevailing wind direction potentially moving ash in the direction of the facility?
- Is the facility experiencing significant ash fallout?
- If the facility is impacted significantly, can non-essential employees be released?

- If essential employees remain, are they included in the Respiratory Protection Program and do they have adequate respiratory protection available?
- Have exposed personnel in facilities that cannot be evacuated either been provided with respiratory protection or have they been provided the necessary facilities to Shelter-in-Place?

Assessments may differ dramatically depending upon the location of the facility in relation to the active volcano, yet the assessment will occur in a time frame necessary to protect all Company and contract personnel.

### 7.18.2 General Communications and Electronic Equipment

There exists the potential for negative effects from volcanic ash fallout on communications equipment. The following issues could occur in the event of significant volcanic activity:

1. Cell phones to Company facilities would probably continue to function in heavier ash content than the microwave link as the signal is at a different frequency and significantly stronger.
2. A very large, thick ash cloud reaching high altitude above the facilities could restrict or eliminate satellite communication, including satellite telephones, GPS, etc.
3. Very High Frequency (VHF) radio would be the least-affected communication in the event of ash fallout of significance to reduce other forms of communication as listed above. VHF communications includes facility in-plant communications.
4. Consider all communication systems relating to a possible volcanic ash release, review HVAC systems into computer/network/server rooms that contain fan-cooled electronics and effectively filter, reduce or eliminate outside air sources in the event of a significant eruption.

### 7.18.3 Facility Operations

The three primary factors potentially-adversely affecting the Operations during a post volcanic eruption event are:

- 1) sustained commercial electrical power,
- 2) sustained feed rates, and
- 3) the amount of volcanic ash fallout causing operational disruptions, equipment shutdowns or facility shutdown.

Primary maintenance concerns include ash in lube oil systems and potential airborne ash damage to rotating elements. Procedures include increasing increased air filtration during the event and lubrication filtration during and after the eruption event. Critical spare filtration equipment and turbine lubrication storage is available on site should the need for replacements exist.

### *Shipping Operations*

The USCG Captain of the Port can issue an order requiring all hydrocarbon loading operations to be suspended immediately upon a volcanic eruption until the event can be evaluated or the condition relaxes to YELLOW/ORANGE. Although the tankers are boiler-fired and well equipped with a robust propulsion system for this type of event, transfer operations have the potential to be temporarily disrupted in the event of an actual RED eruption.

7.18.4 Scenario

SCENARIO – Volcano Eruption	
This scenario depicts the representative emergency response activities to a volcano eruption near the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.	
<b>RESPONSE TYPE:</b>	<b>TYPE / AMOUNT:</b>
Weather (Anacortes ERT/EOC)	Volcano

SCENARIO			
Security receives a Warning/Orange notice from Skagit County LEPC for Mount Baker			
<b>TIME:</b>	1300	<b>WIND:</b>	10 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	60 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>Onsite personnel are able to respond with no injuries</li> </ul>			

7.19 Security Incident

7.19.1 Organization & Responsibilities

The organization of the Bomb Threat Response Group and their responsibilities are as follows:

*Incident Coordinator*

During normal working hours, the Incident Coordinator will be the Facility Security Officer or, in their absence, the Refinery Management Duty Person. During off-hours, the Incident Coordinator will be the Logistics Supervisor, until relieved by the Management Duty person. The Incident Coordinator will evaluate the situation and take the following actions as needed:

- Establish the EOC in the second floor Administration Conference room
- Advise all personnel of the bomb threat by e-mail and/or telephone. Due to the possibility that an explosive device may be radio controlled, request all radio and cellular phone users to discontinue use until further notice and to communicate by telephone only.
- Issue a CAER level 1 incident via Skagit County 911 center
- If desired, specifically request Bomb Squad assistance
- Notify contract Security Supervisor
- Call the Health & Safety Department personnel
- Notify management personnel
- Post Security at Gate 1
- Initiate bomb search, and appoint alternates if designated search personnel are unavailable
- Initiate evacuation, if required, and appoint alternates if designated evacuation coordinators are unavailable
- Initiate all clear

*Facility Security Officer*

- Incident Coordinator during normal working hours

*Refinery Management Duty Person*

- Reports to the Administration Conference Room
- Acts as the Incident Coordinator in the absence of the Facility Security Officer
- Assists in the coordination of the incident.
- Notifies appropriate external and head office resources

### *Logistics Supervisor*

- During off-hours, notifies the Management Duty Person and the Facility Security Officer, and acts as Incident Coordinator until relieved by the Management Duty Person or the Facility Security Officer.
- If requested, conduct bomb search.

### *Superintendents Operations*

- Report to the Administration Conference Room
- Assure that operating areas have been searched
- Assist in the coordination of the incident

### *Management Team Members*

- Report to the Administration Conference Room
- Assist in coordination of the incident
- Manage public relations

### *Maintenance Superintendents*

- Report to the Administration Conference Room
- Call the Electrical Supervisors
- Assist in the coordination of the incident

#### **7.19.2 Search Personnel**

The following personnel have bomb search responsibilities:

- All Operations Supervisors
- Electrical Supervisors
- All Health & Safety Department personnel
- Security Officer Patroller

#### **7.19.3 Evacuation Personnel**

The following personnel have evacuation responsibilities:

- Operations Supervisor
- Quality Assurance Lab Supervisor
- Plant Controller

#### **7.19.4 Search Procedures**

Attempting to locate and identify an explosive or incendiary device is a difficult task. It is a situation which requires thoroughness since there are unlimited numbers of places in which such a device can be hidden. An explosive device can be in almost any size, shape, form, or color.

A thorough search of exterior areas is extremely important since these are the most accessible to a person placing a bomb. Use common sense or logic when searching for a bomb, but do not rely on random or spot checking for only the logical target areas, as a bomber may not be a logical person.

It is extremely important not to touch any object, which is alien to a given setting, unusual in appearance, or questionable in ownership. Upon locating such an object, immediately notify the Incident Coordinator who will request help from the Skagit County Sheriff's Department.

In general, the Search Teams should proceed as follows:

- Look for evidence of recent disturbances of fences or ground areas near fences. Look for damage or indications of attempts to get through, over, or under a fence.
- Look for strange or out-of-place packages or containers.

- If you find anything suspicious, do not approach, touch or move it. Notify the Incident Coordinator immediately.
- At the request of the Incident Coordinator both internal and perimeter search procedures will be initiated.

### *Internal Search Procedures*

Assign personnel and initiate internal search procedures. When initial internal searches are complete, reassign personnel to search the Lab, Shops, and trailers. Report to the Incident Coordinator in the EOC located at the Administration Conference Room at x131 when all searches are complete.

### *Logistics Supervisor*

The Logistics Supervisor is responsible for searching the Wharf and causeway areas.

### *Perimeter Search Procedures*

Assign personnel and initiate external search procedures. Report to the Incident Coordinator in the EOC located at the Administration Conference Room at x131 when searches are complete. During off-hours, safety personnel will conduct the assigned perimeter searches on the way to the plant. The perimeter search routes are also shown on the bomb search map, drawing number 40RA-3F.

### *Safety Supervisor or Designee to Assign Search Routes*

#### Search Route #1:

- Power supply line supports along West March Point Road from Shell property to the refinery entrance.
- Tank truck loading rack area
- Refinery fence from tank truck loading rack to Main Gate
- Contractor's gate at causeway along north fence to Main Gate

#### Search Route #2:

- Main substation and electrical feeder support south to refinery boundary fence (both lines)
- Railroad tracks and tank cars from south refinery fence to tank car loading rack
- Tank car loading rack
- Pipeline from tank car loading rack to "E" Street

#### Search Route #3:

- South and east fence lines from southwest property line to contractor's gate at causeway
- Causeway area from March Point Road
- TERA building and campground

#### Search Route #4:

- Tanks 135, 136, 165, 166, and Effluent area.
- North fence east of causeway and east fence line south to contractor parking lot and on to the refinery flare area
- Contractor parking lot
- Pipe trench and along east fence from Tank 36 to 24

**Search Route #5:**

- West inside fence starting at Eight and E Streets, south to March Point Road
- Natural gas line metering station and radio transmitter
- South fence and H2S and acid pipelines
- Water reservoirs, water supply meter station, and Trans Mountain Pipeline area
- Auxiliary fire water pumps
- East inside fence from fire training area to Tank 24

**Security Officer Patroller**

- Administration Building parking lot and perimeter of building
- Cafeteria change room and west parking lot
- Perimeter of substation #2

**Operations Supervisors**

- Coordinate search of operating areas, switch rooms and control houses.

**Process Unit Operators**

- Search operating areas, switch rooms, and control houses as directed by the Operations Supervisor.

**Electrical Supervisors**

- Main substation and electrical feeder support south to refinery boundary - both lines
- Substation #2 and perimeter area

**7.19.5 Evacuation due to Bomb Threat**

If the Incident Coordinator determines that evacuation is necessary, the IC will instruct the Evacuation Coordinators listed below to proceed with the evacuation. If they are unavailable, the IC will appoint alternates.

**Operating Supervisor(s)**

Instruct all essential operating personnel to remain in the Operators Field Shelters and direct non-operations personnel to evacuate the unit.

**Maintenance Supervisors**

Instruct all personnel in Shop 1, Shop 2, and the Purchasing Warehouse to assemble in the area north of the Purchasing Warehouse.

**Quality Assurance Supervisor**

Instruct all personnel in the Lab to assemble on the lawn east of the Lab Building.

**Plant Controller**

Instruct all personnel in the Administration Building and the Cafeteria Building to assemble on the lawn north of the Administration Building. No personnel shall return to the work place until notified by the Incident Coordinator.

**All Clear**

The Incident Coordinator will determine when the emergency is over and will notify all personnel to return to normal operations.

**7.19.6 Telephone Bomb Threats**

Telephone bomb threats are the most serious because they will generally require immediate action by the person receiving the call. The following actions must be taken in the order listed.

The person receiving the call must learn all of the information possible from the caller. The Bomb Threat Form within Attachment 1 should be used as a guide to obtain this information.

The person receiving the call must immediately notify the Incident Coordinator. During normal working hours, the Incident Coordinator will be the Facility Security Officer or, in their absence, the Management Duty Person.

During off-hours, the Incident Coordinator will be the Logistics Supervisor. In this circumstance, they will notify the Management Duty Person and the Facility Security Officer, and act as the Incident Coordinator until relieved by the Management Duty Person or the Facility Security Officer.

#### 7.19.7 Written Bomb Threats

Written bomb threats may be in the form of letters, notes, e-mails, or fax communications. If a written bomb threat is received, the following procedure should be followed:

- Notify the Incident Coordinator
- Save all containers, including the envelope that the threat arrived in. Once the message is recognized as a bomb threat, further unnecessary handling of the material should be avoided.
- Make every possible effort to retain and protect evidence such as fingerprints, handwriting or typewriting, paper, and postal marks. Place all materials in a document protector, plastic envelope, or similar container.

#### 7.19.8 Letter or Package Bombs

If there is any reason to believe that a letter or package might contain a bomb, proceed with the following:

- Do not handle or move
- Notify the Incident Coordinator

Frequently seen devices include letter bombs, soft cover pocketbook bombs, hard cover book bombs, manila envelope bombs, and cardboard box bombs. While they may be delivered by the US mail, they may also come by private courier or carrier. Personnel, particularly mail handlers, should be alerted to recognize suspicious looking items. Some unusual conditions to look for are the following:

- Special handling marks such as the following: special delivery, confidential, air mail, registered, or certified
- Restrictive markings such as the following: personal, confidential, or addressee only
- Excessive postage
- Handwritten or poorly typed address
- Incorrect title or title, but no names
- Misspelling of common words
- Oily stains or discolorations
- No return address
- Excessive weight
- Lopsided, uneven, or ridged envelope
- Protruding wires or tin foil
- Excessive securing material such as tape and string
- Any evidence that the envelope has been reopened and re-glued
- Mail items from a new or unknown source

#### 7.19.9 Armed Subject

Person Who Discovers the Armed Subject(s)

- **Warning**
  - **Do not remain in any location where the armed subject may present a threat or danger to you.**

- If confronted by the armed subject.
  - Remain calm; speak in a low, but firm voice.
  - Listen to the concerns and show respect.
  - Speak in a normal or slightly lower than normal voice.
  - Avoid cornering the individual.
  - DO NOT attempt to disarm the subject.
  - Escape if the opportunity presents itself.
- All other personnel
  - If it is safe to evacuate, evacuate the Refinery if and when it is safe to do so.
  - If it is NOT safe to evacuate, take cover and barricade yourself in a secure area until help arrives.
- Notify Main Gate Security by radio Channel 16 or by dialing ext. 119 and give pertinent information when possible.
- Render lifesaving first aid and move disabled or injured personnel to a safer location if and when it is safe to do so.
- Remain in continuous communications with security unless otherwise directed.

#### Security Control Center Officer

- Receive emergency information from caller.
- Make emergency announcement over the radio all-call system.
- Activate emergency notification system for security and management – call 333 for MPC Alert Notification.
- Update personnel on location of the armed subject by radio all-call system.

#### After the incident

- Send an all-clear message over the notification system and radio all-call system, when instructed.

#### Initial On-Scene Commander – Shift Foreman

- Initiate incident command at a safe location.
- Account for personnel.
- Determine if there are injuries.
- Perform IC responsibilities until relieved by the On-Scene Commander.
- Provide a turnover briefing to OC on accountability status, injuries, and exact location of the armed subject.

#### On-Scene Commander (OC)

- Respond to the EOC and accept transfer of Initial OC from Shift Foreman.
- Assign security and/or safety personnel to assist law enforcement in plant entry.
- Implement initial response actions.
- Continually assess the situation as changing conditions may warrant more resources.
- Ensure that ICS personnel are following the general position descriptions and duties ([Section 4](#))
- Initiate an ICS 201 ([Section 5](#)).
- Provide status report to Refinery EOC as determined.

#### Incident Commander (IC)

- Assume command as IC in Refinery EOC.
- Be responsible for overall command and control of the Refinery emergency response effort.
- Ensure a Safety Officer is assigned and that a site safety plan is developed.
- Ensure that Government Liaison makes appropriate agency notifications.
- Determine the need for additional resources.
- Ensure staffing needs for ICS positions are determined and met for extended responses.



- Ensure offsite authorities are kept informed of incident status.
- Ensure assessments continue to be developed.
- Ensure that the Skagit County Sheriff’s Office EOC is periodically provided with updates.
- Ensure that ICS personnel follow general positions (*Section 4*)

**7.19.10 Scenario**

<b>SCENARIO – Suspicious Package</b>			
This scenario depicts the representative emergency response activities to a bomb threat at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Security (Anacortes ERT/EOC/Security)		Bomb Threat	
<b>SCENARIO</b>			
An operator calls security to report that a suspicious duffel bag in the employee parking lot.			
<b>TIME:</b>	1300	<b>WIND:</b>	5 W
<b>SEASON:</b>	April	<b>TEMPERATURE:</b>	40 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>• Safe to resume response operations</li> </ul>			

**7.20 Civil Disturbances, Terrorism Event**

When civil disturbances or suspected terrorism event take place, local law enforcement agencies will usually be preoccupied with addressing the protection of the general public. Therefore, it is essential that the refinery be in a position to initiate defensive measures to assist in the protection of personnel and refinery property prior to the actual arrival of local law enforcement personnel.

**7.20.1 Communications**

The Company does not anticipate being the initial or a prime target of civil disorders. Due to its location, the refinery may have some pre-warning of any such activity taking place at other petrochemical facilities and locations in the region. However, due to the presence of large quantities of flammable liquids and gases, the refinery could potentially serve as a target for terrorism-related events.

Personnel should be alert to the mood and political atmosphere in the area. When combined with information available through the news media, time will often be available to prepare for any potential occurrences. These guidelines will not be implemented based solely upon rumors, crank calls or reports from unreliable sources.

**7.20.2 Procedure**

Any authorized and/or reliable communications received by the Refinery that are a pre-warning to a possible civil disturbance, terrorism event or a similar emergency should be handled in the following manner:

1. Contact Security at x119 to inform them of the emergency.
2. The Security will note the information and initiate an ERT and EOC response via 333 call.

The IC will determine the threat level and the need for additional notifications and resources, such as Anacortes PD and/or Corporate Security for advice and assistance if needed

7.20.3 Scenario

SCENARIO – Civil Disturbance			
This scenario depicts the representative emergency response activities to a civil disturbance at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Security (Anacortes ERT/EOC/Security)		Civil Disturbance	
SCENARIO			
Security receives a phone call from Anacortes Police Department that a caravan of picketers is on the way to the refinery with the purpose of picketing all entrances and preventing trucks or employees from entering or leaving until their demands are heard and met.			
<b>TIME:</b>	1300	<b>WIND:</b>	10 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	60 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>Safe to resume response operations</li> </ul>			

7.21 Disaster Recovery Plan (IT Emergency)

7.21.1 General Information and Process

Corporate IT refers to an “IT Emergency” as a “MAJOR INCIDENT”. In case of Major Incident:

**You MUST contact MAPLINE AT 877-627-5463**

IT declares a Major Incident when the loss of an IT service causes significant business impact. The loss of service must be significant.

Criteria that warrant a Major Incident:

- Many users impacted
- Several offices impacted
- A critical application is down
- Lost service causes a significant impact to financial, operations, and/or Environmental, Health & Safety

The IT Major Incident Process document is maintained on the ServiceNow website.

An IT Incident Manager is available 24x7.

How to Declare an IT Major Incident

1. Call the IT Helpdesk at 800-884-7397. You must CALL.
2. Identify the IT Service that is unavailable.
3. Tell the agent this is a “Major Incident”.

7.21.2 Scenario

SCENARIO – Loss of CCR Controls for Units			
This scenario depicts the representative emergency response activities to an IT Major Emergency at the Refinery. This scenario is designed to demonstrate the ability to respond to an event of this type.			
<b>RESPONSE TYPE:</b>		<b>TYPE / AMOUNT:</b>	
Operations (Anacortes EOC/IT)		IT Major Emergency	
SCENARIO			
The Control Board operator contacted their unit supervisor to report that all boards are down and that they have no visibility or control for the units.			
<b>TIME:</b>	1300	<b>WIND:</b>	10 W
<b>SEASON:</b>	September	<b>TEMPERATURE:</b>	60 Degrees
<b>VISIBILITY:</b>	10 miles	<b>LOCATION:</b>	Anacortes Refinery
<b>ASSUMPTIONS:</b>			
<ul style="list-style-type: none"> <li>Safe to resume response operations</li> </ul>			

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# Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

## Purpose:

The purpose of this hazard assessment is to facilitate a hazard evaluation prior to removing insulation or inspecting relatively minor hazardous leaks. After careful consideration from shift personnel of leak risk and personal protective equipment required, uninsulated flange leaks may be attempted to be tightened, but if the leak continues, this Hazard Assessment shall be completed.

## Scope:

This hazard assessment shall be completed after Operations/Product Control has determined that the process is safe to continue to operate with the active leak. Each site should have protocols in place to identify when a unit may continue operation with an active leak that considers the potential for vapor cloud formation, acute toxic releases, and acute fire hazards like materials near or above their auto ignition temperature, or other releases that may impact the health, safety, and security of the plant personnel or the community.

This hazard assessment does not apply to the following:

- Significant hazardous leaks as these may result in an immediate shutdown,
- Valve packing leak repairs typically identified by the LDAR program,
- DOT regulated piping systems,
- Pump seal leaks,
- Repair or reinforcement of thinned piping or equipment, or
- ASME B31.3 Category D Services (nonflammable, nontoxic, not damaging to human tissue, design pressure is  $\leq 150$  psi, design temperature  $\leq 366^\circ\text{F}$ , and fluid temperature  $\geq -20^\circ\text{F}$ ).

## Cautions:

**NOTE: IF AT ANY TIME THE LEAK WORSENS, THE NEED FOR AN EMERGENCY UNIT SHUTDOWN SHOULD BE REEVALUATED.**

**An appropriate area should be roped off around the leak site and hot work stopped in the area until the assessment can be completed.**

- **Operations and/or Maintenance personnel shall not remove insulation or perform any type of inspection that requires touching the leaking equipment without first performing a hazard assessment.**
- The Shift Superintendent should inform all other operating units including Products Control/Tank Farm operations of the situation and that if the leak worsens an immediate unit shutdown could result.
- The decision to remove insulation or to further inspect the hazardous leak area must be made by the hazard assessment team after completing the guideline and considering all of the process safety aspects involved.
- The affected Area Team Leader or designee shall be designated as the leader for the hazard assessment.

# Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

The following hazard assessment will be completed by a team composed of the following individuals. Those denoted by an asterisk (\*) should assemble together on-site, others may be consulted via telephone:

- Maintenance Supervisor and/or Maintenance Foreman/Planner \*
- Day Foreman and/or Shift Superintendent \*
- Shift Foreman/Domain Foreman/Shift Coordinator \*
- Area Inspector \*
- Unit Operator \*
- Area Team Leader
- Maintenance Manager
- Operations/Products Control Manager
- Safety/Environmental/PSM

- The hazard assessment will consider the following items:

- What is leaking? Are the contents above the flash point or above the auto-ignition temperature (See Table 1)? Is the material pyrophoric? Is the material acutely toxic? Is there the potential to produce a vapor cloud? Has Atmospheric monitoring of the area been performed? Should personnel shelter in place or move to a safer location? Is there a potential to impact on health, safety, security of the plant personnel, or community?

- What is the estimated leak rate? Where is the released product going?

- What is the physical location of the leak? Is it elevated?

- Is the source of the leak visible? Is it covered by insulation or other covering or is there some other interference to observing the source?

# Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

- Is it safe to approach the leak source? Consider using an LEL detector or VOC Camera to check for a vapor cloud prior to approaching the leak source.

- Can the unit operate safely with the leak not affecting safety, health, or environment?

- Where and how can the leak be isolated? Are the isolation locations safe and remote even if the leak gets worse? Can the leak be safely isolated or otherwise mitigated (e.g., bypassed, clamped, etc.)? Can the leak be safely isolated or contained? If so, where, how, and when?

- Are there ignition sources (stationary or mobile) that must be controlled or mitigated? Have potential sources of ignition in the area been mitigated (hot pipes, heaters, engine powered equipment, Hot Work, etc.)? Is a purge medium recommended?

- What is the relative corrosion history of the piping segment/equipment? Is there a known cause or likely cause of the leak? What is the likely origin of the leak? What is the likely damage mechanism? Is the worst case failure mechanism understood? **Extreme caution** should be taken prior to stripping insulation from leaking insulated piping known to operate in the temperature region susceptible to corrosion-under-insulation (CUI) due to the possibility of increasing the leak magnitude by removing the insulation. Steps should be taken to isolate the leak location and reduce system pressure prior to proceeding with insulation removal.

- What is required to inspect the metal surrounding the leak source? UT? RT? Other? Does Inspection need to touch the pipe? What precautions should be taken by the inspection crew? **CAUTION: Removal of rust, scale, or other deposits may expose a leak or make an existing leak worse.**

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# Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

- Are there adequate means to access/egress the leak location (i.e., two forms of egress)? Is it still adequate if the leak gets worse? What is the current and potential path of travel of the leaking material? Consider wind direction for solid, liquid, dust and vapor materials.

- What forms of protection should be provided to protect an employee while removing insulation or completing further inspection? What are the recommended PPE requirements for the affected leak area?

- What emergency response equipment and/or resources should be pre-staged? Consider at a minimum a standby person with a radio and a fire extinguisher.

- Is the unit operating at stable conditions? Are the conditions likely to change within the process? Consider changes in upstream or related process as well.

- What if the leak gets worse? How will it affect the unit operation? If needed, are shutdown procedures ready to be implemented? Are isolation valves readily accessible and operable?

- Are multiple units affected by a pending shutdown? Have all affected up and down stream system or asset owners been notified?

- Is there a potential community impact if the leak gets worse? If required, have Governmental Agency notifications been made, per site procedures?

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# Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

- Is the leak originating from a temperature element/thermowell? If so, extreme care should be taken with any attempt to remove the temperature element. Has positive confirmation been obtained from an SME that a thermowell is present? Are mitigations in place to handle the possibility that the leak worsens with removal of the temperature element?

- Have other options have been evaluated to avoid installation of a temporary repair (unit shutdown or rate reduction, etc.)? If yes, explain why those options where not pursued.

- Other concerns considered:

- Based on the Hazard Assessment above, the plan forward will be: (i.e., leak isolation, further inspection, install clamp or composite wrap, unit shutdown, etc.)

***CAUTION - Operations and/or Maintenance personnel shall not remove insulation or perform any type of inspection that requires touching the leaking equipment without first performing a hazard assessment.***

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Marathon Petroleum Company LP

Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

- Team Member Signatures:

<u>Signature</u>	<u>Date</u>	<u>Signature</u>	<u>Date</u>

- A copy of the completed Hazard Assessment shall be made available to all affected employees including, but not limited to Operators, Maintenance workers, and Contractors. If a clamp, enclosure, or composite wrap repair is pursued, this hazard assessment shall be attached to the *PMOC for Design, Installation and Life Cycle Management of Clamps and Composite Wrap Repairs Form* ([RSP-1150-040-FORM2](#)).
- Completed Hazard Assessment should be returned to the PMOC Responsible Person for record retention and attached to the PMOC in the electronic management system.

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# Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

## Appendix A - Typical Refinery Stream Hazard Data

### Definitions

**Auto-Ignition Temperature** – The minimum temperature required to cause self-sustained combustion, independent of the heating element. Auto-ignition temperature should be regarded as approximations as they are very dependent on the conditions under which they were measured (i.e., percentage of gas in the mixture, size and shape of the test apparatus, and the duration of heating). Just because a stream is below its auto-ignition temperature does not mean that it will not light off.

**ERPG-3** – Emergency Response Planning Guideline Level 3 - The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing life-threatening health effects. (AIHA Definition)

**Flash Point** - The minimum temperature at which the liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid.

**IDLH** – Immediately Dangerous to Life and Health – An atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere. [29 CFR\* 1910.120] (NIOSH Definition)

**LOPC** - Loss of Primary Containment – An unplanned or uncontrolled release of material from the process equipment.

**Vapor Density** – The density of a gas relative to air. It is calculated as follows: Molar mass of gas/molar mass of air. Vapor density is an indication whether a gas when released will collect along the ground and low lying areas or disperse. Vapor Density > 1 is more likely to collect in low lying areas. A vapor density of 2 means the gas is twice as dense as air.

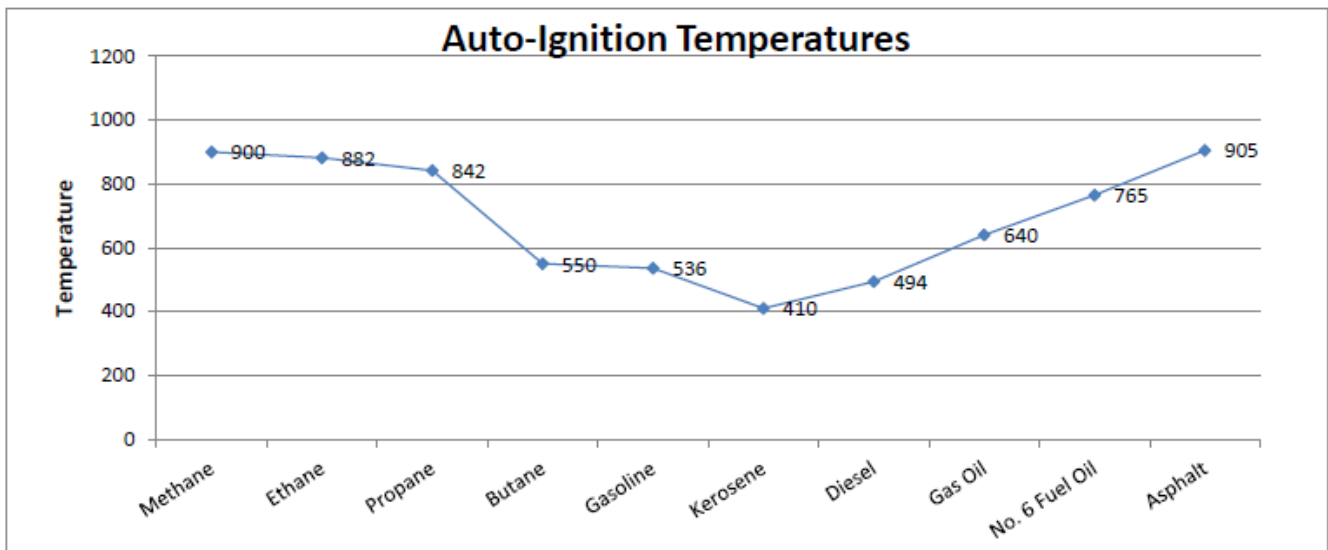
# Managing Minor Hazardous Leaks Hazard Assessment

(RSP-1150-040-FORM1)

**Table 1: Typical Material Hazard Data**

Material	Auto Ignition Temp (°F)	Flash Point (°F)	Vapor Pressure (psia @ 100°F)	Vapor Density (Air=1)	Toxicity (ppm) IDLH / ERPG3
Crude Oil		20-90°F			
Hydrogen	932°F	Gas	Gas	0.07	
Methane/Nat Gas	900°F	Gas	Gas	0.55	
Propane	842°F	Gas	188.6	1.5	
Butane	550°F	-76°F	52 – 72	2.0	
Iso-Pentane	527°F	0°F	20	2.5	
Hexane	437°F	-7°F	5	3.0	
Naphtha	450°F	85°F	0 – 15 (RVP)	4.3	
Gasoline	536°F	-45°F	5 – 12 (RVP)	3.0-4.0	
Jet Fuel	410°F	100-162°F			
Diesel/No 2 FO	494°F	126-204°F			
Gas Oil	640°F	150+°F			
No. 6 FO	765°F	150-270°F			
Vacuum Resid	905°F	400+°F			
Benzene	928°F	12°F	3.2	2.8	
Toluene	895°F	40°F	1.0	3.1	
H <sub>2</sub> S	500°F	Gas	395	1.2	100 ppm/50 ppm
Ammonia (Anhydrous)	1200°F	Gas	212	0.6	300 ppm/200 ppm
HF	Will Not Burn	NA	9 - 20	3.0	30 ppm/50 ppm
Sulfur	450°F	405°F			May give off H <sub>2</sub> S

**Chart 1: Auto-Ignition Temperatures**



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## SECTION 8 PPE, DECON, SITE SECURITY AND CONTROL

### 8.1 Personal Protective Equipment

Initial responders shall wear self-contained breathing apparatus (SCBA) and bunker gear (turnouts) as minimal protective equipment until air monitoring and initial hazard assessments have been completed.

The Site Safety Officer, working with the Industrial Hygiene Lead, the Safety Officer and the Operations Chief, is responsible for determination of proper Personal Protective Equipment levels. Site monitoring must be used to make this evaluation.

#### 8.1.1 Personal Protective Clothing

Personal protective clothing for emergency responders can be categorized into structural firefighting protective gear, chemical protective clothing, and high temperature protective clothing.

#### 8.1.2 Structural Firefighting Protective Clothing

Designed to protect against extremes of temperature, steam, hot water, hot particles, and the ordinary hazards of firefighting. Full protective clothing includes helmet, turnout coat and pants, gloves and boots, positive-pressure self-contained breathing apparatus (SCBA), and a hood made of a fire-resistant material. All firefighting protective clothing meets the requirements of NFPA protective clothing standards. All Emergency Response Team (ERT) firefighting members are issued their own firefighting protective clothing.

The individual in charge at the emergency site (e.g., On-Scene Commander, Operations Section Chief) is responsible to ensure all responders have the necessary protective gear on and each responder is responsible for its proper use.

With respect to hazardous materials exposures, firefighting protective clothing may be used when the following conditions are met:

- Unlikely contact with splashes of extremely hazardous materials. Examples of situations where structural firefighting clothing would not provide adequate protection include concentrated acid and anhydrous ammonia releases or spills.
- Total atmospheric concentrations do not contain high levels of chemicals toxic to the skin. There are no adverse effects from chemical exposure to small areas of unprotected skin.

*CAUTION: Structural firefighting clothing is NOT designed to offer any chemical protection, and turnout boots will provide only limited protection against liquids in-depth. Personnel should be aware of the potential chemical burn hazards associated with the runoff water and accumulated liquids, which exist at refinery emergencies, and should avoid kneeling in areas where such hazards exist.*

#### 8.1.3 Chemical Protective Clothing

Designed to protect the skin and eyes from direct chemical contact. Divided into two groups: chemical liquid splash protective clothing and chemical vapor protective clothing. Chemical liquid splash clothing may also be referred to as either EPA Level B or Level C chemical protective clothing, depending upon the type of respiratory protection provided. Chemical vapor protective clothing is also commonly referred to as an EPA Level A chemical protective clothing.

Chemical protective clothing must be chosen based upon the hazard and chemical compatibility information found in the appropriate SDS and based upon the guidance of the Health and Safety Departments.

Chemical liquid splash protective clothing may consist of either one or two-piece splash suits with associated gloves, boots and/or hoods. Respiratory protection must also be provided. Chemical liquid splash protective clothing may be used under the following conditions:

- The vapors or gases present do not contain high concentrations of chemicals, which are harmful to, or can be absorbed by, the skin.
- The user will not be exposed to high concentrations of vapors, gases, particulates or splashes which will affect any exposed skin areas.
- Operations will not be conducted in flammable atmospheres. However, in some situations, it may be possible to wear chemical splash protective clothing with firefighting protective clothing to combine both chemical and thermal protection.

Chemical vapor protective clothing provides full-body protection for the user. When used with respiratory protection, chemical vapor protective clothing provides a sealed, integral protection level. Chemical vapor protective clothing may be used under the following conditions:

- Extremely hazardous substances are present, and skin contact is possible (e.g., anhydrous ammonia).
- Potential contact with substances that harm or destroy skin (e.g., corrosives).
- Anticipated operations that involve a potential for splash or exposure to vapors, gases or particulates capable of being absorbed through the skin.
- Anticipated operations that involve unknown or unidentified substances and require intervention by the Emergency Response Team (ERT).

#### 8.1.4 Respiratory Protection

Respiratory protection is a primary concern when wearing personal protective clothing and equipment. The respiratory system is the most exposed, direct, and generally, the most critical exposure route. The Anacortes HES Department is responsible for maintaining the refinery's respiratory protection program. Respiratory protection at emergencies can be provided by either air purification devices or by air-supplying respiratory equipment.

#### 8.1.5 Air Purification Devices.

These are either filters or chemical cartridges that remove contaminants from the air that is inhaled.

*CAUTION: The following precautions must be considered when using air purification devices for respiratory protection for an emergency:*

- *Monitoring must be performed prior to allowing response personnel to use such devices.*
- *Cannot be used in an IDLH or oxygen-deficient atmosphere containing less than 19.5% oxygen.*
- *Should not be used in the presence or potential presence of unidentified contaminants.*
- *Must be used with the proper filter or cartridge element.*
- *Protect only against specific chemicals and only to specific concentrations.*

#### 8.1.6 Self-Contained Breathing Apparatus (SCBA)

Provides the highest level of protection against airborne contaminants and in oxygen-deficient atmospheres. Only positive-pressure devices, which maintain positive pressure in the facepiece during both inhalation and exhalation, should be used.

SCBA's are strategically located throughout the refinery in control rooms, around process areas, and on the emergency response vehicles.

### 8.1.7 Supplied Air Respirators (Air Line Units)

Provides the highest level of protection against airborne contaminants and in oxygen-deficient atmospheres. Only positive-pressure devices, which maintain positive pressure in the facepiece during both inhalation and exhalation, should be used.

These units are similar to SCBA's in that a full facepiece issued. The source may be either a manifold system of air cylinders or an air compressor.

*CAUTION: The following precautions must be considered when using air lines or supplied air devices for respiratory protection for an emergency:*

- *NIOSH limits the maximum hose length to 300 feet from the source.*
- *Use in IDLH or oxygen-deficient atmospheres requires a secondary emergency air supply, such as an escape pack.*
- *Will impair user mobility.*
- *The airline hose is vulnerable to physical damage, chemical contamination and degradation.*
- *Ensure CO monitor and compressor alarms are working.*
- *Grade D breathing air must be used.*

### 8.1.8 Downgrading Levels of PPE

All emergency responders shall be initially protected with full protective clothing and SCBAs. Emergency experience within the petrochemical industry has shown that emergency responders are sometimes provided with incomplete or inaccurate information in the initial stages of the incident. The use of lower levels of personal protection can result in a loss of both critical time and/or injury as responders discover that they are inadequately protected to handle the actual problem.

*CAUTION: Some gases, such as nitrogen, are tasteless, colorless, and odorless. Emergency Response Team (ERT) members do not enter a process area or a confined space to rescue a victim without conducting air monitoring and wearing the appropriate respiratory protection based on the monitoring results.*

Personnel engaged in emergency response operations and exposed to hazardous substances producing a potential or actual inhalation hazard shall wear SCBA until the On-Scene Commander verifies through the use of air monitoring that a decreased level of respiratory protection will not result in personnel exposure to hazardous substances.

PPE should not be downgraded unless the Site Safety Officer, and/or the On-Scene Commander are satisfied that the following criteria have been met:

- The hazards and risks have been fully evaluated and hazard information has been verified.
- The atmosphere has been checked by a qualified individual and has been verified to be lower than 20% of the Lower Explosive Limit (LEL) for an open-air release of flammable vapors, or 10% of the LEL for a flammable vapor release in a confined space or indoors.
- The atmosphere has been checked by a qualified individual and has been verified to be greater than 19.5% oxygen, but not more than 23.5% oxygen.

- The atmosphere has been checked by a qualified individual and has been verified to be below the IDLH and/or Permissible Exposure Limit (PEL) or the Threshold Limit Value - Ceiling (TLV/C) for the contaminants of concern.
- The source of the fire or release has been identified, verified and brought under control.

If the appropriate safe operating criteria have been satisfied, the Site Safety Officer, after consultation with the Safety Officer in the EOC (if appropriate), may determine that the level of protective clothing or equipment may be downgraded. Examples of downgrading include removing SCBA's in favor of air purifying respirators for the chemical present, or removal of structural firefighting gear in favor of fire-resistant coveralls.

## 8.2 Decontamination

Decontamination (decon) procedures serve several basic functions:

1. Minimizes worker contact with contaminants during removal of personal protective gear, and exposure to personnel in clean areas.
2. Prevents spreading of contaminants from personnel, clothing, equipment, and vehicles working or being used in the contaminated areas into surrounding uncontaminated areas off site.
3. Removal or detoxification of contaminants from equipment or areas to enable future uses after activities involving contact are complete.

In theory, decontamination procedures are logical and straightforward. A series of steps are followed in sequence which gradually removes contaminants so that the end result is a contaminant free individual or piece of equipment. In practice, however, it is a much more detailed process requiring training and decision making.

### 8.2.1 General

Anacortes Refinery Emergency Response Team members will typically only be involved in decontamination operations of their own equipment and personnel. They may conduct decon of victims to aid transport and treatment.

Decontamination of large pieces of equipment, property, or the environment will be accomplished through the use of contractors specializing in this service. Whenever the Company's ERT members are involved in decon operations, they will follow these procedures.

### 8.2.2 General Design Principles

The decontamination line is located between the exclusion or spill clean-up area (hot zone) and the clean or support area (warm zone). It must act as the control point for ingress and egress of personnel into the spill clean-up area. In addition, the decon plan must be part of the site safety and health plan. Important issues to be addressed for decontamination set ups include:

- the containment, collection, and disposal of contaminated solutions and wastes generated in the process;
- separate set ups for heavy equipment and other machinery to prevent cross contamination of personnel decon facilities;
- physically separated stations or stages of decon to prevent cross contamination;
- well-marked and distinct entry and exit points as well as physically separated entry paths into the clean-up area from the clean area and vice versa; and
- procedures for minimum decon for restroom use and emergencies (medical, evacuation, etc.).

Figure 8.1: Site Control Map

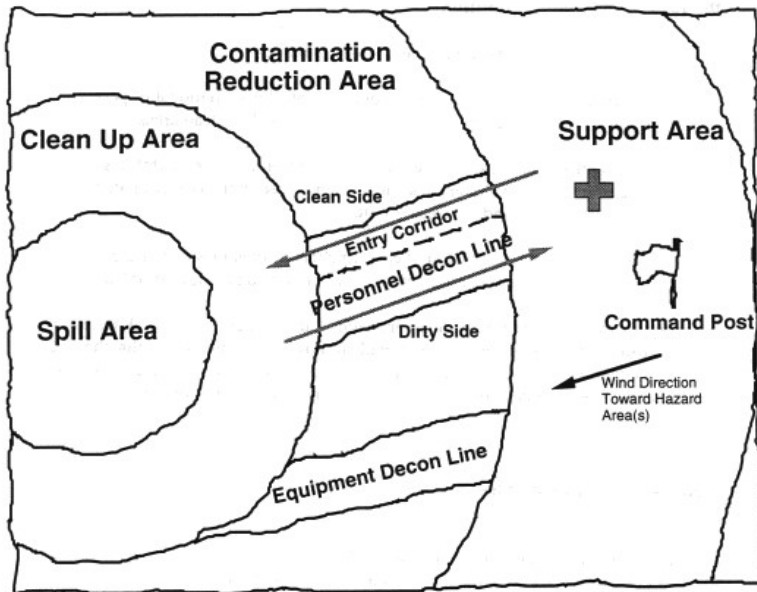


Figure 8.1 illustrates many of the issues that need to be addressed during Site Set Up. All operations should be restricted to the upwind side of the spill to minimize worker exposures. For the same reason, care should be given to the location of the medical or first aid station. Finally, a separate heavy equipment decon line should be established since equipment decontamination may not necessarily follow the same procedures as personnel decon.

### 8.2.3 General Work Practices

First and foremost, in any decontamination plan is to establish Work Practices or an Operating Plan to minimize contact with hazardous materials - thus reducing the amount of decontamination required. These can include any or all of the following:

- Stress activities or extra steps to avoid contact (e.g. avoid walking through patches of oil, avoid unnecessary handling any contaminated objects)
- Use of remote sampling, handling, and clean up techniques (e.g. long-handled instruments to avoid wading through oil patches, drum grapplers, etc.)
- Wrap sampling and monitoring equipment in see through plastic bags. Special holes for sampling ports or sensors may be required as well.
- Use of disposal chemical protective clothing (CPC) and equipment.
- Strippable coatings for equipment (e.g. strippable plastic shields for respirator facepieces).
- Double containerization of contaminated waste/recovered material (e.g. plastic lined drums for disposal of chemical protective clothing, overpacks for drums, etc.)

Proper use of chemical protective clothing is critical to ensure worker protection and reduced decontamination. This includes proper fastening of CPC (i.e. use all buttons provided, close all snaps, zippers fully closed, etc.). Gloves and boots should be tucked inside of the arms and legs of suits, and the juncture of these pieces of equipment must be taped to prevent contamination from running inside and/or past the CPC. Remember to tape the gloves and boots to the suit with enough room for full arm and leg span, otherwise ripping or tearing of the suit may occur.



Finally, inspect all CPC before putting it on. Check for cuts, tears, punctures, and abrasions as well as for signs of previous use or material degradation (i.e. Polyvinyl Alcohol (PVA) gloves which work great against aromatic and aliphatic hydrocarbons will begin to blister and crack when exposed to moisture in the air). Similarly, injuries to the skin surface such as cuts and scratches increase the possibility of personnel injury, harm, and exposure. Workers with large areas of damaged skin should be kept from working in contaminated areas until the skin heals.

#### 8.2.4 Resources

Typical equipment required for decontamination lines include but are not limited to those items in the following table.

**Table 8.1: Decontamination Equipment Options**

Drop cloth(s) made of plastic or other impermeable material	For heavily contaminated equipment or PPE such as overcoat, tools, etc. Also, as a covering for entire decon line to control contaminant spread.
Disposal collection containers and plastic bags	Drums or other suitably lined trash cans for disposal of PPE, disposable wipes, disposable tools, etc.
Absorbents	For physical removal of gross contamination.
Wash tubs or pools	To collect rinsate or wastes from wet decon.
Cleaning solutions, i.e. surfactants	For wet decon
Rinse solutions, i.e. water	For wet decon
Long-handled, soft bristle brushes	For wet decon
Lockers/cabinets	For storage of decontaminated equipment, (i.e. respirators, tools, etc.)
Storage containers for contaminated wash and rinse solutions	Must be vapor tight to prevent backflow of vapors into decon area
Shower facilities or personal wash sinks	Access to full body showers and wash sinks for personal hygiene purposes. Hand sanitizers should also be available for use.
Clean clothing (personal storage lockers)	
Barricade or banner tape or cones	To establish a physical separation and denote contaminated areas.

- The amount of resources required for decon as well as the actual set up of decon will depend on the following factors:
- The availability of utility services such as potable water, electricity, waste water disposal.
- Mobilization time and duration of site activities.
- Level of activity expected (site monitoring vs. waste packing) and site conditions.
- Available space for a decon set up as well as location requirements of decon line (e.g. contiguous space with clean up area(s)).
- Health hazards of contaminant.
- Periodic or continuous monitoring of decon line will be necessary to decide if additional control measures are necessary to minimize runoff, vapor diffusion/dispersion, and/or movement of gross waste from station to station.

#### 8.2.5 Contaminant Removal Methods

Decontamination methods either (1) physically remove contaminants, or (2) remove contaminants by chemical inactivation or detoxification, or (3) both.

### Physical Removal

In many cases including clean-up of oil spills, gross contamination can be removed by physically dislodging or displacing, wiping off, and evaporating the material.

Contaminants removed by physical means fall into one or a combination of the following three groups: loose contaminants, adhering contaminants, and volatile liquids. Oil falls into the last two categories: adhering contaminants and volatile liquids.

Loose contaminants are dusts and vapors that become lodged or cling to equipment and protective clothing. These can be removed with water or a liquid rinse. The use of anti-static solutions may also enhance the ability to remove electrostatically-charged loose contaminants.

Adhering contaminants are those that adhere by forces other than electrostatic attraction. The adhesive qualities vary from substance to substance as well as with the temperature. Removal can be accomplished by scraping, brushing, and wiping. In addition, certain methods such as solidification, freezing, and adsorption or absorption can be used. Volatile liquids are those contaminants that can be caused to evaporate. Removal can be accomplished by allowing evaporation over time or enhancing the evaporation rate with water rinse or steam. Care has to be taken to minimize exposure potential for workers being decontaminated and the decon line workers.

### Chemical Removal

Physical removal methods may not remove enough of the contaminant to be effective decontamination. Usually, a combination of physical and chemical removal is required. Chemical removal can involve either (a) dissolving contaminant, (b) use of surfactants, (c) solidification, or (d) rinsing.

- Dissolving the contaminant involves use of a solvent such as water, dilute acids, dilute bases, halogenated solvents, or organic solvents. Care must be taken in selecting a solvent to ensure chemical compatibility with not only the contaminant being removed but also the suit, boot, and glove material. Some organic solvents will dissolve some CPC materials.
- Solidification enhances the ease of removal of the contaminant by physical means.
- Mechanisms include removal of the water content using absorbents such as grounded clay or powdered lime, chemical reaction by polymerization, and freezing using temperature and wind or ice water.
- Rinsing attempts to remove contaminants by dilution and solubilization. Multiple rinses with small quantities of liquid are better than a single deluge.

Oil is best removed using a combination of solidification and physical removal or wiping down gross contamination and following with multiple rinse cycles with surfactant in water. Use of solvents for oil removal should be avoided due to the increased health hazards as well as the increased cost of waste disposal.

### 8.2.6 Personnel Protection and Monitoring

As a general rule, the decontamination workers will be, at a minimum, one level of protection below those workers they are decontaminating. This poses a question, however, when cleanup workers are in Level C. The level of protection used by the decon workers must be selected based on monitoring by the Site Safety Officer to determine exposure potential. If this is not possible, then the decon team should be at the same level of protection as the workers.

In addition, the decon worker working closest to the Clean Up Area has a higher potential for exposure than does the worker(s) on the other end of the line. Although monitoring can assist in making this decision, the worker(s) with the highest potential for exposure should be at the same level of protection as the Clean Up Workers coming into decontamination.

Also remember that decontamination workers are still in a contaminated area and must themselves be decontaminated before going back to the Support Zone or clean areas. The extent of their decontamination depends on the extent of material they have contacted. Generally, the worker(s) in the first stage of decon will be the most contaminated, with stage 2 being the next most contaminated, and stage 3 being the least. The process of decontaminating the decon team begins with the most contaminated worker(s) in the first stage to perform gross decontamination on him/herself, step into station 2 and be decontaminated by the worker(s) in station 2 and on down the line. The worker(s) in station 2 then decon themselves and step into station 3, and the worker in station 3 decons him/herself.

Personal exposure monitoring of all site workers is one of the responsibilities of the Site Safety Officer. This generally takes the form of real-time sampling as well as full shift personal and area samples. Full shift personal and area samples involve the use of sampling pumps and sampling media. Workers may be asked to wear the sampling pump and media during their shift. At the end of the shift, the pump is removed, and the media processed for shipment to a laboratory for analysis. The results of all monitoring completed will be posted in an area where workers can access the information. In the case of personal sampling, no names are used in posting the results.

### 8.2.7 Decontamination Procedure Steps

The decontamination procedure is a step by step logical sequence of contamination removal and then the removal of articles of protective clothing, respirators, etc., At the conclusion of decontamination, the contaminated clothing and gear is removed for disposal/cleaning as appropriate, and the worker is never in contact with the chemical. This, unfortunately, is more difficult than it sounds, and requires practice and specialization.

A full Level A decontamination may consist of up to 20 individual steps. Fortunately, because the hazards of crude oil or any mixed treatment chemicals have been characterized and are known, the 20-step decontamination process can be reduced to a basic 3 step decontamination involving both physical and/or chemical removal methods. Figure 2 contains a suggested minimum decontamination procedure for use with known contaminants such as crude oil. It involves the use of 3 basic stations: gross decontamination with physical and chemical removal methods in Station 1 and further cleaning in Stations 2 and 3.

#### Decon Station 1

Theoretically, this is the most contaminated station in the decon line. Gross removal of contaminant via brushing or wiping is completed at this station. If practical, use of a surfactant in water solution (a cheap and reliable surfactant is laundry soap but care should be taken not to use too much surfactant in solution; "slippery to the touch" is a general guideline) is ideal after the initial gross wiping in order to obtain better removal of the contaminant. Special attention should be placed on the outer boots and outer gloves.

Once all visible contaminant is cleaned, outer boots and outer gloves can be removed. The worker being decontaminated should allow decon workers to do all the work except for helping by raising arms and legs so that the decon workers can access all portions of the CPC. Workers may need to hold onto an object or the decon worker for balance during some portions of decon.

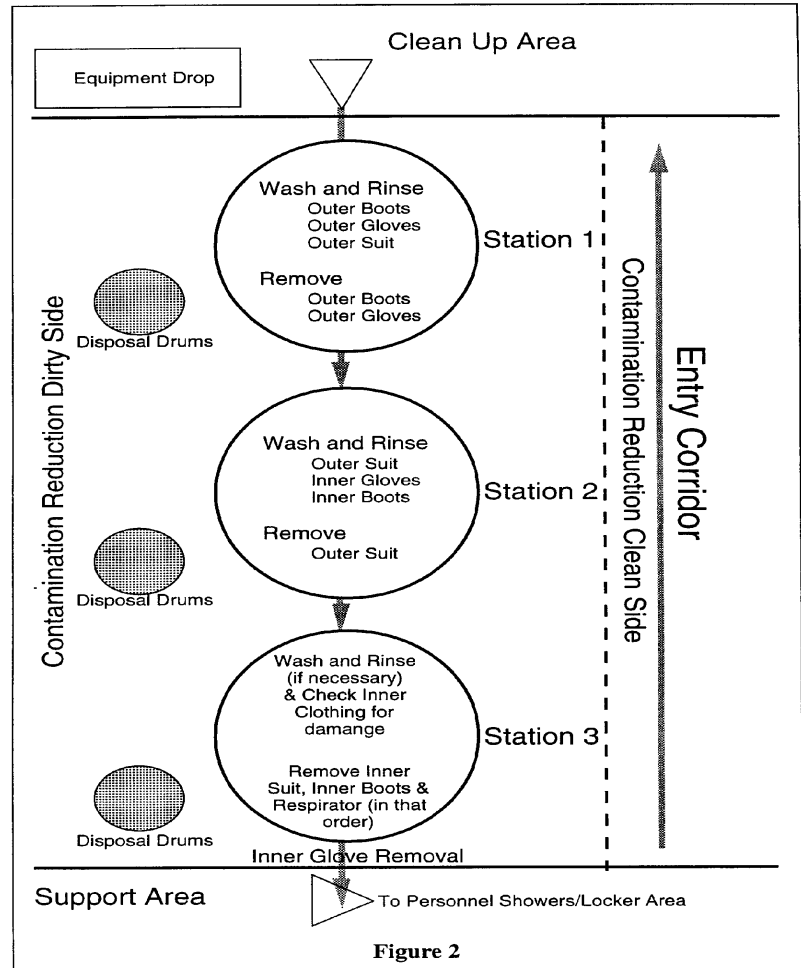
When the worker steps out of Station 1, they should be dressed in the outer suit and all inner clothing. The rationale here is that the most contaminated pieces of clothing (gloves and boots) have been removed along with gross contaminants.

**Decon Station 2**

The worker coming into Station 2 now has removed the most contaminated pieces of clothing and any gross contaminant. They are now ready for an examination of the outer suit and another wash and rinse if necessary.

Once all visible contamination has been removed, the outer suit can be removed taking care to prevent touching the outside of the suit with any of the inner clothing (gloves, boots, or suit).

The rationale here is another check of the most contaminated piece of clothing. Not all visible contamination may be removed in Station 1, so this creates another opportunity to clean the outer suit to prevent contamination of the inner suit.



*Figure 8.2 Typical Decon Station Setup*

**Decon Station 3**

This final stage should be the cleanest part of the decon line. Here, an examination is done of the inner suit, gloves, and boots to determine the amount of breakthrough (permeation or penetration) from the outer suit. If there are signs of breakthrough, a wash and rinse of the inner suit, gloves, and boots will be required; otherwise, the inner suit and inner boots can be removed.

At this point, the respirator and inner gloves should be the only Personal Protective Equipment (PPE) still remaining. The respirator can now be removed with the inner gloves still on; this ensures that the hands are still protected if there is any contaminant left on the respirator.

The final step before entering into the Support Area is the removal of inner gloves. This should be done in a manner that prevents contact with the outer surface of the inner gloves. This process usually takes some practice but is easily mastered.

### 8.2.8 Emergency Decontamination

Part of planning for decontamination and site layout in general requires planning for medical emergencies. Plans must be developed up front for (a) decontaminating the victim, (b) protecting medical personnel, and (c) disposing of contaminated personal protective equipment and wash solution.

Any worker who experiences a medical emergency while still contaminated will have to undergo some form of decontamination before medical attention can be administered. The decision of the level of decontamination required will depend on the type and severity of the medical condition and the nature of the contaminant.

In an oil spill incident, lifesaving procedures can be administered with no decontamination if the medical condition is life threatening, since health effects of crude oil are well characterized and known. If the victim can be stabilized, then some form of decontamination must be considered at this point for the victim, medical responders, and medical equipment used for response.

If the condition is not life threatening, the victim should be decontaminated as much as possible before being handed over to the medical responders. It is crucial that Safety Data Sheets on all known chemicals involved in the spill clean-up accompany the victim to the hospital or clinic. The medical responders must also be informed of:

1. what happened to the victim,
2. what contaminants that victim was exposed to,
3. what level of decontamination was performed, and
4. what specific decontamination procedure is being used.

In general, if decontamination can be done, wash, rinse, and/or cut off the protective clothing. If decontamination cannot be done, wrap the victim in blankets, plastic, or other chemical resistant material to minimize spreading contaminants.

Also, if possible, site personnel familiar with the incident and knowledgeable of the clean-up activities occurring should accompany the victim. Remember the Buddy Rule and stock at least 4 of each Level of PPE used (minimum of 2 responders and 2 backups).

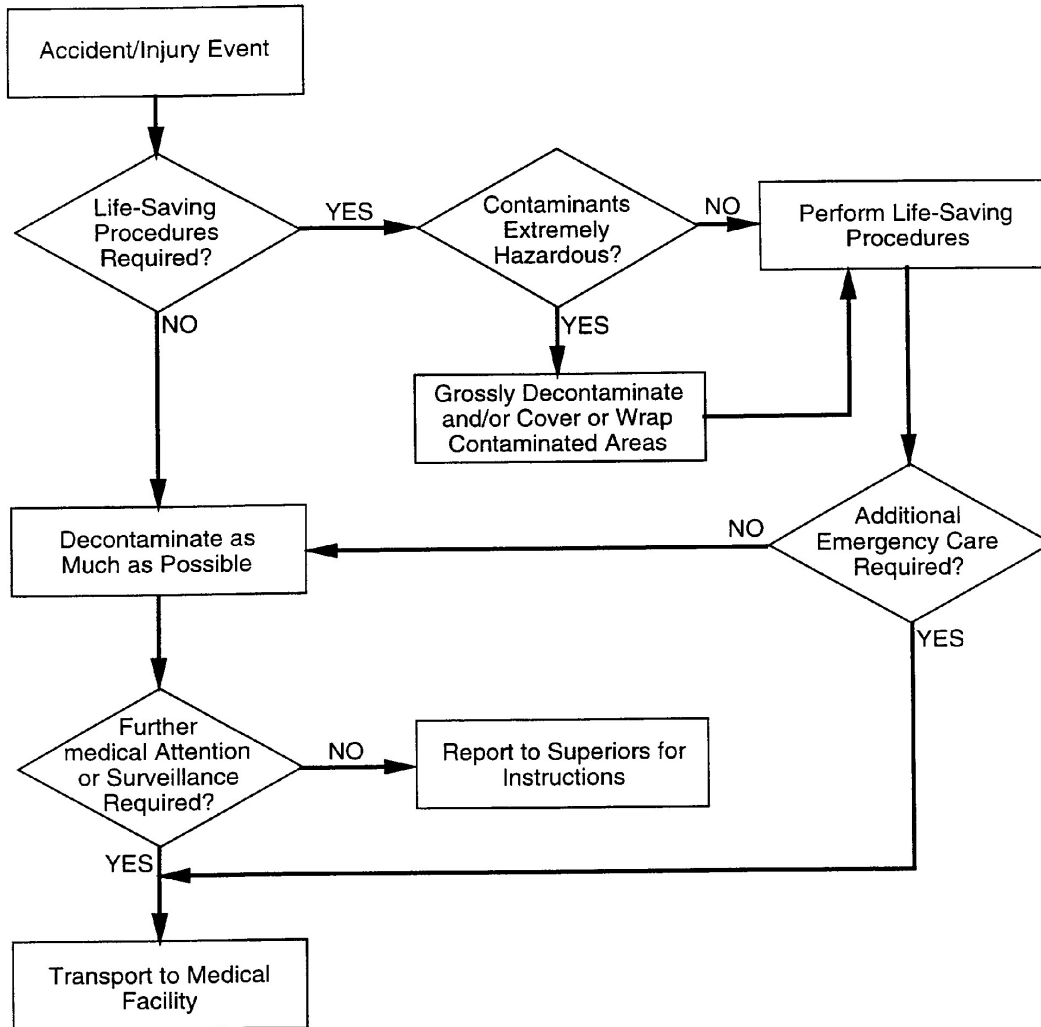
*CAUTION: Use warm water to provide for patient comfort and reduce the potential for hypothermia. If warm water is not available, cold water can be used, but it will increase the chance of hypothermia.*

*NEVER USE HOT WATER!*

*DANGER: Advise both the Emergency Medical Services (EMS) unit and the receiving hospital when handling a chemically contaminated patient.*

Note that if a clean-up does turn into an emergency again, all personnel must be evacuated and only those personnel with appropriate training and PPE are allowed to re-enter the cleanup area (now a "Hot Zone"). The following flowchart illustrates a Decision Flowchart for Emergency Decontamination.

Figure 8.3 Emergency Decon Decision Flowchart



### 8.3 Site Security & Control

Upon discovering an emergency, the person in the area with highest authority, generally the On-Scene Commander is responsible for isolating the emergency from other workers. This can be accomplished by barricading the area with barricade tape, posting another worker(s) at a safe distance to keep employees out of the area, or establishing yourself such that you have a clear view of the area of the emergency and can adequately warn others off. As the On-Scene Commander, it is important to maintain site security and control until someone of higher authority assumes responsibility and control of the site from you, i.e., assumes the role of Incident Commander.

For all emergencies, once the Incident Command Organization is established, the Site Safety Officer assumes the responsibilities for Site Security and Control. The Site Safety Officer will request resources as necessary (i.e. Anacortes Security) to secure all Access/Egress points around the area of the emergency are secured. Only those personnel involved in the response and trained per the requirements of 29 CFR 1910.120 (HAZWOPER) will be allowed to enter the emergency area. Note: Plant security personnel (employee or contractor) are not to be used in nor are they to cross the hazard zone. Security personnel may have escort duties or gate security duties, yet this is not to be construed as site security because site ERT/Site Safety are charged with this task.

When the Whelen sounds, Security personnel will immediately do the following:

- The contract security supervisor will make available a mobile officer to position at Refinery main gate respectively to assist with IC requirements and escorts.
- Main Gate Security personnel shall:
  - Direct appropriate persons to the location of the EOC or by direction of the IC.
  - Direct appropriate persons to the location of the Triage Center or by the direction of the IC.
  - Maintain access control and allow only authorized persons to enter the facility.
  - Advise the Incident Commander of the arrival of governmental agencies and media.
  - Answer incoming phone calls. SOC personnel are forbidden from relaying any information to the phoning party. Keep the phone lines clear and transfer all incoming calls to the Emergency Operations Center. Upon transferring the call to the command center, the Information Officer shall handle the forwarding of pertinent information via telephone.

# PERMIT & PLAN SIGN-OFF SHEET

INCIDENT NAME: \_\_\_\_\_ DATE PREPARED: \_\_\_\_\_

OPERATIONAL PERIOD: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_

**Personnel Decontamination Plan**

(PLAN OR PERMIT NAME)

**APPROVED BY:**

\_\_\_\_\_ IC \_\_\_\_\_ DATE

\_\_\_\_\_ FOSC \_\_\_\_\_ DATE

\_\_\_\_\_ SOSC \_\_\_\_\_ DATE

\_\_\_\_\_ LOSC \_\_\_\_\_ DATE

\_\_\_\_\_ TOSC \_\_\_\_\_ DATE

**COMMENTS:**



1. Decontamination Zones:

Work areas will be divided into three zones;  
Support Zone (Cold Zone),  
Contamination Reduction Zone (Warm Zone)  
Exclusion Zone (Hot Zone)

These zones are to be identified at each work area by signs and/or barrier tape or other means. Decontamination is performed in the Contamination Reduction Zone. Each time cleanup workers exit the Contaminated Zone they must undergo decontamination.

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

2. Minimum versus Maximum Decontamination Layout

Refer to Safety Data Sheets (SDS) for clear guidance on appropriate decontamination. Most hydrocarbon spills may only require the minimum decontamination layout.

3. Decontamination Stations:

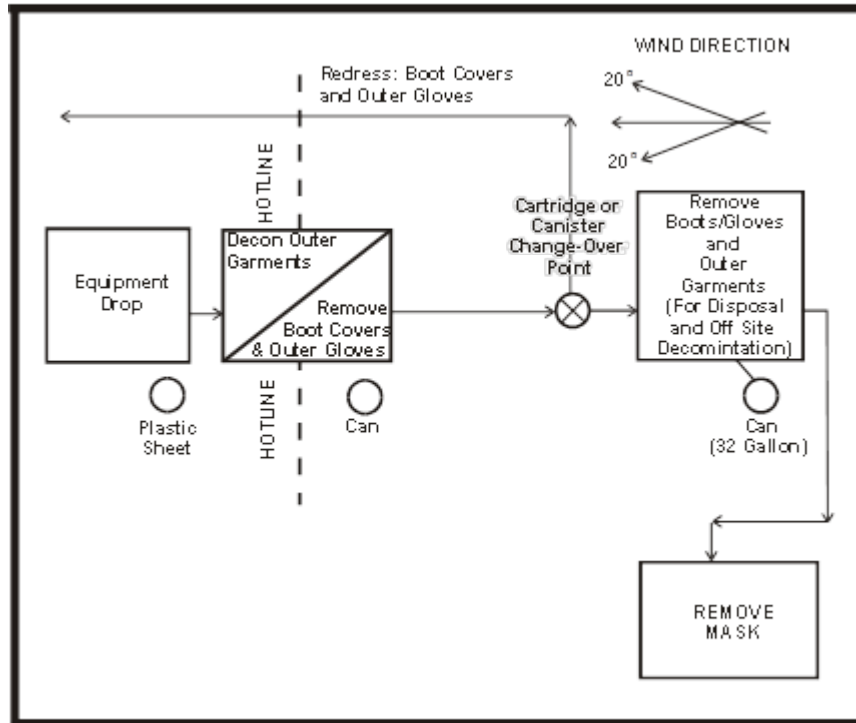
Decontamination is performed at a series of stations within appropriate, impermeable Contamination Reduction Zone. The floor of each station is covered with PVC sheets to prevent contamination of the soil. Dikes are installed under these sheets to prevent contaminated runoff from impacting soil.

Procedures for these stations are as follows:

**DECON PROCEDURES FOR MINIMUM DECONTAMINATION LAYOUT**

<b>STATION 1</b>	Equipment Drop	Deposit equipment used on site (tools, sampling devices and container, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
<b>STATION 2</b>	Outer Boot and Glove Removal	Remove outer boots and gloves. Deposit in container with plastic liner.
<b>STATION 3</b>	Inner Boot, Inner Gloves and Outer Garment Removal	Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
<b>STATION 4</b>	Face Mask Removal	Face mask is removed. Avoid touching face with fingers. Face mask deposited on plastic sheet.
<b>STATION 5</b>	Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

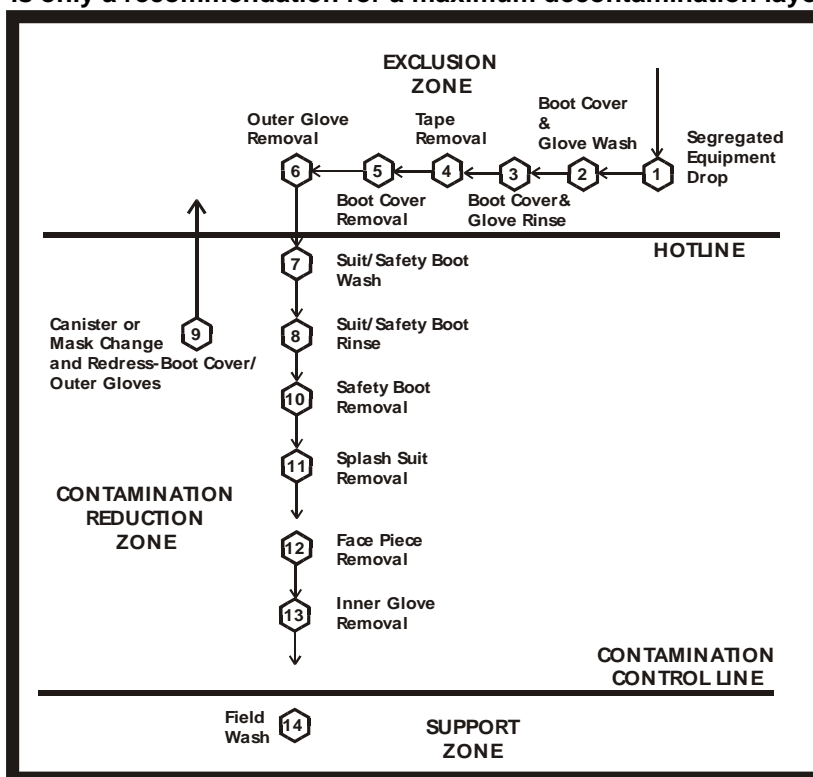
The drawing below is only a recommendation for a minimum decontamination layout.



**DECON PROCEDURES FOR MAXIMUM DECONTAMINATION LAYOUT  
LEVEL C PROTECTION**

<b>STATION 1</b>	Segregated Equipment Drop	Deposit equipment used on site (tools, sampling devices and container, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
<b>STATION 2</b>	Boot Cover and Glove Wash	Scrub outer boot cover and gloves with decon solution or detergent and water
<b>STATION 3</b>	Boot Cover and Glove Rinse	Rinse off decon solution from Station 2 and conserve water.
<b>STATION 4</b>	Tape, Boot Cover and Outer Glove Removal	Remove tape around boots and gloves, boot covers and outer gloves and deposit in container with plastic liner.
<b>STATION 5</b>	Suit and Boot Wash	Wash splash suit, gloves, and safety boots. Scrub with long-handled scrub brush and decon solution.
<b>STATION 6</b>	Suit and Boot, and Glove Rinse	Rinse off decon solution using water. Repeat as many times as necessary.
<b>STATION 7</b>	Canister or Mask Change	If worker leaves exclusion zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers donned, and joints taped, worker returns to duty.
<b>STATION 8</b>	Safety Boot, Splash Suit and Face Mask Removal	Remove safety boots and deposit in container with plastic liner. With assistance of helper, remove splash suit. Remove face mask. Deposit in container with plastic liner. Avoid touching face with fingers.
<b>STATION 9</b>	Inner Glove Removal	Remove inner gloves and deposit in lined container.
<b>STATION 10</b>	Field Wash	Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.

The drawing below is only a recommendation for a maximum decontamination layout.



# PERMIT & PLAN SIGN-OFF SHEET

INCIDENT NAME: \_\_\_\_\_ DATE PREPARED: \_\_\_\_\_

OPERATIONAL PERIOD: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_

**Equipment Decontamination Plan**

(PLAN OR PERMIT NAME)

**APPROVED BY:**

_____	IC	_____	DATE
_____	FOSC	_____	DATE
_____	SOSC	_____	DATE
_____	LOSC	_____	DATE
_____	TOSC	_____	DATE

**COMMENTS:**

## 1. General Information

This plan is divided into three sections to address:

- Contaminated vessels (response vessels, recreational and commercial vessels, agency vessels)
- Contaminated land equipment (heavy equipment, vehicles)
- Contaminated response equipment (boom, skimmers, tools)

## 2. Vessel Decontamination

### PURPOSE

This plan serves to identify general guidance procedures to be followed by vessels involved with oil spill response operations. Because these operations may involve transiting through slicks, operating within oiled waters or recovery operations, we may assume that vessel hulls, decks, machinery, tanks, piping, deck gear and other areas will be impacted with oil. This plan will be used for all vessels and support equipment, either contaminated or suspected of being contaminated with oil, to return to a non-oiled state.

### SITE SPECIFICS

Site Location: \_\_\_\_\_

Description: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: \_\_\_\_\_

### CONCEPT OVERVIEW

In view of the extensive equipment inventory involved in this response effort, the responsible party will:

- oversee gross decontamination of vessels; ☐
- establish and oversee temporary berthing of oiled vessels; and
- oversee final decontamination of oil spill recovery vessels and equipment.

The primary focus of this operation will be to expedite cleanup of oiled vessels and response equipment in a safe, organized and efficient manner while minimizing further damage to the environment and waste generation.

Equipment decontamination is planned to occur in two phases: ☐

- Recovered oil is to be off-loaded from skimmers cargo tanks to portable storage tanks and or vacuum trucks pending disposal as per the "Approved" Disposal Plan. ☐
- Equipment to be transferred into a bermed area and decontaminated.

All equipment will undergo full decontamination prior to demobilization.

### CERTIFICATE OF DECONTAMINATION

For this project, the equipment owner's representative will certify that equipment has been decontaminated. In the event of a dispute, the FOSC representative shall provide final certification of decontamination. A tracking form will be used to document cleaning and acceptance by the equipment advisor.

### METHODOLOGY

\_\_\_\_\_ (Vessel name)

Decontamination of the hull of the Vessel \_\_\_\_\_ is to occur at anchor within the \_\_\_\_\_ . The affected area will be placed inside standard contractor containment boom (8x12) during the decontamination process. If weather conditions permit, smaller vessels will be used as platforms to facilitate cleanup operations.

The hull of the vessel will be wiped by hand with cotton rags. A citrus-based cleaning solution should be used to remove residue oil from the hull. This citrus-based cleaning solution needs to be approved by the Environmental Unit before use in the water. All oil will be wiped from the hull in this manner.

Personnel involved in this operation will wear modified PPE Level D including raingear, gloves, eye protection and floatation work vest.

Preplanning for protection of adjacent areas shall be accomplished in order to minimize cross contamination. Floating oil from sheen-emanating vessels will be minimized with sorbents as necessary to reduce potential loss outside the containment boom. Floating sorbent materials shall be utilized in natural collection points as needed to retain free-floating oil. These sorbents will be tended daily.

### Vessels

Decontamination of spill response vessels is to occur at \_\_\_\_\_. The following vessels have been identified for decontamination:

Vessel Type	Vessel Name	Vessel Location

**Add extra lines as needed**

**\* Denotes required tank entry.**

Each vessel will be placed inside standard contractor containment boom (8x12) during the decontamination process. This decontamination zone area may utilize a boom anchoring system to prevent the collapse of the perimeter protection during tidal changes and surges.

A decontamination work plan will be created for each Oil Spill Response Vessel (OSRV). These plans may be added as appendices to this document. Preplanning for protection of adjacent areas shall be accomplished in order to minimize cross contamination. Floating oil from sheen-emanating vessels will be minimized with sorbents as necessary to reduce potential loss outside the containment boom. Floating sorbent materials shall be utilized in natural collection points as needed to retain free-floating oil. These sorbents will be tended daily.

If required, vessels with significant oil may be hauled from the water utilizing the \_\_\_\_\_. The vessel will be transferred to a bermed area. The vessel will be blocked using jack stands and wood cribbing. A decontamination team will be assigned to the bermed area. Most vessels require the hull to be washed / wiped to remove residual oil.

Recreational vessels which were oiled during the response will be sent to the \_\_\_\_\_. They will be stored in a designated area. When the vessel is to be cleaned it will be moved into a containment berm. The hull and affected areas will be cleaned with a marine cleaner. All efforts will be made to remove residual oil from the hull and machinery. The vessel will be released from the decon area following an inspection by the USCG and the P & I Club representative.

### **Confined Space**

If a confined space entry is required to clean tanks on the vessels, a confined space entry plan will be developed and approved in accordance with the entry contractor's SOP. The entry plan will be reviewed and approved by the Safety Officer and included as part of the Site Safety and Health Plan.

### **3. Heavy Equipment Decontamination**

A decontamination pad should be established for cleaning of heavy equipment or large sampling tools. This pad can be a prefabricated area that already exists on site for washing large equipment, or can be constructed. If a prefabricated area exists, it needs have characteristics that allow for collecting fluids and solids that will fall off the large equipment. Decontamination pads can be constructed in a variety of ways, but things to consider during construction are the following:

- The pad will need to be constructed so it provides complete secondary containment. Hence all sides will require berms to prevent off pad migration of fluids. The berms need to be constructed by considering the balance between sump pump removal rates and the amount of fluid that will be generated.
- Fluids from decontamination processes cannot escape and be directly discharged vertically into the ground; hence if plastic sheeting is used it should be, at a minimum, double layered and greater than 8 mil thick.
- The pad will have to drain in one general direction where a sump pump can collect fluids.
- The pad will need to be located near power and water, if possible. However, a generator can supply power and water can be trucked in.

### **Procedure**

After the decontamination area is set up, equipment decontamination is comprised of four general steps:

1. Removal of gross (visible) contamination
2. Removal of residual contamination
3. Prevention of recontamination, and

4. Disposal of wastes associated with the decontamination (in accordance with the approved Disposal plan)

#### **4. Small Equipment Decontamination**

##### **Containment Boom and Portable Equipment**

A separate decontamination area has been identified for containment boom and small equipment. The site is located at \_\_\_\_\_ (OSRO) has positioned a Shoreline Cleanup Trailer at this location to provide a support zone to be used for consumable supplies.

#### **CLEANING PROCESS**

A Hypalon liner or like (secondary containment) will be placed under each decon pool or area with the perimeter sufficiently bermed to allow for wastewater and rainwater evacuation. All wastewater will be pumped to a poly portable storage tank or vacuum truck for disposal. All pumps, hoses and piping will be left in place to facilitate speedy evacuation of retained oil / water. The final disposal of wash water, oiled sorbents and materials will be accomplished in accordance with the "approved" Disposal Plan.

A citrus-based cleaning solution (PES 51 or like) will be utilized as a degreaser and will be applied by a Hudson sprayer as applicable. By utilizing the PES 51 product, which will not emulsify the oily water, it is possible to recycle/reclaim the rinsates. Because this cleaning solution is citrus based it does not leave a petroleum sheen on the equipment after the cleaning process.

A Safety Data Sheet for PES 51 (or the material used) is available from \_\_\_\_\_.

Actual pressure washing, if required, will utilize a Landa (or like) hot/cold pressure washer with a temperature range up to 220° F and a pressure rating up to 3000 psi. Every attempt will be exercised to mitigate noise-generating equipment by placing it in insulated areas.

Once the piece has been determined clean to the owner's standard, the equipment will be demobilized.

## APPENDIX A TRAINING AND EXERCISES

### A.1 Exercises

The Company is required under the Environmental Protection Agency's (EPA) Risk Management Program (RMP) to conduct exercises in accordance with 40 CFR §68.96. These exercises are designed to test the refinery's ability to respond to a release of a regulated substance (i.e., toxic substance release or release of a regulated flammable substance involving a fire and/or explosion).

A listing of all RMP exercise requirements to be completed is listed in *Figure A-1*. The company also strives to maintain compliance with the regulations regarding training requirements of OSHA and EPA.

This training includes:

- Emergency response,
- Hazardous waste,
- Oil Spill Response; and
- Health and Safety and Emergency Response Training

#### Response drills will be designed to:

- Provide an opportunity for IMT personnel to practice responding to an emergency.
- Test the Emergency Response Plan for shortcomings or errors.
- Improve Company personnel's emergency response expertise.
- Comply with RMP Requirements.

The Refinery Fire Chief, in coordination with the regional Emergency Management Coordinator, is responsible for scheduling, maintaining records, implementing, and evaluating this drill program, and ensuring that post-drill evaluation improvements are implemented. Critique will be reviewed with crews not present for the drill.

Emergency Response Exercises will take three forms as described in *Figure A-1*. Descriptions of these exercises are as follows:

*Figure A-1 Type and Frequency of Emergency Response Exercises*

Type of Exercise	Frequency
Notification Exercises	Annually
Emergency Response Field Exercises	Annually
Tabletop Exercises	Triennially
Shelter-In-Place/Safe Haven Drills	Annually
Evacuation Drills	Annually

#### A.1.1 Notification Exercises

The Company will conduct Notification Drills on an annual basis. The notification drill will consist of exercising the emergency response notification mechanisms. These mechanisms include notifications to the public and appropriate Federal, state, and local emergency response agencies.

This exercise can be coordinated with either the field deployment exercise or the tabletop exercise. Documentation of the notification exercise shall be retained for 5 years from the date of the exercise.

#### A.1.2 Emergency Response Field Exercises

The Company maintains and trains its employees in the use of the emergency response equipment. The Company will coordinate with local emergency response officials to establish a frequency for field exercises. The Company shall conduct a field exercise at a minimum at least once every ten years



thereafter, unless the appropriate local emergency response agencies agree in writing that such frequency is impractical. If local emergency response agencies so agree, the Company shall consult with local emergency response officials to establish an alternate appropriate frequency for field exercises. The scope of the field exercise shall include:

- Tests of procedures to notify the public and the appropriate Federal, state, and local emergency response agencies about an accidental release.
- Tests of procedures and measures for emergency response actions including evacuations and medical treatment.
- Tests of communications systems.
- Mobilization of facility emergency response personnel, including contractors, as appropriate.
- Coordination with local emergency responders.
- Emergency response equipment deployment.
- Any other action identified in the emergency response program, as appropriate.

### A.1.3 Tabletop Exercises

The refinery shall coordinate with local emergency response officials to establish a frequency for a tabletop exercise involving the simulated release of a regulated substance. At a minimum, the refinery shall hold a tabletop exercise once every three years. The tabletop exercise shall involve discussions of the refinery's Emergency Response Plan. The discussion should include:

- Procedures to notify the public and the appropriate Federal, state, and local emergency response agencies.
- Procedures and measures for emergency response including evacuations and medical treatment.
- Identification of facility emergency response personnel and/or contractors and their responsibilities.
- Coordination with local emergency responders; procedures for emergency response equipment deployment.
- Any other action identified in the emergency response plan, as appropriate.

### A.1.4 Shelter-In-Place/Safe Haven Drills

On an annual basis, the refinery shall conduct a drill for Shelter-In-Place and Safe Haven. The scope of the drill will involve an evacuation of the units and locations to the specific Shelter-In-Place or Safe Haven locations identified in *Section 2*.

### A.1.5 Evacuation Drill

On an annual basis, the refinery shall conduct a complete evacuation of the facility to test the evacuation and accountability procedures.

### A.1.6 Documentation

The refinery shall prepare an evaluation report within 90 days of each field and tabletop exercise. The report shall include:

- A description of the exercise scenario.
- Names and organizations of each participant.
- An evaluation of the exercise results including lessons learned.
- Recommendations for improvement or revisions to the emergency response exercise program and emergency response program,
- A schedule to promptly address and resolve recommendations.

All documentation shall be retained for 10 years from the date of the exercise.

### A.1.7 Alternative Means of Meeting Exercise Requirements

The Refinery may satisfy the requirement to conduct notification, field and/or tabletop exercises through:

- Exercises conducted to meet other federal, state or local exercise requirements, provided the exercise meets the requirements of [A.1.1](#) – [A.1.3](#), as appropriate.
- Response to an accidental release, provided the response includes the actions indicated in [A.1.1](#) – [A.1.3](#), as appropriate. When used to meet field and/or tabletop exercise requirements, the Refinery shall prepare an after-action report, comparable to the exercise evaluation report required in [A.1.6](#), within 90 days of the incident

### **A.1.8 Response Equipment Inspections**

Equipment inspections are conducted at most semi-annually. Equipment inspection logs are maintained on file with the refinery fire chief. Completed equipment inspection logs are available upon request.

## **A.2 Training**

Experienced, well-trained personnel are essential for successful implementation of this Emergency Response Plan (ERP). Exercises, both deployment and tabletop, are necessary to check the effectiveness of training and to test the ERP. An ongoing training and exercise program is carried out and managed company wide to ensure personnel are prepared to respond to incidents at their facility, while also providing sufficient number of Incident Management Team (IMT) personnel to manage coordinated responses regionally and if needed cascade trained personnel nationally.

All employees and contractors are required to know and understand basic evacuation procedures. Marathon employees receive annual training on the Emergency Response Plan, while contractors must complete the Marathon Contractor Orientation before allowed to work on-site. This awareness level training includes:

- Understanding of hazardous properties and effects, such as chemical & physical hazards, and air monitoring
- Hazard communication, and Safety Data Sheets (SDS)
- Emergency Response Plan initiation

### **A.2.1 Emergency Response Plan Training**

Both field responders and IMT members are trained on the Emergency Response Plan annually. This training includes a general overview of the Plan as well as details on the sections that are appropriate to the audience. For field responders, the focus should be on accessing the Plan, initial response actions, and notifications. IMT members should also focus on documentation, specific response actions, and demobilization. Information on how the plan interacts with city and county emergency response plans, and additional information on local issues and policies is included for both groups.

All field personnel will be trained in the proper procedures for the reporting and monitoring of emergencies. Included in this training are procedures for contacting management on a 24-hour basis. A copy of the Emergency Response Plan will also be made available to all personnel on the IMT.

### A.2.2 HAZWOPER Training Program

The table below provides a breakdown on HAZWOPER training requirements

Emergency Response Function	Affected Employees	Training Description
Awareness	All employees & contractors	General overview of emergency response plan including, <ul style="list-style-type: none"> <li>• any updates, or</li> <li>• specific training on their role/duties in event of an emergency.</li> </ul>
Subject Matter Experts (SMEs)	Response Team Members (e.g., Fire, Rescue, Air Monitoring)	Detailed training at a specified period should be given to all individuals with emergency duties (e.g., fire, rescue, and/or air monitoring teams).
Employee Responders	Awareness, Operations, Technician, Specialist & On-Scene Coordinator	Refining has determined that Operations and Product Control personnel must be trained to the OSHA HAZWOPER HAZMAT Technician level to ensure that personnel who would respond immediately to a hazardous materials release have had the proper and adequate training to respond safely. Other support personnel including Maintenance personnel who will only respond in a defensive manner will be trained to the OSHA HAZWOPER Operations level.
Outside Responders	Local Fire Departments, Local Emergency Planning Commission, Local Hospitals, Regulators, Coastguard, Contractors, etc.	ERP must consider interface training with <ul style="list-style-type: none"> <li>• outside responders on nature of facility operations, and</li> <li>• hazards, especially if they are being relied upon for response during an emergency.</li> </ul>
Incident Commanders (Including Backups)	ICS Leaders	Train ICS members on expectations, plans, and function during an emergency.

The HAZWOPER requirements for the various levels of response are integrated into the Facility's training applications. In general, personnel involved in protection and containment operations must have at least 8 hours of HAZWOPER training or sufficient experience to demonstrate competency. Personnel involved in more aggressive activities such as source control, containment, recover, and cleanup, etc. (i.e., activities that result in direct contact) must have a minimum of 24 hours of training. Training criteria for those who respond to an emergency are based on the duties and functions associated with the level of response or types of activities they may have to perform.

### A.2.3 IMT Training Program

IMT personnel must be trained on general ICS features and position specific responsibilities for roles they might fill. They must also demonstrate their abilities during tabletop exercises. The IMT training program takes advantage of both trainings provided by FEMA through the Emergency Management Institute and trainings that are created and provided internally. Trainings are provided through a mix of Computer Based and Instructor Led training. In certain instances, employees who have years of experience with the IMT can demonstrate proficiency in their duties to count for some course credit. Personnel should take all courses initially before being assigned a role and then take refresher courses as needed.

Course descriptions for all courses including course goals, topics, and learning objectives can be found in the Learning Management System (LMS). [GEN1008 Appendix B Emergency Response Training Matrix](#) provides training courses and timelines for training. A copy of GEN1008 Appendix B is available upon request.

## A.2.4 Response Team Training

### A.2.4.1 Operations Positions Including Emergency Releasable Positions

Operations level training includes:

- Emergency Response Plan implementation
- Basic hazardous material (HazMat) training that includes:
  - Specific PPE
  - Safety Data Sheets (SDS)
  - Air monitoring
  - Incident Command (IC)
  - Hazard 7 risk assessment
  - Response to medical emergencies
  - Chemical & toxicological terminology and behavior
  - Decontamination
- Respiratory protection, including self-contained breathing apparatus (SCBA)
- Emergency response actions and limitations
- All operations personnel, including operators assigned to the Emergency Releasable Operations Positions receive the same NFPA 1081 Defensive Fire Training. This training will be required for all hourly Operators, Shift Supervisors, and Zone Superintendents.
- Training for Emergency Releasable Operations Positions will consist of annual training in compliance with SAF-4018 on the applicable sections of NFPA 600 Industrial Fire Brigades and NFPA 472 Hazardous Materials Response/Hazwoper, which will include CBT's and instructor led training.

### A.2.4.2 Exterior Fire Brigade

Advanced Exterior Fire Brigade Members are trained to the Advanced Exterior Industrial Fire Brigade Member level, per NFPA 1081. Member training consists of the following:

- Monthly training
- Quarterly drill participation

### A.2.4.3 Hazardous Materials Technician

The HazMat Team is trained in accordance with SAF-4018, NFPA 472 and OSHA 29 CFR 1910.120 Hazwoper. Hazmat Team Members are trained and qualified to the HazMat technician level to respond to spills or releases.

### A.2.4.4 Rescue Squad

Training is critical in the development and maintenance of the knowledge, skills and equipment uses within rope rescue operations. This is accomplished through initial and on-going training to ensure skills are maintained. It is important that members are well versed in all aspects of rescue scenarios. Initial Rescue Squad Member training will follow NFPA 1006. The purpose of this training is to provide the basic knowledge and skills required for rope rescue scenarios. The Rescue Squad trains routinely throughout the year. On-going training is to maintain and expand the skills that are required to safely and efficiently perform rescues. Training offered will consist of a minimum of 72 hours annually that will include both high angle and confined space rescue scenarios.

### A.2.4.5 Emergency Medical Responders Services

Medical Team members have at a minimum Washington State EMR qualification. The initial training consists of 60 hours of classroom and/or patient contact hours, followed by a state certified written test and practical skills evaluation. This certification has continuing education requirements of on-line training courses and scenario-based evaluations. The medical Team will train on a quarterly basis.

#### ***A.2.4.6 Oil Spill Response Team***

Marathon has developed an Oil Spill Response Organization to be consistent with the NIMS Incident Command System (ICS), which provides the structure for effective management of oil spill resources. The components of the organization would be activated and mobilized in accordance with the size and complexity of the incident. Specific training requirements are located within Appendix A of the Anacortes FRP.

#### ***A.2.4.7 Auxiliary Support Team***

The Auxiliary Support Team will train on the various roles and responsibilities they will fill. The Auxiliary Support Team will also participate in drills.

#### ***A.2.4.8 Incident Commander/EOC***

Members trained to the Incident Command (IC)/Emergency Operations Center (EOC) level must be familiar with the Marathon Anacortes Refinery Emergency Response Manual. Basic Incident Command training is provided to all employees annually during EHS Training. IC Training can be conducted through CBT's and or Instructor led training.

Training requirements for the Incident Commander role include:

- NIMS IS-100 – Introduction to the Incident Command System
- NIMS IS-200 – Basic Incident Command System for Initial Response
- A review, completed with safety, for understanding ICS concepts and local response procedure shall be completed prior to filling the IC position or working a job where this is part of the job responsibilities.

Advanced IC training will be periodically offered to qualified personnel who could fill the Incident Commander role but is not a requirement. This includes, but not limited to: Zone C Supervisors, ERT officers, and Safety Department personnel. This training will be offered periodically as needed.

#### ***A.2.4.9 Emergency Response Trainers***

Emergency Response Trainers receive training through many different venues. It is important to note that all Marathon Anacortes Refinery Emergency Response Trainers must follow a specific checklist designed to ensure the training is consistent and metrics are met. The established checklist also ensures the Trainer has appropriate experience to function as a Marathon Anacortes Refinery Emergency Response Trainer.

### **A.2.5 Training Documentation and Record Maintenance**

Emergency response personnel training records will be maintained for five years. The Training Department is responsible for maintaining all training records. Records include:

- Documentation of yearly training associated with the Emergency Response Plan as provided to IMT and Facility personnel.

## APPENDIX B EMERGENCY RESPONSE RESOURCES

### B.1 Fire Protection Resources

The selection of fire protection equipment and resources is based upon potential fire problems and related emergencies while considering the availability of on-duty personnel and the anticipated response of off-duty employees. Consider the following points:

- Fire monitors, which can be left unattended after being turned on by operations personnel, are strategically located throughout process areas to provide cooling for structures and operating equipment.
- Fixed water spray systems, hose reels and fire hydrants are located and equipped for operation by the personnel on-duty.
- The plant location makes it reasonable to expect help from off-duty personnel and municipal emergency responders within 30 minutes after the request for assistance has been initiated.

#### B.1.1 Firefighting Water System

The water for firefighting purposes will be supplied from the east reservoir, which can store 6,300,000 gallons. In case more water is required, valves can be opened to connect the west reservoir, which will double the water supply. The water is supplied from the City of Anacortes water system by pipeline. This pipeline is capable of delivering 4,000 gallons per minute (gpm) into the reservoir. The water is piped to the firewater pumps. These pumps will pump the desired pressure to our fire water system.

In the event that either the neighbor Puget Sound Refinery or Marathon Anacortes Refinery should require additional water for firefighting, the following personnel are authorized to activate the interconnecting 8" fire water line between the facilities located at the corner of 14th and G Streets:

- Zone C Operations Supervisor
- RLT Duty Person
- Safety Specialists

The firewater distribution system within the Anacortes Refinery consists of underground piping laid out in a loop or grid arrangement around process units and tankage areas. One branch from this loop extends to the loading racks and another to the Wharf. Mains are 10", 12", and 16" pipe sizes with a secondary grid system of 8" and 10" pipe sizes.

The main lines are sectionalized approximately every 800' by valves. These enable portions of the fire mains to be shut down for repair without affecting more than small areas of the plant. Hydrants are connected to the main fire water system by means of 6" pipe.

#### B.1.2 Fire Pumps

There are two main and two auxiliary pumps that supply water for use throughout the fire water system. The auxiliary pumps are steam turbine driven, located at the Boiler House. Each pump has a capacity of 1,750 gpm.

The utility/jockey water pump located at the Boiler House has capacity of 750 gpm at 140 psig. This pump is lined up to the fire water system to keep that system packed at all times. The utility water pumps need to be isolated away from the fire water system whenever a fire water pump is activated.

Two main firewater pumps are located at the east reservoir. They are diesel driven pumps, each with a capacity of 2,000 gpm at 130 psig. These pumps can be remotely started from the Boiler House. They can also be started in the local mode at the Pump House. The only location where the pumps can be shut down is at the Pump House. Complete instructions for starting and operating these pumps can be found in Tank Farm Operating Procedure 02.

These pumps will auto start when the header pressure drops below 20 psi on the discharge side of the pump.

### **B.1.3 Fire Hydrants**

Fire hydrants have 2 ½" outlets plus one 4" pumper port. Crews arriving first at the scene of the fire should connect directly to the hydrant. This leaves the valve connections so that additional hoses can be connected to the hydrant after the water has been turned on. The hydrants are opened with a hydrant wrench by turning the valve nut on top of the hydrant counterclockwise. The hydrant connections are protected by a screw cap. This cap can be loosened by using the hydrant wrench. Both of these hydrants have the pumper ports adapted to 5" Storz fittings. Local drawing 19-RS-01 provides a fire water map for the refinery.

### **B.1.4 Quick Acting Hose Racks (QAR)**

Quick acting hose racks (QAR) are located around processing units near the roads at the truck loading racks, Effluent, and shipping pump house. These racks consist of a shelter house, which is easily opened. Inside is 200' of 2 ½" hose and two 50' sections of 1 ½" hose equipped with combination nozzles. Each hose rack is connected to the fire main through a 3" standpipe and two block valves. An outside hose connection is on this standpipe for an additional hose stream.

In the 2 QAR's located nearest the crude furnaces, one on west and one on the east, the addition of a BlitzFire Monitor and 100' of 2.5" hose is stored inside. These monitors are located here to aid in the knock down of any vapors that may be moving towards the furnaces.

### **B.1.5 Turret Nozzles**

Turret Nozzles are installed in the process units and selected vehicles for the cooling of vessels in relatively congested, hazardous, or remote locations. The stationary nozzles are located for maximum usefulness in connection with possible fires at the following locations: furnaces, vessels, exchangers in structures, column flanges, as well as for screening of emergency control stations such as furnace dropout valves. The turret nozzles are the fully adjustable type with a capacity of 500 gpm or more and a range upwards of 180'.

### **B.1.6 Portable Turret Nozzles**

Certain areas of the plant have portable turret nozzles as added fire protection, such as at the Crude Unit, CCU, Alky, and Logistics Truck and Tank Car Loading Facilities.

Portable turret nozzles are present:

To operate any of these portable turret nozzles, simply connect the hose to the nearest fire hydrant or standpipe, position the portable turret nozzle, activate the water supply, and adjust the turret nozzle stream location and water pattern.

### **B.1.7 Hose Stations on Decks**

Crude Unit and CCU. These stations are located adjacent to stairways, and consist of a connection for 1 ½" hose. Water is supplied to these stations from the utility water system. However, the catalytic cracking structure is supplied from the fire water system.



The utility water headers get winterized periodically in the winter when cold weather is predicted, during these times the water to the hose connections would be out of service.

### B.1.8 Water Spray/Deluge Systems

Sprinkler nozzles are located over pumps requiring such protection due to contents handled. Deluge systems are in place for inaccessible un-insulated vessels. These systems are supplied from the main water system loop around the plant, usually from two different and widely separated points. The headers are connected to the main water system through block valves and strainers. Since the spray and deluge systems are manually operated, the duo-valve arrangement provides safe access to the water control points in almost any emergency.

### B.1.9 Firefighting Foam Inventory

#### Foam Concentrate (AR-AFFF)

Tank Capacity (Gallons)	Vehicle #/Type	Location
3,000 (1x3) Universal Gold	Tender #225 (1985 Peterbilt)	Fire Hall
2,000 (3x3) Universal Green	Engine #1 Ferrara	Fire Hall
1,500 (3x3) Universal Green	Engine #2 Pierce	Fire Hall
795 each (3x3) Solberg	Foam Trailers (2)	Fire hall
200 (3x3) Universal Green	QA-1	Safety trailer
(3x3) Universal Green	22 Totes – 265 gallons each	Warehouse
(1x3) Universal Gold	23 Totes – 265 gallons each	Green Tent
(3x3) Solberg	16 Totes - 265 gallons each	Fire Hall

### B.1.10 Fixed Systems

The Company maintains multiple fixed systems through the facility. There are Halon 1301 systems in the Laboratory and Cogeneration facility. An FM-200 system is in the IT network room, Cogen UPS room, and Central Control Building, and a Dry Chemical system at the Nikiski Terminal truck loading rack.

### B.1.11 Mobile Firefighting Support Vehicles and Equipment

The refinery has two engines (E-1 Ferrara and Engine #2 Pierce) and two portable pumps (Dominators). The two engines are equipped as follows.

#### Mobile Fire Equipment

Equipment	E-1 Ferrara	Engine #220 (White/GMC)
Foam carrying capacity	2,000 gallons Universal Green 3x3	1,500 gallons Universal Green 3x3
Water pump capacity	5,250 gpm from draft	2,750 gpm at draft
LDH capacity (5 or 7 ¼")	900' of 7 ¼"	1,500' of 5"
3" Hose capacity	400'	1,000'
1 3/4" Hose capacity	300'	500'
Hose Connections	7 ¼" 3" & 2.5" outlets	8 plus 2-5" outlets
Foam Equipment	6,000 gpm tsunami 2 – 2000 gpm monitors	2,000 gpm cannon
SCBA	13 packs	14 packs

### B.1.12 Foam Tender Operation

The Refinery has one Foam Tender #225, which is a 1985 Peterbuilt truck. The Tender holds 3,000 gallons of Foam. There are 2 ½" hoses that are 18' long mounted on each side of the tank. These are for transferring foam for usage via gravity. The discharges are located on each side of the truck at the rear of the tank.



### **B.1.13 Fire Extinguishers**

The Company has numerous extinguishers located throughout the Refinery.

### **B.1.14 Wharf Fire Protection**

#### ***B.1.14.1 Water Sprinkler System***

The Wharf and 170' of adjacent causeway is protected on the underside with a sprinkler system. This system is divided into four parts, protecting areas between four fire walls. This system remains under constant air pressure. Each spray head on the system has a fusible plug. These plugs, when heated to their melting point (i.e., 165°F) will drop out, allowing the air pressure to escape. This in turn causes air pressure to drop which actuates the dry valve, allowing water to enter the system and out through the spray heads. This system will be pressured by the plant air system. There is an alarm on this system which will sound when the system has been activated.

#### ***B.1.14.2 Fixed & Portable Firefighting Equipment***

There are four 500 gpm grade level turret nozzles located along the Wharf head. There are also two 1,000 gpm elevated turret nozzles located at the southeast of the Wharf office and northwest of the loading manifold. The elevated turret nozzles are operated with hydraulic controls from control panels east of the Wharf office or the turnout nearest the Wharf head.

At each end of the Wharf head there is a two-wheeled hose reel cart located in small structures. The hose reel contains 300' of 2 ½" hose with a combination Mystery Nozzle (i.e. 170 gpm). In the structure there is also a CNF PC-31 2 ½" foam nozzle.

Nineteen standpipes are located along the causeway and Wharf head. Those on the causeway are equipped with two 2 ½" hose connections whereas those on the Wharf head have four hose connections.

Fire extinguishers include:

- Six 20 lb. dry chemical extinguishers located along the Wharf head
- Two 20 lb. dry chemical extinguishers located at or near the small boat landing
- One 150 lb. dry chemical extinguisher along the north wall of the Wharf office
- One 5 lb. CO2 extinguisher in the upstairs Wharf office
- One 20 lb. CO2 extinguisher at the south door to switch gear area

The loading manifold sump is protected with smothering steam with the block valves located east of the manifold.

#### ***B.1.14.3 Foam Equipment***

A wheeled Ansul 36-gallon tank foam cart is located downstairs in the switchgear room. It has one length of 2 ½" hose pre-connected to the supply and a 1 ½" on the discharge.

### **B.1.15 Other Related Equipment**

Inventory lists of other related emergency response supplies and equipment, such as SCBA's, fire hose types and quantities, etc., are maintained by the Fire Department and are available through the Fire Chief.

## **B.2 Environmental Systems and Resources**

### **B.2.1 Air Monitoring Equipment, Fixed Systems**

Fixed toxic and flammable gas monitors are located in various areas throughout the process complex and the refinery. When activated, these monitors will send a signal to the respective control room and/or sound an alarm in the immediate work area. Fixed monitors are used to monitor the following gases:

- Hydrocarbon gases and vapors
- Hydrogen sulfide

### **B.2.2 Air Monitoring Equipment, Portable Systems**

The following portable air monitoring equipment can be found at various work locations throughout the refinery.

- Combustible Gas Detectors
- Hydrogen Sulfide Detectors
- Carbon Monoxide Detectors
- Oxygen Meters
- Color-metric detector tubes for specific gases, including n-butane, benzene, sulfur dioxide, carbon monoxide, ammonia and chlorine.
- Photo-ionization Detector (PID)

### **B.2.3 Storage Tank High Level Alarms**

A computerized gauging system is connected to the most active storage tanks in the refinery. These storage tanks have software alarms set for both high and low levels. The alarm system is maintained from the Central Control Room. In addition, the control room operator is also in radio contact with the outside gaugers monitoring the storage tanks.

## **B.3 Hazardous Materials and Oil Spill Equipment**

The Company maintains the necessary equipment to deal with the Hazardous Materials expected to be found within the facility, such as:

- HazMat Team Trailer – Maintained by Fire/HazMat Team.
  - Industrial absorbents
  - Absorbent boom
  - Decontamination Equipment & stations
  - Barrels, buckets, etc.
  - Chemical Protective Clothing
  - Gas Detection Equipment
- Spill Response Trailer – Maintained by Environmental Dept.
  - Absorbent rolls and pads
  - Waste containment
  - Absorbent material
  - Minimal Chemical PPE

## **B.4 Medical Resources**

### **B.4.1 Refinery Medical Personnel**

Medical Department is located in the Medical clinic located near the lab building.

- One (1) Nurse
- One (1) Physician's Assistant
- Clinic is staffed from 7:00 AM to 3:30 PM, Monday through Friday

Emergency Medical Responders (EMR) receive basic EMR Training certified through Washington State.

### **B.4.2 Refinery Medical Equipment**

Medical and first aid equipment can be found at the Medical Clinic, the Fire Station, at first aid stations and in the Trauma Kits throughout the refinery, and in emergency response vehicles.

### B.4.3 Local Medical Facilities

Island Hospital  
1211 24<sup>th</sup> St  
Anacortes, WA 98221  
(360) 299-1300

Skagit Valley Hospital  
300 Hospital Parkway  
Mount Vernon, WA 98273  
(360) 424-4111

PeaceHealth United General Medical  
2000 Hospital Dr  
Sedro-Woolley, WA 98284  
(360) 856-6021

### B.4.4 Regional Burn Unit

Harborview Medical Center  
325 9<sup>th</sup> Ave  
Seattle, WA 98104  
Hospital (206) 744-3000  
Regional Burn Center (206) 744-5735

### B.4.5 Transport Capabilities

- There is no on-site medical transport capability.
- Ambulances: The Anacortes Fire Department has two fully equipped medic units available, capable of transporting two patients each. Primary Attendants on Anacortes Fire Department Medic Units are Advanced Life Support Paramedics. They are supported by Emergency Medical Technicians (EMTs), as necessary. Island Hospital ambulance drivers are EMTs employed by the hospital. Primary attendants on Skagit Valley and United General Medic Units are Paramedics supported by EMTs.
  - Island Hospital has one ambulance available.
  - Skagit Valley Hospital has two fully equipped medic units.
  - United General Hospital has two fully equipped medic units.
- Helicopters: A helicopter is available from a private contractor (i.e. Med Flight) based at St. Luke's Hospital in Bellingham. Landing zone coordinates that were established by Airlift Northwest are the following:
  - Place: On a baseball field outside of Marathon Anacortes Refinery.
  - Area: Approximately 300 feet by 300 feet ground level. Approximately 24 feet above sea level.
  - Longitude: N48 degree 29.915'
  - Latitude: W122 degree 30.060'.

## B.5 Mutual Aid

In the event of a major incident that is beyond the scope of present equipment within any given plant, the Northwest Oil Refiners have drawn up agreements to supply each other with fire equipment.

Marathon Anacortes Refining Company will release the following equipment for mutual aid response to:

- HF Sinclair Puget Sound Refining Company, Anacortes
- Phillips 66 Refinery, Ferndale
- BP Refinery, Cherry Point
- U.S. Oil and Refining, Tacoma

Anacortes Refinery Emergency Response Plan

Emergency Response Resources

MEMBER	TYPE	CAPACITY (gpm)	FOAM		HOSE (feet)					SCBA's		
			MFG	TYPE	AMOUNT (gallons)	5"	3"	2 1/2"	1 3/4 "	1 1/2"	Make	No.
BP	Tender 52		Williams	1 x 3	4000							
BP	Fire Pump 52	6000	Williams	1 x 3								
BP	Master Stream 52	6000										
BP	Quick Attack 52		Williams	1 x 3	95	600'					Survive Air	2
BP	Engine 51 - if authorized by the Whatcom County Department of Emergency Management.	3000	Williams	1 x 3	1250	2600'	600'				Survive Air	9
P 66	Pumper	4000	Thunder storm	AFFF 1x3%	1000	750	500		500		Scott 4.5	6
P 66	Pumper	1500	3M	AFFF-A+	1000	500	500		500		Scott 4.5	7
P 66	Bulk Foam (drums)		Thunder storm	FP	1000							
P 66	Foam Tender		CNF	AFFF-A+	3000							
P 66	Big Gun	3500										
P 66	Hose Trailer					1000						
Marathon	Bulk Foam (Truck)		CNF	AFFF	3000							
Marathon	Pumper (Ferrara)	5250	Solberg (3X3)	AR-AFFF	2000	1000 (7.5")		500		300	Scott 4.5	12
Marathon	Bulk Foam (Totes)		Solberg (1x3)	AR-AFFF	7950							
Marathon	Pumper	1750	CNF	AFFF	1500	1000		1500		700	Scott 4.5	14
Marathon	Master Stream	6000	Williams									
Marathon	Hose Reel & Rack (2)					3600						
Marathon	Foam trailer (2)	1500	Williams (1x3)	AR-AFFF	795							
Marathon	Quick Attack 1	1500	Williams (1x3)	AR-AFFF	200	400						
Marathon	Foam Monitor (2)	2000	CNF									
HF Sinclair	Foam Trailer		CNF	AR-AFFF	4000							
HF Sinclair	Hose Trailer					5000						
HF Sinclair	Hazmat ICS										Scott 4.5	4
HF Sinclair	SCBA Filling Unit/Lights (+ 50 spare bottles)										Scott 4.5	6
HF Sinclair	Foam Monitor x2	2000	CNF									
HF Sinclair	Storage				6000							
HF Sinclair	75' ladder	2000	CNF	AR-AFFF 3x6	350	1000					Scott 4.5	16
HF Sinclair	Pumper	3500	CNF	AR-AFFF 3x6	1000	1000		800	550		Scott 4.5	16
HF Sinclair	Pumper	1500	CNF	AR-AFFF 3x6	1000	1000		800	550		Scott 4.5	16
US Oil	Quick Attack	4000	Thunderstorm	AFFF-A	95	250				300		
US Oil	Trailer Mounted Monitor	4000				100						
US Oil	Foam Trailer		Thunderstorm	AFFF-A	500							
US Oil	Foam Trailer		Thunderstorm	AFFF-A	500							
US Oil	Hose							1350		400		
US Oil	Foam Totes 250 gal (6 ea)		Thunderstorm	AFFF-A	1500							

Notes:

FP = Fluoroprotein AFFF-A = Aqueous Film Forming Foam – Alcohol + (plus) = Freeze Protected

**Hydrant**

Company	Size	Threads
Phillips 66	2 ½, 5	NST, Storz
Marathon	2 ½, 5	NST, Storz
BP	2 ½, 5	NST, Storz
Shell	2 ½, 5	NST, Storz
US Oil	2 ½, 5	NST, Storz

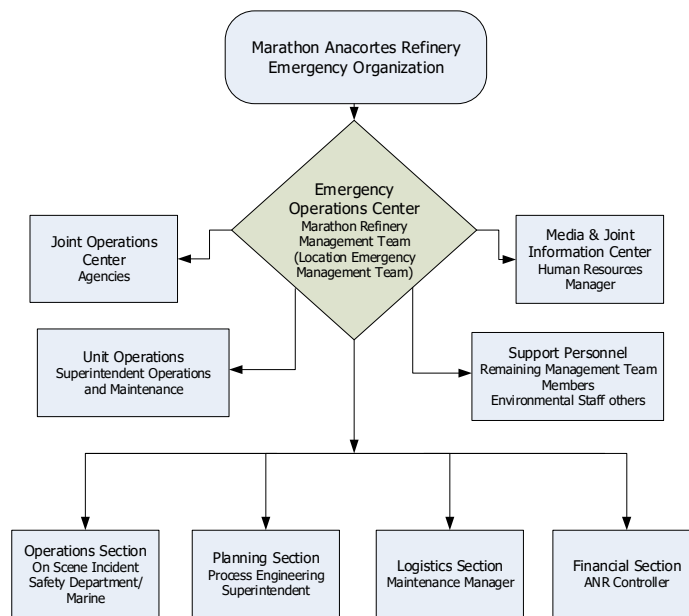
(5" hose & connection Storz fittings)

## APPENDIX C ERT STATEMENT OF ORGANIZATION

### C.1 Statement

The Marathon Anacortes Refinery is committed to protecting life (primary), preventing exposure to the community (secondary), and loss of property. To meet this commitment, the site is prepared, resourced and organized to respond to emergencies. To that end, all Operations employees are trained to respond to incipient stage fires and other emergencies. Any emergency beyond their level of training and role is addressed through our Incident Command System and Emergency Response Teams. This manual describes the specific Emergency Response Teams (ERT) that receive specialized training within their area of focus to ensure they meet the necessary requirements of 29 CFR 1910.120, 29 CFR 1910.156 NFPA 600, NFPA 1081, NFPA 472, CPER-001 and Industrial Emergency Responders criteria.

Figure C.1 Emergency Management Organization (ICS)



### C.2 Team Expectations and Training

#### C.2.1 Advanced Exterior Fire Brigade

Members are composed of hourly and staff employees. Each year, the Emergency Response Coordinator (ERC) will evaluate the Advanced Exterior Fire Brigade (i.e., qualified members). The results of this evaluation may result in recommendations to Marathon Anacortes Refinery management for additional Brigade Members or assistance with training resources. Advanced Exterior Fire Brigade Members are included in the emergency notification system (MPC Alerts) and are expected to respond to emergencies in a timely manner, unless their normal job duties as essential operations personnel prevent them from leaving their designated process unit.

#### C.2.2 Incipient Exterior Fire Brigade

All hourly Operators, Shift Foreman, Area Team Leads, and Supervisors are trained to the incipient exterior fire brigade level. Incipient Exterior Fire Brigade members are expected to respond in a defensive manner. The primary responsibility of the Incipient Exterior Fire Brigade is to control and

minimize the fire while protecting surrounding people and equipment. Incipient Fire Brigade employees receive annual training including Live Fire Training.

### **C.2.3 Emergency High Angle & Confined Space Rescue Team**

The Rescue Team's main function is to provide personnel aid and rescue assistance utilizing specialized equipment and techniques in both high angle and confined space rope rescue scenarios. Rescue Team Members are also included in the Emergency Response Notification System (MPC Alerts) and are expected to respond to emergencies in a timely manner, unless their normal job duties as essential operations personnel prevent them from leaving their designated process unit.

### **C.2.4 Hazardous Materials Team (HazMat)**

The HazMat Team is a smaller group of individuals trained in accordance with NFPA 472 and 29 CFR 1910.120 Hazwoper. HazMat Team Members are trained and qualified to respond with Class A or Class B Personal Protective Equipment (PPE). HazMat Team Members are included in the Emergency Response Notification System (MPC Alerts) and are expected to respond to emergencies in a timely manner, unless their normal job duties as essential operations personnel prevent them from leaving their designated process unit. Training for a HazMat team member will be in compliance with 29 CFR 1910.120 and SAF-4018

### **C.2.5 Emergency Medical Responders**

This group is composed of individuals trained to the Emergency Medical Technician (EMT) or Emergency Medical Responder (EMR) level for responding to medical emergencies. The primary responsibility for these individuals is to safely and efficiently prepare the injured person for emergency medical transport involving injuries beyond basic first aid. Emergency Medical Responders work under standing orders from the refinery's contract occupational health services provider and in conjunction with Skagit County EMS protocols.

### **C.2.6 Air Monitoring Team**

The purpose of the Air Monitoring Team (AMT) is to provide advanced air monitoring capabilities to detect and model airborne contaminants during plant emergencies and non-routine conditions. The AMT performs a critical function in protecting the health & well-being of employees/contractors and members of the surrounding community through the detection and monitoring of adverse conditions. These actions shall be undertaken with the highest regard to the safety of the AMT members and the Emergency Response Team (ERT) members it supports during incidents.

The AMT is structured to maximize the use of personnel, equipment, and the latest technological advances to continually improve Air Monitoring capabilities. The AMT utilizes the MPC Air Monitoring Team Best Practices Manual as the basis for its response activities.

The Community Exposure Guidelines and Occupational Exposure Limits are provided in Section 1. The Air Monitoring Forms can be found in Section 2 as well as MPC path below:

<http://ww3.mpcconnect.com/sites/hess-oeo-org/docs/CEGOEL/Forms/Document%20Category.aspx>

### **C.2.7 Auxiliary Support Team**

Members are assigned special duties during an emergency to support the Incident Commander with staging, accountability, communication and logistics. Auxiliary Support Team Members are included in the Emergency Response Notification System (MPC Alerts) and are expected to respond to emergencies in a timely manner, unless their normal job duties as essential operations personnel prevent them from leaving their designated process unit. The Auxiliary Support Team member actions are limited to outside the Hot and Warm Zones.

## APPENDIX D ACRONYMS AND DEFINITIONS

### D.1 Acronyms

AED.....	Automatic External Defibrillator
AFFF.....	Aqueous Film Forming Foam
AOC.....	Abnormal Operating Conditions
API.....	American Petroleum Institute
ASTM.....	American Society of Testing Materials
ATC.....	Alcohol type Foam Concentrate
BBL (or Bls).....	Barrel
BC.....	Battalion Chief
BLEVE.....	Boiling Liquid Expanding Vapor Explosion
BRM.....	Blast Resistant Module
CERCLA ...	Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended
CERT.....	Corporate Emergency Response Team
CFR.....	Code of Federal Regulations
CHEMTREC.....	Chemical Transportation Emergency Center
CO <sub>2</sub> .....	Carbon Dioxide
CPC.....	Chemical Protective Clothing
Decon.....	Decontamination
Demob.....	Demobilization
DOT.....	Department of Transportation
EMS.....	Emergency Medical Service
EOC.....	Emergency Operations Center
EPA.....	U. S. Environmental Protection Agency
EPCRA.....	Emergency Planning and Community Right-to-Know Act
EPG.....	Emergency Preparedness Group (Marathon)
ERC.....	Emergency Response Coordinator
ERP.....	Emergency Response Plan
ERT.....	Emergency Response Team
ES&S.....	Environmental, Safety and Security
FEMA.....	Federal Emergency Management Administration
FOSC.....	Federal On-Scene Coordinator
GAL.....	Gallons
GIS.....	Geographic Information System
GPM.....	Gallons per Minute
H <sub>2</sub> S.....	Hydrogen Sulfide
HAZMAT.....	Hazardous Materials
HAZWOPER.....	Hazardous Waste Operations and Emergency Response
HR.....	Human Resources
IC.....	Incident Commander
ICP.....	Incident Command Post
ICS.....	Incident Command System
IDLH.....	Immediately Dangerous to Life and Health
IH.....	Industrial Hygiene
IMT.....	Incident Management Team
JIC.....	Joint Information Center



LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
LOSC	Local On-Scene Coordinator
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MOU	Memorandum of Understanding
MPC	Marathon Petroleum Corporation
MPLX	Marathon Petroleum Logistics
NCP	National Contingency Plan
NFPA	National Fire Protection Association
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center (USCG)
NWS	National Weather Service
OSC	On-Scene Coordinator/Commander
OSHA	Occupational Safety and Health Administration (USDH)
OSRO	Oil Spill Removal Organization
OSRP	Oil Spill Response Plan
P&ID	Piping and Instrumentation Diagram
PEL	Permissible Exposure Limit
PFD	Personal Flotation Device
PHMSA	Pipeline and Hazardous Materials Safety Administration
PPE	Personal Protective Equipment
QI	Qualified Individual
RCRA	Resource Conservation and Recovery Act of 1976
RECEO	Rescue, Exposure Protection, Confinement, Extinguishment, Overhaul
RLT	Refinery Leadership Team
RP	Responsible Party
RQ	Reportable Quantity
SAR	Search and Rescue
SARA	Superfund Amendments and Reauthorization Act
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheet
SOC	Security Operations Center
SOP	Standard Operating Procedure
SOSC	State On-Scene Coordinator
SPCC	Spill Prevention, Control, and Countermeasures Plan
SSHPP	Site Safety and Health Plan
STEL	Short Term Exposure Limit
USA (811)	Underground Service Alert
USCG	U. S. Coast Guard
USDOT	U. S. Department of Transportation
USFWS	U. S. Fish and Wildlife Service (USDOI)
WISHA	Washington Industrial Safety and Health Act

## D.2 Definitions

**Access/Staging Areas** - Designated areas offering access to emergency sites for the gathering and deployment of emergency response equipment and personnel.

**Absorbent Material** - Any of the several materials designed to absorb oil, both hydrocarbon and non-hydrocarbon.

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

**Alteration** - Any work on a tank or related equipment involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of a tank.

**Barrel** - Measure of space occupied by 42 U. S. gallons at 60 degrees Fahrenheit.

**Clean-Up** - For the purposes of this document, clean-up refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Clean-up includes restoration of the site and its natural resources.

**Command Post** – A site located at a safe distance from the emergency 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.

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

**Communications Center** - The location designated by the Information Officer for communications with all media and external inquiries. The initial Communications Center will be located in the Office of the Manager of Human Resources.

**Community Exposure Guidelines (CEG)** - Company identified exposure guidelines for potential application to the general public for emergency periods of 10 minutes to 24 hours based primarily on the Environmental Protection Agency (EPA)'s Acute Exposure Guideline Levels (AEGs). These guidelines address acute exposure limits that would apply immediately or shortly after an incident. They do not address exposure limits for longer time frames (e.g. months to years).

**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.

**Contamination Reduction Zone** - The area between the contaminated zone and the clean zone. This area is designed to reduce the probability that the clean zone will become contaminated. Also known as the warm zone.

**Corporate Emergency Response Team (CERT)** - Comprised of selected Corporate and Local staff. The CERT is designed to assist and support the LIMT with management of major incidents, and to provide resources as required.

**Critical Areas** - Areas which, if impacted by an emergency, may result in threats to public health and/or safety.

**Crude Oil** - Any liquid hydrocarbon mixture occurring naturally in the earth, whether treated to render it suitable for transportation and includes crude oil from which certain distillate fractions may have been removed and crude oil to which certain distillate fractions may have been added.

**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.

**Defensive Firefighting** - The mode of manual fire control in which the only fire suppression activities taken are limited to those required to keep a fire from extending from one area to another.

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

**Designated Employee** - An employee that is not a member of the Emergency Response Team (ERT) but has been trained to use portable fire extinguishers or small hose lines to fight incipient fires in their immediate work area.

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

**Diversion Boom** - A flotation/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 Operations Center (EOC)** - The pre-designated site where local and state agencies direct and manage off-scene logistics support to on-scene emergency operations. The initial EOC for Marathon Anacortes Refinery is located in the Administration Building Conference Room.

**Emergency Releasable Operations Positions:** - Composed of 9 on-shift Operators and the Logistics Supervisor. The Emergency Releasable Operations Positions will respond initially to all emergency situations 24 hours a day. They will be relieved by the Emergency Response Team under the direction of the Incident Commander. Formally known as the First Response Fire Crew

**Emergency Response Operations** - Activities related to emergency incidents, including response to the scene of the incident and specific response duties performed at the scene.

**Emergency Response Team** - The facility-based team that makes notification of a real or threatened release and takes the first action to alleviate the threat or event.

**Exclusion Zone** - The area where contamination does or may occur.

**Exterior Firefighting** - Offensive firefighting performed outside of an enclosed structure when the fire is beyond the incipient stage.

**Facility** - Any pipeline, structure, equipment, or device used for handling oil including, but not limited to, underground and aboveground storage tanks, impoundment's, 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 the coastal waters.

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

**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 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 Resources 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 emergency observer after detection of an emergency.

- Incident** - Any event that results in the emergency. Action by emergency service personnel may be required to prevent or minimize loss of life or damage to property and/or natural resources.
- Incident Command Post (ICP)** - The location at which the primary command functions are executed and may be collocated with the EOC. For minor incidents this will be located in the field near the scene.
- Incident Commander (IC)** - The one individual in charge at any given time of an incident. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.
- Incident Command System (ICS)** - A method by which the response to an extra-ordinary event, including an emergency, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.
- Incident Management Team.** The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation. They will supervise and control all response and clean-up operations.
- Incidental Release** – Incidental releases are limited in quantity, exposure potential, or toxicity and present minor safety or health hazards to employees in the immediate work area or those assigned to clean them up. An incidental spill may be safely cleaned up by employees who are familiar with hazards of the chemicals with which they are working.
- Incipient Response** - A release that can be safely controlled at the time of the release and does not have the potential to become an uncontrolled release
- Incipient Stage** – The early stage of a fire, in which the progression has not developed beyond that which can be extinguished using either portable fire extinguishers or hand-lines flowing up to 125 gpm.
- Industrial Fire Brigade** - An organized group of employees within an industrial occupancy who are knowledgeable, trained, and skilled in at least basic fire-fighting operations, whose full-time occupation might or might not be the provision of fire suppression and related activities for their employer.
- Initial Notification** - The process of notifying necessary company personnel and Federal/State/Local agencies that an emergency has occurred, including all pertinent available information surrounding the incident.
- Initial Spill Response Crew** - Composed of on-shift Operators and the Logistics Supervisor. The Initial Spill Response Crew will respond initially to all oil spills 24 hours a day. They will be relieved by the Marine Spill Brigade as directed by the Incident Commander.
- Injury** - A measurable adverse change, either long- or short-term, in the chemical or physical quality of the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.
- Joint Operations Center (JOC)** - If an emergency incident has the potential to impact the community and require the involvement of governmental agencies, the overall management of the incident will be conducted at the JOC. Members of the LIMT, along with designated personnel from the governmental agencies, will assume the responsibility for the overall management of the incident. The initial JOC is located in the cafeteria.
- 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.
- Limited Action** - Actions which are necessary to secure an operation during emergency response or prevent an incident from increasing in severity, such as shutting down processes or closing emergency valves.
- Lines of Authority** - A pre-established ranking of individuals qualified to assume a commanding role during emergency response. They are noted in an emergency response plan which is implemented during incident response

**Local Incident Management Team (LIMT)** - Composed of the Refinery Leadership Team (RLT) and other selected individuals that hold the responsibility of staffing the EOC

**Lower Explosive Limit** - Air measurement to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into an emergency area.

**Marine Spill Brigade** - Composed of approximately 30 Marathon Anacortes Refinery personnel and supported by the Marine Spill Response Corporation (MSRC) and other spill response contractors. The Marine Spill Brigade will relieve the Initial Spill Response Crew under the direction of the Incident Commander.

**Master Stream** - A portable or fixed fire-fighting appliance supplied by either hose lines or fixed piping, which has the capacity of flowing in excess of 300 gpm of water or water-based extinguishing agent.

**Media/Joint Information Center** - All on-site contact with the media will be conducted in the Media Center. For small incidents, the Media Center will be located in the lobby of the Administration Building. For major events, the Media Center will be located in the TERA building. Human Resources has the responsibility for the management of the Media Center

**Non-Crude Oil** - Any oil other than crude oil.

**Occupational Exposure Limits** - The amount or concentration of a chemical to which workers may be exposed for a predefined time limit without suffering adverse health effects. Examples include an 8-hour Time Weighted Average (TWA), Ceiling Limit, and 15 minute Short Term Exposure Limit (STEL). These limits may be derived from the OSHA Permissible Exposure Limit (PEL), American Conference of Governmental Hygienists (ACGIH) Threshold Limit Value (TLV), or other sources of exposure criteria developed for the purpose of protecting the health and safety of workers.

**Offensive Firefighting** - The mode of manual fire control in which manual fire suppression activities are concentrated on reducing the size or magnitude of a fire to accomplish extinguishment.

**Operations Liaison** - A member of the Command Staff who is the point of contact for coordination of efforts with the affected Operations Zone. The Operations Liaison is the focal point for communications between the Incident Commander and the Unit Operators

**Plan** - Emergency Response Plan (ERP)

**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.

**Recreational Areas** - Publicly accessible locations where social/sporting events take place.

**Repair** - Any work necessary to maintain or restore a tank or related equipment to a condition suitable for safe operation.

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

**Response Resources** - The personnel, equipment, supplies, and other capability necessary to perform the response activities identified in a response plan.

**Response Plan** - A practical plan used by industry for responding to an emergency. 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 emergencies with varying characteristics; and (3) segregating information needed during the response from that required by regulatory agencies to prevent confusion during an incident.

**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.

**Rescue Squad** - A specialized division within the Emergency Response Team. The Rescue Squad is trained in high angle and confined space rescue. The use of the Rescue Squad is at the direction of the Incident Commander.

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

**Safety Officer** - A member of the Command Staff responsible for monitoring incident operations and advising the Incident Commander on all matters relating to operational safety, including the health and safety of Emergency Response personnel.

**Small Release** - A small release is a release of hazardous substances which does not pose a significant safety of health hazard to employees in the immediate vicinity.

**Site Security and Control** - Steps that must be taken to provide safeguards needed to protect personnel and property, as well as the 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.

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

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

**Staging Areas** - Designated areas near the emergency site accessible for gathering and deploying equipment and/or personnel.

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

**Support Members** - Personnel assigned to the industrial Fire Brigade to perform specific response duties, including those people who have specific technical knowledge or skills, or who have been given specific assignments that indirectly support manual fire suppression efforts

**Uncontrolled Release** - A release where significant safety and health risks could be created

**Unified Command (UC)** - 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.

**Unit Operations** - Composed of all essential operating personnel that have the responsibility to stabilize or shut down operations process units as required by the Incident Management Team or the Incident Commander

**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 because 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.

**Zones - Cold Zone:** The area immediately outside the boundary of the established warm zone where personnel are safe from the adverse effects of a fire or release.

**Hot Zone:** The area immediately surrounding the physical location of a fire or release having a boundary that extends far enough from the fire or release to protect personnel positioned outside the hot zone from being directly exposed to flames, dense smoke, or extreme temperatures.

**Warm Zone:** The controlled area immediately outside the boundary of the established hot zone having a boundary that extends far enough from the hot zone to protect personnel outside the warm zone from the adverse effects of the fire or release

## APPENDIX E CROSS REFERENCE

### E.1 WASHINGTON OCCUPATIONAL SAFETY AND HEALTH

PLAN REQUIREMENTS	PLAN SECTION
<b>WAC 296-24-567 Employee emergency plans and fire prevention plans</b>	
<b>(1) Emergency Action Plan</b>	
(a) <b>Scope and application.</b> This subdivision applies to all emergency action plans required by a particular DOSH standard. You must put the emergency action plan in writing, and it must cover those designated actions employers and employees must take to ensure employee safety from fire and other emergencies.	
(b) <b>Elements.</b> You must include the following elements, at a minimum, in the plan:	
(i) Emergency escape procedures and emergency escape route assignments;	2
(ii) Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;	7
(iii) Procedures to account for all employees after emergency evacuation has been completed;	2
(iv) Rescue and medical duties for those employees who are to perform them;	7
(v) The preferred means of reporting fires and other emergencies; and	3
(vi) Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan.	3
(c) <b>Alarm systems.</b> You must establish an employee alarm system which complies with WAC 296-800-310. The employee alarm system must provide warning for necessary emergency action as called for in your emergency action plan. The employee alarm must be distinctive and recognizable as a signal to perform actions designed under the emergency action plan.	2
(d) <b>Evacuation.</b> You must establish in the emergency action plan the types of evacuation to be used in emergency circumstances.	2
(e) <b>Training.</b>	A
(i) Before implementing the emergency action plan, you must designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees.	A
(ii) The employer must review the plan with each employee covered by the plan at the following times:	A
(A) Initially when the plan is developed;	A
(B) Whenever the employee's responsibilities or designated actions under the plan change; and	A
(C) Whenever the plan is changed.	A
(iii) You must review with each employee upon initial assignment those parts of the plan which the employee must know to protect the employee in the event of an emergency. You must keep the written plan at the workplace and made available for employee review.	A
<b>(2) Fire prevention plan.</b>	
(a) <b>Scope and application.</b> This subsection applies to all fire prevention plans required by a particular DOSH standard. You must put the fire prevention plan in writing.	
(b) <b>Elements.</b> You must include the following elements, at a minimum, in the fire prevention plan:	
(i) A list of the major workplace fire hazards and their proper handling and storage procedures, potential ignition sources (such as welding, smoking and others) and their control procedures, and the type of fire protection equipment or systems which can control a fire involving them;	7
(ii) Names or regular job titles of those personnel responsible for maintenance of equipment and systems installed to prevent or control ignitions or fires; and	3
(iii) Names or regular job titles of those personnel responsible for control of fuel source hazards.	3
(c) <b>Housekeeping.</b> You must control accumulations of flammable and combustible waste materials and residues so that they do not contribute to a fire emergency. You must include the housekeeping procedures in the written fire prevention plan.	See R-11-030
(d) <b>Training.</b>	



PLAN REQUIREMENTS	PLAN SECTION
(i) You must apprise employees of the fire hazards of the materials and processes to which they are exposed.	A
(ii) You must review with each employee upon initial assignment those parts of the fire prevention plan which the employee must know to protect the employee in the event of an emergency. You must keep the written plan in the workplace and made available for employee review.	A
(e) <b>Maintenance.</b> You must regularly and properly maintain, according to established procedures, equipment and systems installed on heat producing equipment to prevent accidental ignition of combustible materials. You must include the maintenance procedures in the written fire prevention plan.	See D-53-102 & RSP-1308
<b>WAC 296-824-20005 Planning. Develop an emergency response plan.</b>	
(1) You must make sure your plan is written and adequately addresses, as a minimum, all of the following:	
(a) Preemergency planning and coordination with additional responders (including personnel from other employers such as: Fire departments, law enforcement agencies, emergency medical services, and state or federal agencies);	B
(b) Personnel roles, (See Table 1) and lines of authority and communications for all affected parties including responders;	4
(c) Employee training (see WAC 296-824-30005 for more detail):	A
(i) Emergency recognition;	A
(ii) Immediate emergency procedures including:	A
(A) Methods of alerting employees (see WAC 296-800-310, exit routes and employee alarm -systems) and outside responders;	3
(B) Procedures for limited action (emergency prevention);	7
(C) Details of who will evacuate immediately and who will remain behind for limited action;	7
(D) Evacuation routes and procedures;	2
(E) How to establish safe distances and places of refuge (for example, during emergency response the incident commander (IC) decides to make changes based on new developments, i.e., changes in the wind direction).	2
(d) Methods of securing and controlling access to the site;	7
(e) Emergency medical treatment and first aid;	7
(f) A complete personal protective equipment (PPE) program that addresses:	
(i) Selection of PPE including selection criteria to be used and the identification, specified use and limitations of the PPE selected.	See R-11-023
(ii) Training on proper use of PPE (including maintenance).	See R-11-023
(iii) Hazards created by wearing PPE including heat stress during temperature extremes, and/or other appropriate medical considerations.	See R-11-023
(iv) Criteria used for determining the proper fit of PPE.	See R-11-023
(v) Procedures covering proper use of PPE including procedures for inspection, putting it on (donning) and removing it (doffing).	See R-11-023
(iv) Maintenance of PPE including procedures for decontamination, disposal and storage.	See R-11-023
(vii) Methods used to evaluate the effectiveness of your PPE program	See R-11-023
(g) Emergency equipment;	B
(h) Emergency response procedures;	7
(i) Decontamination procedures determined by a hazardous materials specialist or other qualified individual;	8
(j) Methods to critically assess the response and conduct appropriate follow-up	6
(2) You must make your written emergency response plan available to employees, their representatives, and WISHA personnel for inspecting or copying.	

## E.2 Occupational Safety and Health Administration (29 CFR)

PLAN REQUIREMENTS	PLAN SECTION
<b>§1910.38 Emergency Action Plan</b>	
(a) <b>Application.</b> An employer must have an emergency action plan whenever an OSHA standard in this part requires one. The requirements in this section apply to each such emergency action plan.	
(b) <b>Written and oral emergency action plans.</b> An emergency action plan must be in writing, kept in the workplace, and available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees.	
(c) <b>Minimum elements of an emergency action plan.</b> An emergency action plan must include at a minimum:	
(1) Procedures for reporting a fire or other emergency;	3
(2) Procedures for emergency evacuation, including type of evacuation and exit route assignments;	2
(3) Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;	7
(4) Procedures to account for all employees after evacuation;	2
(5) Procedures to be followed by employees performing rescue or medical duties; and	7
(6) The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.	3
(d) <b>Employee alarm system.</b> An employer must have and maintain an employee alarm system. The employee alarm system must use a distinctive signal for each purpose and comply with the requirements in § 1910.165.	2
(e) <b>Training.</b> An employer must designate and train employees to assist in a safe and orderly evacuation of other employees.	A
(f) <b>Review of emergency action plan.</b> An employer must review the emergency action plan with each employee covered by the plan:	A
(1) When the plan is developed or the employee is assigned initially to a job;	A
(2) When the employee's responsibilities under the plan change; and	A
(3) When the plan is changed.	A
<b>§1910.39 Fire Prevention Plan</b>	
(a) <b>Application.</b> An employer must have a fire prevention plan when an OSHA standard in this part requires one. The requirements in this section apply to each such fire prevention plan.	
(b) <b>Written and oral fire prevention plans.</b> A fire prevention plan must be in writing, be kept in the workplace, and be made available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees.	
(c) <b>Minimum elements of a fire prevention plan.</b> A fire prevention plan must include:	
(1) A list of all major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard;	7
(2) Procedures to control accumulations of flammable and combustible waste materials;	See R-11-030
(3) Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials;	See D-53-102 & RSP-1308
(4) The name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires; and	3
(5) The name or job title of employees responsible for the control of fuel source hazards.	3
(d) <b>Employee information.</b> An employer must inform employees upon initial assignment to a job of the fire hazards to which they are exposed. An employer must also review with each employee those parts of the fire prevention plan necessary for self-protection.	A
<b>§1910.120 Hazardous Waste Operations and Emergency Response.</b>	
(I) Emergency Response by Employees at Uncontrolled Hazardous Waste Sites.	

PLAN REQUIREMENTS	PLAN SECTION
(1) <i>Emergency response plan.</i>	
(i) An emergency response plan shall be developed and implemented by all employers within the scope of paragraphs (a)(1)(i) through (ii) of this section to handle anticipated emergencies prior to the commencement of hazardous waste operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, OSHA personnel and other governmental agencies with relevant responsibilities.	Overall Plan
(ii) Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan complying with 29 CFR 1910.38.	
(2) <i>Elements of an emergency response plan.</i> The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following:	
(i) Pre-emergency planning.	7
(ii) Personnel roles, lines of authority, training and communication.	3, 4
(iii) Emergency recognition and prevention.	2
(iv) Safe distances and places of refuge.	2
(v) Site security and control.	7
(vi) Evacuation routes and procedures.	2
(vii) Decontamination procedures which are not covered by the site safety and health plan.	8
(viii) Emergency medical treatment and first aid.	7
(ix) Emergency alerting and response procedures.	2
(x) Critique of response and follow-up.	8
(xi) PPE and emergency equipment.	B
(3) <i>Procedures for handling emergency incidents.</i>	
(i) In addition to the elements for the emergency response plan required in subsection (1)(2), the following elements shall be included for emergency response plans:	
(A) Site topography, layout, and prevailing weather conditions.	1
(B) Procedures for reporting incidents to local, state, and federal governmental agencies.	3
(ii) The emergency response plan shall be a separate section of the Site Safety and Health Plan.	
(iii) The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.	1
(iv) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.	A
(v) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.	1
(vi) An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise in order to speed communication, and to begin emergency procedures.	2
(vii) Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.	6

**E.3 Environmental Protection Agency Risk Management Program (RMP) (40 CFR)**

PLAN REQUIREMENTS	PLAN SECTION
<b>§68.95 Emergency Response Program</b>	
(a) The owner or operator shall develop and implement an emergency response program for the purpose of protecting public health and the environment. Such program shall include the following elements:	
(1) An emergency response plan, which shall be maintained at the stationary source and contain at least the following elements:	Entire Plan
(i) Procedures for informing the public and the appropriate Federal, state, and local emergency response agencies about accidental releases;	3
(ii) Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures; and	7
(iii) Procedures and measures for emergency response after an accidental release of a regulated substance;	7
(2) Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance;	7, B
(3) Training for all employees in relevant procedures; and	A
(4) Procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes. The owner or operator shall review and update the plan as appropriate based on changes at the stationary source or new information obtained from coordination activities, emergency response exercises, incident investigations, or other available information, and ensure that employees are informed of the changes.	1
(b) A written plan that complies with other Federal contingency plan regulations or is consistent with the approach in the National Response Team's Integrated Contingency Plan Guidance ("One Plan") and that, among other matters, includes the elements provided in paragraph (a) of this section, shall satisfy the requirements of this section if the owner or operator also complies with paragraph (c) of this section.	
(c) The emergency response plan developed under paragraph (a)(1) of this section shall be coordinated with the community emergency response plan developed under 42 U.S.C. 11003. Upon request of the LEPC or emergency response officials, the owner or operator shall promptly provide to the local emergency response officials information necessary for developing and implementing the community emergency response plan.	
<b>§68.96 Emergency Response Exercises</b>	
(a) <b>Notification exercises.</b> At least once each calendar year, the owner or operator of a stationary source with any Program 2 or Program 3 process shall conduct an exercise of the stationary source's emergency response notification mechanisms required under §68.90(b)(3) or §68.95(a)(1)(i), as appropriate, before December 19, 2024, and annually thereafter. Owners or operators of responding stationary sources may perform the notification exercise as part of the tabletop and field exercises required in paragraph (b) of this section. The owner/operator shall maintain a written record of each notification exercise conducted over the last five years.	A
(b) <b>Emergency response exercise program.</b> The owner or operator of a stationary source subject to the requirements of §68.95 shall develop and implement an exercise program for its emergency response program, including the plan required under §68.95(a)(1). Exercises shall involve facility emergency response personnel and, as appropriate, emergency response contractors. When planning emergency response field and tabletop exercises, the owner or operator shall coordinate with local public emergency response officials and invite them to participate in the exercise. The emergency response exercise program shall include:	A

PLAN REQUIREMENTS	PLAN SECTION
(1) <b>Emergency response field exercises.</b> The owner or operator shall conduct field exercises involving the simulated accidental release of a regulated substance (i.e., toxic substance release or release of a regulated flammable substance involving a fire and/or explosion).	A
(i) <b>Frequency.</b> As part of coordination with local emergency response officials required by §68.93, the owner or operator shall consult with these officials to establish an appropriate frequency for field exercises.	A
(ii) <b>Scope.</b> Field exercises shall involve tests of the source's emergency response plan, including deployment of emergency response personnel and equipment. Field exercises should include: Tests of procedures to notify the public and the appropriate Federal, state, and local emergency response agencies about an accidental release; tests of procedures and measures for emergency response actions including evacuations and medical treatment; tests of communications systems; mobilization of facility emergency response personnel, including contractors, as appropriate; coordination with local emergency responders; emergency response equipment deployment; and any other action identified in the emergency response program, as appropriate.	A
(2) <b>Tabletop exercises.</b> The owner or operator shall conduct a tabletop exercise involving the simulated accidental release of a regulated substance.	A
(i) <b>Frequency.</b> As part of coordination with local emergency response officials required by §68.93, the owner or operator shall consult with these officials to establish an appropriate frequency for tabletop exercises, and shall conduct a tabletop exercise before December 21, 2026, and at a minimum of at least once every three years thereafter.	A
(ii) <b>Scope.</b> Tabletop exercises shall involve discussions of the source's emergency response plan. The exercise should include discussions of: Procedures to notify the public and the appropriate Federal, state, and local emergency response agencies; procedures and measures for emergency response including evacuations and medical treatment; identification of facility emergency response personnel and/or contractors and their responsibilities; coordination with local emergency responders; procedures for emergency response equipment deployment; and any other action identified in the emergency response plan, as appropriate.	A
(3) <b>Documentation.</b> The owner or operator shall prepare an evaluation report within 90 days of each field and tabletop exercise. The report should include: A description of the exercise scenario; names and organizations of each participant; an evaluation of the exercise results including lessons learned; recommendations for improvement or revisions to the emergency response exercise program and emergency response program, and a schedule to promptly address and resolve recommendations.	A
(c) <b>Alternative means of meeting exercise requirements.</b> The owner or operator may satisfy the requirement to conduct notification, field and/or tabletop exercises through:	
(1) Exercises conducted to meet other Federal, state or local exercise requirements, provided the exercise meets the requirements of paragraphs (a) and/or (b) of this section, as appropriate.	A
(2) Response to an accidental release, provided the response includes the actions indicated in paragraphs (a) and/or (b) of this section, as appropriate. When used to meet field and/or tabletop exercise requirements, the owner or operator shall prepare an after-action report comparable to the exercise evaluation report required in paragraph (b)(3) of this section, within 90 days of the incident.	A