

ภาคผนวก จ23

Emergency and Crisis Management Manual

EMERGENCY & CRISIS MANAGEMENT MANUAL

INDEX

Introduction	
Section 1	: Emergency Telephone List
Section 2	: Emergency and Crisis Management Organization
Section 3	: Description of Emergency Duties
Section 4	: Sequence of Emergency (Fire/ Explosion)
Section 5	: Fire/ Explosion in the Refinery
Section 6	: Fire/ Explosion at Product Jetty/ SBM
Section 7	: Oil Spillage at Sea
Section 8	: Fire in area of Site Houses
Section 9	: Fire in area of the administration/ training/ function building.
Section 10	: Crisis Management
Section 11	: Fire Fighting Action Plan
Section 12	: Chemical / Flammable or Toxic gases release Emergency Initiation
Section 13	: Sequence of Emergency Chemical / Flammable or Toxic gases release
Section 14	: Refinery Chemical / Flammable or Toxic gases release Action Plan
Section 15	: Radiological Incident Response

INTRODUCTION

This Manual is not concerned with emergency procedures on Process Units, such as those occurring in the event of air failure, for instance. The action required in these cases is described in the Individual Unit Operating Manuals, and Standing Instructions. It does, however, contain sections dealing with a more general category of emergencies which could occur, not only in the refinery area but also outside; for example, on the jetty or in the housing areas. Revisions to the Manual will be produced and distributed from time to time and holders of the Manual should ensure that they keep its contents up-to-date at all times.

In the Manual you will find a diagram of the organisation which will become effective for each type of emergency, crisis, together with lists of job holders and short descriptions of their duties. It is essential that everyone who has a part to play in the emergency, crisis procedures understand what he has to do and how his duties fit into the total organisation. The Manual must therefore be studied carefully by all concerned.

No Manual can hope to cover every detail of every type of emergency, crisis and therefore the contents of this one should be looked upon as guidelines only. Action to be taken in any incident will obviously depend upon the nature and magnitude of the emergency, crisis and the personnel and facilities available to deal with it. Common-sense and initiative on the part of everyone concerned will be needed. Good co-operation and co-ordination between the numbers parties involved will also be essential. The main objective of this manual is to provide the organisational basis by which emergencies can be promptly and effectively tackled.

Persons appointed to positions in the emergency, crisis organisation will fully understand the importance of their being available at the right place with the minimum of delay in the event of an emergency. During normal working hours a sufficient number of people should always be available, but outside normal working hours the Refinery Duty Rota is designed to ensure the availability of same key staff.

All personnel on duty will be confined to a distance of less than 30 kms. from the Refinery or to arrive within 30 minutes

Duty personnel must, however, always inform the Refinery Telephone Operator of their location and how they can be contacted when not in their own homes. A "Duty Telephone Number Record" will be kept by the Telephone Operators for this purpose and it is obviously essential that it be kept up-to-date at all time.



Anyone who is unable to carry out his duty for any reason (including, for example, illness or injury) must inform his Department Head or in a latter's absence, the duty Management, who will make an alternative arrangement.

Any major emergency, crisis in an oil refinery inevitably attracts a lot of attention from outside parties such as government departments, the local community T.V., press, etc. Requests for information and details of the incident will inevitably come into the refinery via a wide variety of routes such as by telephone, letters, personal contacts, etc. Experience elsewhere has shown that a frank and open approach to such requests is the best policy for a Company such as ours to adopt and therefore we will do our best to keep the public and authorities fully informed of what has happened and the likely consequences. However it is essential that this be done officially through a single controlled channel of communication and in our organisation this will be the INFORMATION CENTRE that located in the Refinery Site office; HSE Briefing Room at Gate No.1. Individual members of the staff are therefore forbidden to pass on information or comment on any emergency. Anyone asking for information should be politely directed to the INFORMATION CENTRE.

SECTION 1

EMERGENCY TELEPHONE LIST

**Section I : EMERGENCY TELEPHONE LIST (REFER TO INTRANET NETWORK)****Refinery** Telephone number

Telephone Operator	90/91
Emergency Control Centre	2612, 2613, 2614
Main Control room	4030
Fire station	2666, 2668
Security office	2690
Gate No.1	2691
Gate No.7	2695
Gate at Sukumvit road	2693
Medical centre	2888
Control Room TOC I	2310, 2311
Control Room TOC II	2320, 2321
Control Room TOC III	4030, 4033
Control Room TOC IV	4040, 4043
Control Room TOC V	4050, 4055
Control Room TLB	5941-5945
Control Room TPX	5300,5301-3
Control Room LABIX	5470-71,5482-3
Oil Movement Control Room	2300, 2303
Offsite Control Room	2330, 2331
Utility Control Room	4093
Occupational Health, Safety and Fire Office	2600, 2621-24, 2634-37

Bangkok Office

Telephone Operator 99/7000

Local Authorities Telephone number

Sriracha fire brigade	0-3831-1666
Lamchabang Municipality	0-3849-0554, 0-3849-0199
Chaoprayasurasak Municipality	0-3834-8000, 0-38348-156
Chonburi Army	0-3828-2567, 0-3828-8542
Sathaheib Navy	0-3843-1179, 0-3843-7600
Sriracha Police station	0-3831-3555
Lamchabang Police station	0-3849-0555-6
Chonburi Province Civil Defence Centre	0-3828-2585, 0-3827-2737
Sriracha Distric Civil Defence Centre	0-3831-3988, 0-3831-2240

Mutual Aid

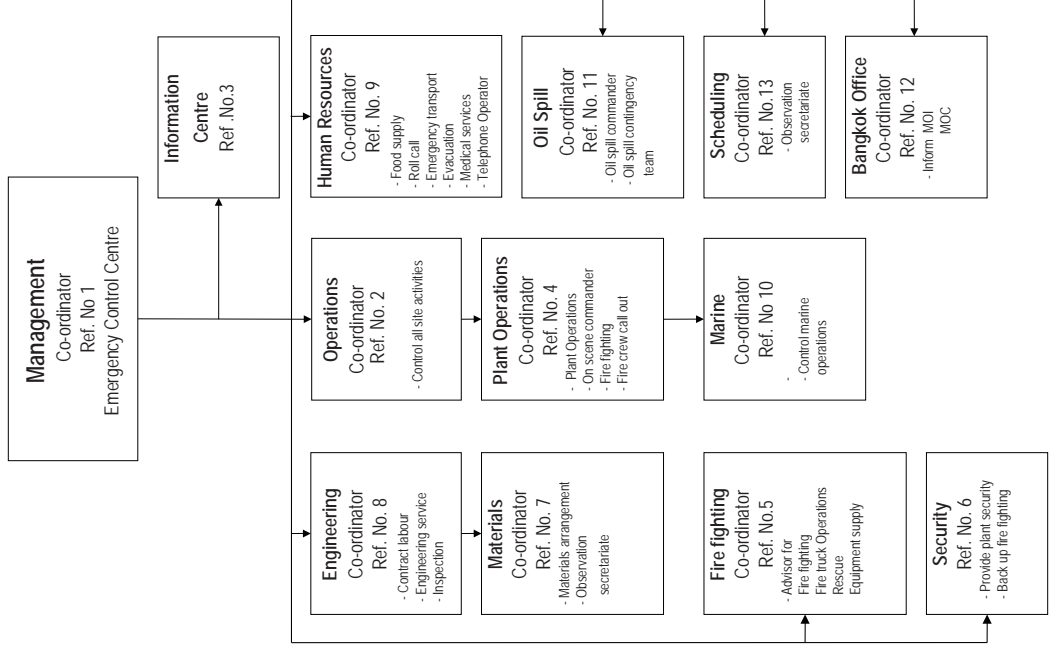
Esso Refinery	0-3314-2999
PTT	0-3849-3725-32 Ext. 5555
TPX	0-3835-1317-9 Ext. 5390, 5300, 5301
PTT	
PTT Communication Centre	0-2537-3111, 222, 333 Fax: 0-2537-3498-9

Hospital

Praboromratchathawee Somdej Na Sriracha Hospital	0-3832-0200 (Running 50)
Leamchabang Hospital	0-3835-1010-2
Smitivej Hospital	0-3832-4100-7
Phyathai Hospital	0-3877-0200-8
Lamchabang International Hospital	0-3849-1888
ศูนย์ต้นทอม	0-3832-7555



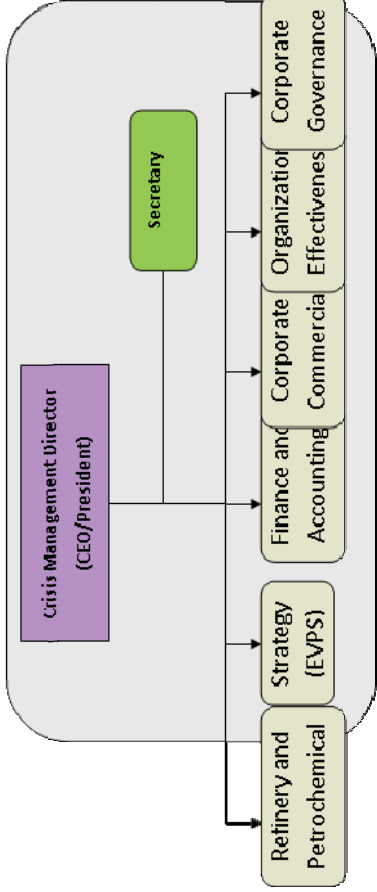
Section 2 : EMERGENCY ORGANISATION



SECTION 2

EMERGENCY AND CRISIS MANAGEMENT ORGANIZATION

Section 2 : CRISIS MANAGEMENT ORGANIZATION



SECTION 3

DESCRIPTION OF EMERGENCY DUTIES



Section 3 : DESCRIPTION OF EMERGENCY DUTIES

EMERGENCY DUTIES OF PERSONNEL

Reference No. : 0

Title: Crisis Management

Person Responsible:

- a. Inside normal working hours: Chief/Executive Officer (CEO), Group Executive Vice President (EVP)
- b. Outside normal working hours: On call by Reference no.12

DESCRIPTION OF DUTIES:

1. Proceed immediately to the Crisis Management Centre located in the ENCO building Bangkok upon receipt of an emergency message.
2. Assess the situation, advise Incident commander and Crisis management coordinator to control the situation and ensure that all support activities are well organised
 - 2.1 Activate or appoint a crisis management team.
 - 2.2 Brainstorm all possible crises that could hit the organization; develop the response required for each.
 - 2.3 Prepare a master plan everyone understands, a plan with clear delegation of responsibility across the organization.
 - 2.4 Spoken man or designate the official spokesperson at every location, or the one voice for the organization.
3. Receive periodic reports of the incident and current situation from the Crisis Management Centre.
4. Approve, in conjunction with the Incident commander or crisis management coordinator, all releases of information concerning the incident to the press, including PTT Communication Centre, public, authorities, employees and relatives.
6. Attend and address press conference, briefing sessions etc. as considered appropriate.
7. Co-ordinate all efforts to restore the situation to normal as soon as possible.
8. Co-ordinate the preparation of a detailed incident report o for issue to all interested parties as soon as possible after the incident
9. Declare the crisis is over in conjunction with the Incident commander when the situation is under control.

10. Prepare all necessary supports and coordinate with the Authorities to enable ThaiOil and Subsidiaries to continues it business and prepare for recovery plan



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 1

Title: Management Co-ordinator (Incident Commander)

Person Responsible:

- a. Inside normal working hours : Senior Executive Vice President-Refinery and Petrochemical
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the refinery upon receipt of an emergency message.
2. Proceed to Emergency Centre at Emergency Room or site of emergency, assess the situation, advise Operation co-ordinator on strategy and tactic to control the situation and ensure that all support activities are well organised. Thereafter operate exclusively from the Emergency Control Centre.
3. Receive periodic reports of the incident and current situation from the operations Co-ordinator.
4. Contact, as soon as possible, the Executive Vice President-Refinery and Petrochemical (if applicable), the Chief Executive Office of the Thai Oil Public Co. Ltd., the Managing Director of the Thai Oil Public Co. Ltd. (via Head office Co-ordinator) and advise them of the incident, the current position, casualties and the probable effect upon refinery operations. Request Head office co-ordinator to advise the relevant authorities accordingly. Contact SRIRACHA Police/Amphur and inform them of the incident and/or request assistance if required.
5. Prepare and approve, in conjunction with the Information Centre (Ref.3/9) within 15 min. after setup ECC, all releases of information concerning the incident to the press, PTT Communication Centre, Public, authorities, employees and relation, and in conjunction with Ref.12, all releases of information concerning the incident after BKK setup Centre with crisis communication team.
6. Attend and address press conference, briefing sessions etc. as considered appropriate.
7. Co-ordinate all efforts to restore the situation to normal as soon as possible.
8. Co-ordinate the preparation of a detailed technical report of the incident for issue to all interested parties as soon as possible after the incident



9. Declare the emergency is over in conjunction with the Operation Co-ordinator when the situation is under control.
10. Dispatch telexes, E-mail to SGS, the Hague, informing them of the incident, casualties and initial assessment of extent of damage, giving if possible an indication of any assistance required. Repeat as and when considered necessary on the next day or later.
11. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.
12. Participate in Thaioil and Subsidiaries emergency, observe and provide support as needed.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 2

Title: Operations Co-ordinator

Person Responsible:

- a. Inside normal working hours : Assistance Executive Vice President-Manufacturing; (Manufacturing Manager-Refinery, Area A Production Unit Operations Manager, Area B Production Unit Operations Manager, Area C Production Unit Operations Manager, Area D Production Unit Operation Manager Tank Management/Oil Movement/Distribution Operation, Area D Production Unit Operation Manager Offsite/Hygiene), Area E Production Unit Operations Manager, Area F Production Unit Operations Manager
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the site of the incident upon receipt of an emergency message.
2. Upon arrival at the site, advise the Emergency Control Centre of your presence and how you can be contacted.
3. Assess the situation, assume control of plant Operations and take appropriate action to eliminate the emergency situation and restore normal condition, using the Manufacturing, Engineering, Finance and Personnel facilities via the Control Centre or Management Co-ordinator as appropriate. Call for outside assistance, via the Control Centre if necessary.
4. As soon as possible report the current situation to the Management co-ordinator giving preliminary details of damage, casualties, progress of remedial action. Repeat as and when considered appropriate.
5. Advise Management Co-ordinator as soon as in your opinion the situation is under control and the emergency can be considered to be over.
6. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 3

Title: Information Centre

Person Responsible:

- a. Inside normal working hours : Refinery Relations Manager
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the refinery upon receipt of an emergency message and set up an Information Centre in the Refinery Site office; Emergency Centre at Emergency Room Internal communication facilities are essential.
2. Report to the Emergency Control Centre when the Information Centre has been set up.
3. Control All official information released by the Company:
 - 3.1 Seek and receive information regularly from both the Emergency Control Centre and Management Co-ordinator on significant events and their timing throughout the period of the emergency and maintain a diary.
 - 3.2 In conjunction with the Management Co-ordinator consider when and what information should be given to the press, PTT Communication Centre, public, authorities, employee and next of kin.
 - 3.3 Assist the Management Co-ordinator by drafting press statements etc. and attending all press conference/briefing sessions.
4. Ensure that Management Co-ordinator is informed of all significant events.
5. Receive press and other visitor and ensure that they do not enter into any restricted area, without the prior permission of the Management Co-ordinator.
6. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.

EMERGENCY DUTIES OF PERSONNEL

Reference No. : 4

Title: Plant Operations Co-ordinator (On-scene Commander)

Person Responsible:

- a. Inside normal working hours : Shift Manager (A, B, C, D)
- b. Outside normal working hours : Shift Manager (A, B, C, D)

DESCRIPTION OF DUTIES:

1. Proceed immediately to the site of the emergency upon receipt of an emergency message. Upon arrival, report to the Operations Co-ordinator.
2. Proceed immediately with action below as applicable.
 - 2.1 Establish the nature and executed of the emergency.
 - 2.2 Check that actions taken in shutting down operational facilities, either partially or totally as appropriate, are in hand and exerted correctly. If this is not the case, issue further instructions immediately. Take steps according to the fire fighting action plan and to eliminate the source fuel conduction with the fire fighting team.
 - 2.3 Ensure that all measures aimed at eliminating the emergency are proceeding according to plan and that all supervisors are in firm control of their areas.
 - 2.4 Ensure that any casualties have been transferred to Medical Services.
 - 2.5 Give situation reports to the Operations Co-ordinator if necessary, specifying any immediate Engineering Services required. Make further reports to Operations Co-ordinator at subsequent regular intervals until emergency situation is eliminated.
3. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Mgt. on duty.

EMERGENCY DUTIES OF PERSONNEL

Reference No. : 5

Title: Fire and Safety Advisor Co-ordinator

Person Responsible:

- a. Inside normal working hours : Occupational Health, Safety and Fire Manager
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the site of the fire upon receipt of an emergency message.
2. Proceed immediately with action below as applicable.
 - 2.1 Report to the Incident commander or Mgt. on duty who will be responsible for overall site activities. Advise the fire fighting operation in conjunction with Operation Co-ordinator.
 - 2.2 Check that Fire Fighting Action Plan has been properly initiated, and fire crews and equipment at site are correctly deployed. If refinery's own fire fighting capability is inadequate, initiate, request to Operations Co-ordinator for outside assistance (i.e. Municipal Fire Brigade, Esso Refinery, PTT). If there are casualties in the area, rescue them to a safe area. Ensure that the rescue operation is properly executed.
 - 2.3 Ensure that fire fighting techniques at site are correct, and that all equipment is functioning correctly. Keep a continuous monitor on stocks of equipment, materials and fuel, and arrange for replenishment/additional supplies well in advance.
 - 2.4 Remove any unnecessary personnel from the emergency site.
 - 2.5 Remain with person responsible for Plant Operations or his deputy at the scene of the fire until the fire is extinguished. When this stage has been reached, report on situation to Operations Co-ordinator.
 - 2.6 Ensure that all fire fighting/safety equipment, apart from that required for stand-by is returned to Fire Station and proceed with re-serving (i.e. foam replenishment, etc.) on an immediate basis.



3. If any fire fighting equipment or chemical stocks need emergency replenishment, request from Emergency Materials Supply through Operations Co-ordinator.
4. If urgent maintenance on any piece of fire fighting/safety equipment is required, request assistance from Engineering Services through Operations Co-ordinator.
5. When all fire crews have been withdrawn and fire fighting/safety equipment has been returned to its normal state of readiness, confirm situation to Operations Co-ordinator.
6. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.

For Mutual Aid Agreement Response

After receiving confirmation from Mutual aid (PTT, ESSO, TPX) Thaioil will sent 1 Fire truck with 4 Fire Fighting Personnel (1 Fire truck driver + 3 Security guards) to site of incident and assist fire fighting according to the Mutual aid agreement.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 6

Title: Security Co-ordinator

Person Responsible:

- a. Inside normal working hours : Security Manager
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the refinery upon receipt of an emergency message, upon arrival report to Management co-ordinator.
2. Ensure that all operational gates and entry points to the Refinery and Jetty areas are secured and manned.
3. Dispatch Security Patrol car to collect all available off duty guards and bring them to the Guard Room at Gate No.1.
4. Issue instructions to all guards that only identified company employees and permanent contractors are to be allowed within the Refinery perimeter and Jetty area. All other persons demanding entry should be referred to the Information Centre.
5. Issue instructions to all guards that only vehicles with refinery admission badges are allowed to pass through the entrance gates. Entry of other vehicles will be authorised and arranged by the Emergency Control Centre if appropriate. Send guard with each non-refinery vehicle to direct if necessary.
6. Keep all access roads leading to the site of the incident clear of obstructions and parked cars.
7. If guard manpower availability exceeds requirement for security, advise Operation Co-ordinator who will re-deploy if required.
8. If guard manpower availability is considered insufficient to maintain adequate security and/or armed security protection is required, request assistance (e.g. police, army) via Emergency Control Centre immediately.



- 9. Mark regular reports on security situation to Operations Co-ordinator and confirms return to normal security status when this has been attained.
- 10. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 7

Title: Materials Co-ordinator

Person Responsible:

- a. Inside normal working hours : Procurement Manager/Warehouse Manager
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the refinery upon receipt of an emergency message, upon arrival report to the Engineering co-ordinator
2. Upon arrival report to the Emergency Control Centre, contact other Materials personal as necessary and open warehouse and yard for materials issue and appoint someone as Warehouse/Yard control as soon as possible when personnel are available.
3. Arrange for the purchase of materials as and when required during the emergency.
4. After arrangement under 2&3 have been made, report the Materials situation and arrangements to the Control Centre and make emergency arrangement for sufficient supply of gasoline/gasoil to support the whole operations (eg. fire trucks, some mobile equipments etc.)
5. Arrangements for the main fire fighting vehicles to be refilled at the fire location as and when required in co-operation with the Fire Fighting personnel.
6. Keep the Control Centre informed of your location and the materials situation.
7. Keep all the above arrangements in operation until advised by the Management Co-ordinator that the emergency is over.
8. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.

EMERGENCY DUTIES OF PERSONNEL

Reference No. : 8

Title: Engineering Co-ordinator

Person Responsible:

- a. Inside normal working hours : Engineering Manager / Group Engineering Section Head
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Contract labour

- 1.1 Proceed immediately to the site of the refinery upon receipt of an emergency message.
- 1.2 Upon arrival, report to Management co-ordinator
- 1.3 Co-ordinate distribution of manpower to Engineering Services and other sections as required to cope with the situation.

2. Engineering Services

- 2.1 Check that all job holders in Engineering, Mechanical, Electrical, Instrument and Inspection are present if not, make arrangement with telephone operator to call them.
- 2.2 Set up a centre for Engineering Services at Emergency Centre at Emergency Room and call in Engineering personnel using the Emergency Transport/Materials Service and the Emergency Control Labour Pool as required.
- 2.3 Co-ordinate Engineering services as required by the Operations Co-ordinator.
- 2.4 Continue to act until the Management Co-ordinator advises that the emergency is over.

3. Photography/Inspection

Instruct one of the Section Heads to take charge of photography/inspection as follows:

- 3.1 Collect camera and proceed immediately to the location of the emergency and advise the Operations Co-ordinator of your arrival on site.
 - 3.2 Take photographs of the affected areas both during the after the emergency to provide a photographic record for use in reports and for assessment of the extent of damage. Do not take personal risks or interfere with the activities of other parties dealing with the emergency.
 - 3.3 Keep a written diary and make notes on the areas affected and extent of damage.
 - 3.4 Continue to act until the Management Co-ordinator advises that the emergency is over.
 - 3.5 Collect all useful evidence for investigation after the incident.
4. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 9

Title: Human Resources Co-ordinator

Person Responsible:

- a. Inside normal working hours : Human Resource Manager
HR Service Manager

- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Food supply

- 1.1 Proceed immediately to the site of the emergency upon receipt of an emergency message. Advise the Management Co-ordinator of your arrival.
- 1.2. Make an assessment of the number of persons, requiring food and drink and for how long a period.
- 1.3 Arrange food and drink, for duty personnel, medical centre patients, mass media representatives and local authority officer (eg. police fireman etc).
- 1.4. Co-ordinate with Emergency Control centre the number of persons requiring food and drink and arrange for the timely arrival.



2. Roll call

- 2.1. Consult with responsible persons in charge as advised by the Operations Co-ordinator to ascertain the numbers and names of personnel that were known to have been in the area of emergency.

As a guide, responsible persons will include:

- a. Shift Manager or Assistant Shift Manager for shift personnel.
 - b. Workshop and Field Supervisors for engineering and contractor personnel.
 - c. Security for visitors, occasional contractors, customs officers etc.
 - d. Loading master, his deputy or Jetty Foreman for Jetty personnel.
- 2.2 Report to the Management Co-ordinator the number of persons present at the time of the emergency and the names of all persons who cannot be accounted for.

3. Emergency Transport

- 3.1 Prepare Emergency Transport to be ready for using as required by each co-ordinator.

4. Evacuation

- 4.1 As required, make any necessary arrangements for the temporary reception and accommodation of persons transported away from the disaster area pending the possibility of return home.
- 4.2 Keep Management Co-ordinator and Information Centre informed of all significant actions,
- 4.3 Events and progress and continue to act until the Management Co-ordinator advises that the emergency is over.

5. Medical Services

- 5.1 After consultation with the Management Co-ordinator, alert Praboromratchathawee Somdej Na Sriracha Hospital through Information Centre and request appropriate assistance - doctors, medicine, stretchers, ambulances, hospital readiness to receive patients etc.
- 5.2 Ensure that first aid treatment is administered promptly and that where necessary patients are transferred to Praboromratchathawee Somdej Na Sriracha Hospital/Hospital in Bangkok or elsewhere. Co-ordinate transport requirements with Emergency Transport.
- 5.3 Ensure that records are kept of all patients treated including names, condition, degree of seriousness, and treatment given.
- 5.4 Make necessary arrangements to follow the established procedure for handling fatalities.
- 5.5 Report all significant actions and event to the Management Co-ordinator and the Information Centre.

6. Telephone Operator

- 6.1 Inside Normal Working Hours:
 - 6.1.1 Upon receipt of an emergency message; when instructed by a member of the Management Team, announce in Thai and English over the office loudspeaker system the nature and location of the emergency. This must be repeated twice.
 - 6.1.2 In the event of a failure of the office loudspeaker system, alert the staff through the Radio Channel 2, Company group pagers, messengers etc.
 - 6.1.3 If a person fails to answer the telephone in a reasonable time, proceed to the next person on the list. Upon completion of the list, repeat the calls to the persons not yet contacted.

6.2 Outside Normal Working Hours:

- 6.2.1 Proceed immediately to the Refinery upon receipt of an emergency message. Inform the Management Co-ordinator of your arrival.
 - 6.2.2 Arrange to have one more telephone operator and check that the following actions have been taken.
 - 6.2.2.1 Alert all personnel in the site houses by using the telephone fire call system.
 - 6.2.2.1 Alert all other duty personnel by telephone, radio or pager.
 - 6.2.3 Upon completion of the above, if required, periodically check the status of Radio Channel 2 as it is mainly used during the emergency. Call Communication technician as needed.
7. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 10

Title: Marine Co-ordinator

Person Responsible:

- a. Inside normal working hours: Area D Production Unit Operation Manager Offsite/ Hygiene
Area D Production Unit Operation Manager Tank Management/
Oil Movement/Distribution Operation
- b. Outside normal working hours: Shift Manager, Assistant Shift Manager
(Offsite or Movement; Assistant Shift Manager Oil Movements or
Assistant Shift Manager Lorry Loading)

DESCRIPTION OF DUTIES:

1. Proceed immediately to the refinery upon receipt of an emergency message.
2. Upon arrival, report presence to the Operations Co-ordinator
3. Establish nature and extent of emergency. Depending on this, take action, as appropriate, using the guidelines below:
 - 3.1 Inform the local Agents, Ship Agency
 - 3.2 Crude Vessel at Thaioil Berth and SBM:
 - 3.2.1 Establish communication with the ship's Master. Inform him of the situation and ask him whether any assistance is required.
 - 3.2.2 If it appears advisable for the vessel to leave the berths, and proceed to a safe area request the Master to arrange for immediate stoppage of discharge and disconnection of hoses if required .Dispatch diver to assist with hose disconnection.
 - 3.2.3 Confirm the time of departure of the vessel and arrange for the presence of a pilot on board at the agreed time.



3.3 Product Tanker at Thaioil Jetty:

- 3.3.1 Check that the Jetty Foreman on duty has taken the correct action in stopping loading pumps, disconnecting hoses and clearing all unaffected ship from the Jetty. If this is not the case, take immediate action to do so.
- 3.3.2 Contact Master of any vessel moored at the Thaioil Jetty and informs him of the situation. If necessary, arrange for loading to be stopped, and request ship's Master to move his vessel to a safe area away from the Jetty immediately after the shore hoses have been disconnected.
- 3.4 Vessels in Au Udom Bay:
 - If it appears that the emergency may endanger any other vessels in Au Udom Bay, contact the Masters of all endangered vessels. Inform the Masters of the situation and, where possible, suggest actions to minimise the danger.
 - 3.5 If it is necessary for a crude or product tanker to leave its berth before normal completion of discharge or loading, inform the customs/Excise Department immediately. Arrange for a Customs/Excise inspection to be carried out as soon as the vessel has moved to a safe area.
4. Report to Operations Co-ordinator, giving details of action taken. Make further reports to Operation Co-ordinator at subsequent regular intervals until emergency is over.
5. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.

EMERGENCY DUTIES OF PERSONNEL

Reference No. : 11

Title: Oil Spill On-Scene Commander (OSC)

Person Responsible:

- a. Inside normal working hours: Marine Manager or his deputies (Berthing Master) or Area D Production Unit Operation Manager Offsite/ Hygiene Area D Production Unit Operation Manager Tank Management/ Oil Movement/Distribution Operation
- b. Outside normal working hours: Assistant Shift Manager Oil Movements / Shift Manager Assistant Shift Manager Oil Movements / Marine Manager / Shift Manager / Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the refinery upon receipt of an emergency message, and activate the "Oil Spill Emergency Contingency Plan".
2. In all cases of oil spillage at sea:
 - 2.1 Establish nature and extent of spillage.
 - 2.2 Alert Operations Co-ordinator and Management Co-ordinator, if deemed necessary.
 - 2.3 Mobilise oil Spill Combating personnel and equipment as deemed necessary.
 - 2.4 Determine whether the risk of coastal pollution by the oil would be significantly reduced by the application of chemical dispersants.
 - 2.5 Confirm that, if dispersal is desirable, the dispersant can be applied without exposing personnel and equipment to dangerous concentrations of hydrocarbon vapour.

- 2.6 If dispersal is required and it can be carried out safely, organise the immediate dispatch of the dispersal crews to the area of the spillage.
- 2.7 Ensure proper oil sample Collection.
- 2.8 Direct all on scene spill control and clean-up activities.
- 2.9 Contact Emergency Control Centre (ECC) for advice and for the provision of adequate supplies of dispersants, oil spill combating equipment, and material.
- 2.10 Call for assistance of other I.E.S.G. member for boom deployment or dispersal action through ECC.
3. In cases where the spilled oil is observed to be moving towards the coastline, where it may cause pollution of beaches:
 - 3.1 Note approximate area in which pollution is likely to occur.
 - 3.2 Assess the potential severity of such pollution.
4. Report on Oil Dispersal and Pollution aspects of the situation to the Operations Co-ordinator and Management Co-ordinator, giving details of action taken. In case where pollution of beaches appears likely, the Operations Co-ordinator will be responsible for arranging an on-the-spot inspection of the area likely to be polluted. The Operations Co-ordinator will also be responsible for deciding whether the Major Oil Spill Contingency Plan should be put into operation.
5. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 12

Title: Bangkok Office Co-ordinator

Person Responsible:

- a. Inside normal working hours : Corporate Compliance Manager
- b. Outside normal working hours : Duty Rota

DESCRIPTION OF DUTIES:

1. Proceed immediately to the Bangkok office, ENCO building upon receipt of an emergency message and establish Crisis Management Centre, ensure all facilities and contact necessary resources availability to standby including communication are functioned.
2. Report to Crisis Management coordinator or CEO to notify the preliminary situation and consequence impact to the Thaioil and Subsidiaries business (if any)
3. Inform the Emergency Control Centre (ECC) located at the Refinery Site Office Sriracha Management Co-ordinator ref. 1 regarding readiness of crisis management centre and keep contact to update the situation
4. Deploy full function of Crisis management team by each EVP functions and other Management member as appropriate response in accordance with crisis management structure
5. As required, inform the Ministry of Industry, Ministry of Commerce and the Office of the Board of Investment of the incident. Report periodically to the three agencies on all significant events as considered appropriate.
6. Contact the Scheduling co-ordinator and receive information on the effect on crude and product transfer facilities.
7. Advise customers of any immediate change in product availability and request any necessary modifications to the product shipping schedule as appropriate.
8. Advise crude and feedstock suppliers of the probable effect upon the crude and feedstock position as appropriate.
9. Advise the Treasurer and Finance Controller of the situation for their co-ordination with the Agent Bank and Insure as necessary.



10. In Conjunction with the Information Centre, control all official information released by the Company.

10.1 Seek and receive information regularly from the Emergency Control Centre, Management

Co-ordinator and Information Centre on significant events and their timing throughout the emergency maintain a diary.

10.2 In conjunction with the Management Co-ordinator and Information Centre consider when and what information should be given to the press, PTT Communication Centre, public, authorities, employees and next of kin.

10.3 Co-ordinate with Management Co-ordinator on the drafting of press statements, etc.

10.4 Release official information on the incident to the Bangkok press, PTT Communication Centre, public, authorities, employees and next of kin.

10.5 Attend all press conferences and briefing sessions held in Bangkok.

11. Receive the press and other visitors at the Bangkok office.

12. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.



EMERGENCY DUTIES OF PERSONNEL

Reference No. : 13

Title: Scheduling Co-ordinator

Person Responsible:

- a. Inside normal working hours: Scheduling Manager
- b. Outside normal working hours: Duty Rota

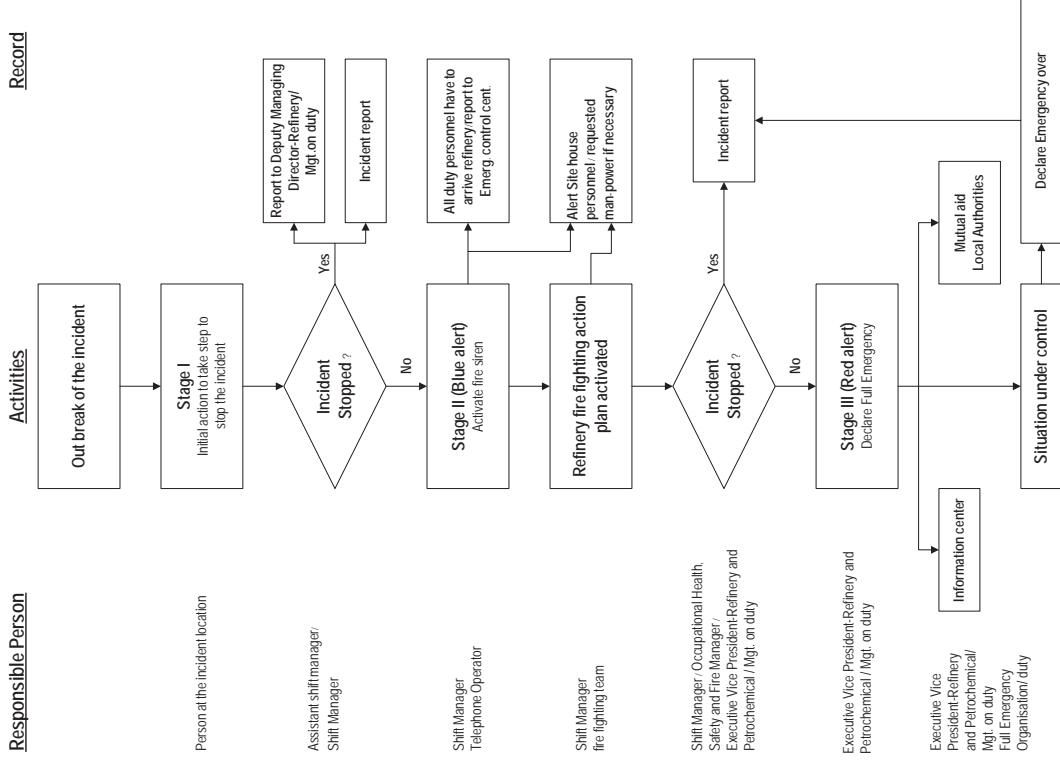
DESCRIPTION OF DUTIES:

1. Proceed immediately to the refinery upon receipt of an emergency message.
2. Upon arrival, report to the Management Co-ordinator.
3. Receive reports of the nature of the incident and prevailing situation from the Emergency Control Centre. Evaluate the possible effect on crude/product supply.
4. Once the effect on crude and product transfer facilities has been established, take following measures as appropriate.
 - 4.1 Advise customers of any immediate change in product availability and request any necessary modifications to the product supply schedule.
 - 4.2 Advise Bangkok Office of the probable effect upon the crude receipt and product supply.
5. Establish immediate processing/blending/supply programme, as required.
6. Resume normal responsibilities according to routine procedure and re-establish regular programming position as soon as this is feasible.
7. Prepare all necessary supports according to the pre-incident planning and or as requested by the incident command or Shift Manager.

SECTION 4

SEQUENCE OF EMERGENCY (FIRE & EXPLOSION)

Section 4 : SEQUENCE OF EMERGENCY



SECTION 5

FIRE & EXPLOSION IN THE REFINERY

Section 5 : FIRE & EXPLOSION IN THE REFINERY

EMERGENCY INITIATION

STAGE 1

The initial action in the event of an explosion or outbreak of fire in the refinery will normally be taken by the Assistance shift manager and the personnel of the Operations Dept. Shift Manager will inform first line fire fighting team and fire truck to standby at site by Radio or Telephone. Without additional assistance by using portable or fixed fire fighting equipment .They will try to extinguish the fire within a few seconds.

If this action succeeds in dealing with the incident further action should be limited to the Assistant Shift Manager / Shift Manager on duty informing the following individuals as soon as possible.

In normal working hours:

- Executive Vice President-Refinery and Petrochemical
- Area A Production Unit Operations Manager
- Area B Production Unit Operations Manager
- Area C Production Unit Operations Manager
- Area D Production unit Operation Manager Tank Management/
Oil Movement/Distribution Operation
- Area D Production unit Operation Manager Offsite/Hygiene
- Area E Production Unit Operations Manager
- Area F Production Unit Operations Manager
- Occupational Health, Safety and Fire Manager
- Management on Duty

STAGE 2 (Blue Alert)

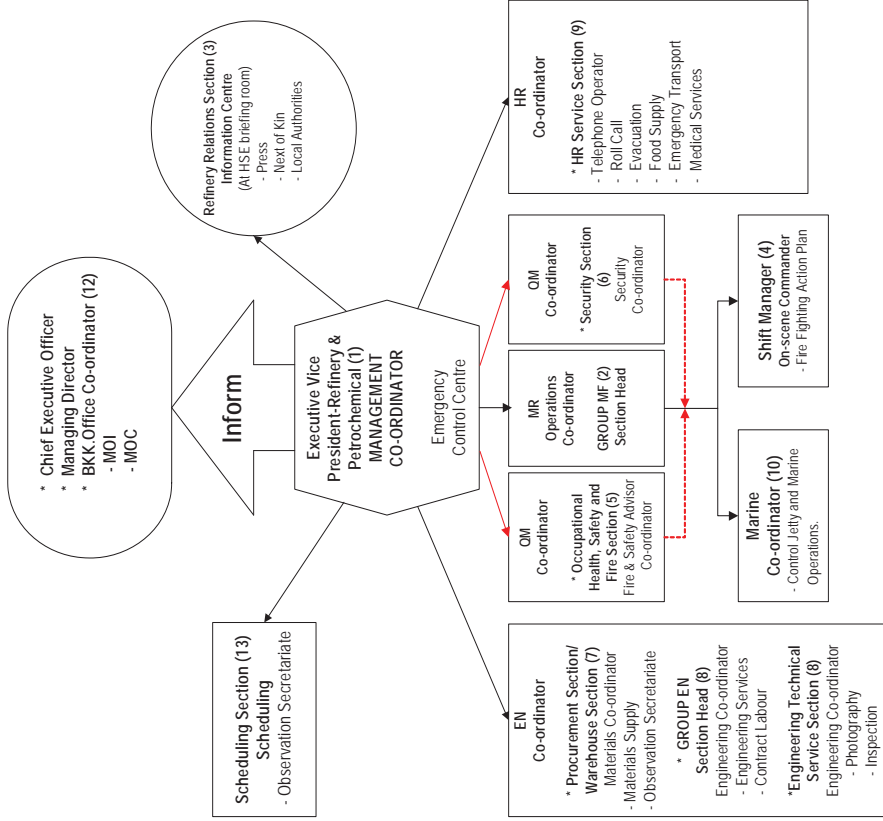
Should Stage 1 action be unsuccessful, or if in the opinion of the Shift manager, the incident is of a type and/or severity requiring additional assistance, the Shift Manager or area Assistant Shift Manager should immediately sound the fire siren, and the Telephone Operator will deploy by group pagers, the full resources of the Refinery Fire Fighting Organisation, as described later in this section.

During normal working hours this will alert the staff who will be responsible for further action. Outside normal working hours the appropriate duty rota personnel and site house personnel will be alerted by the Telephone Operator who will take immediate action upon hearing the fire siren. All duty personnel period involved have to arrive the Refinery and report to Emergency Control Center within 30 minutes. The initial action by above mentioned staff will be controlling/extinguishing the fire.

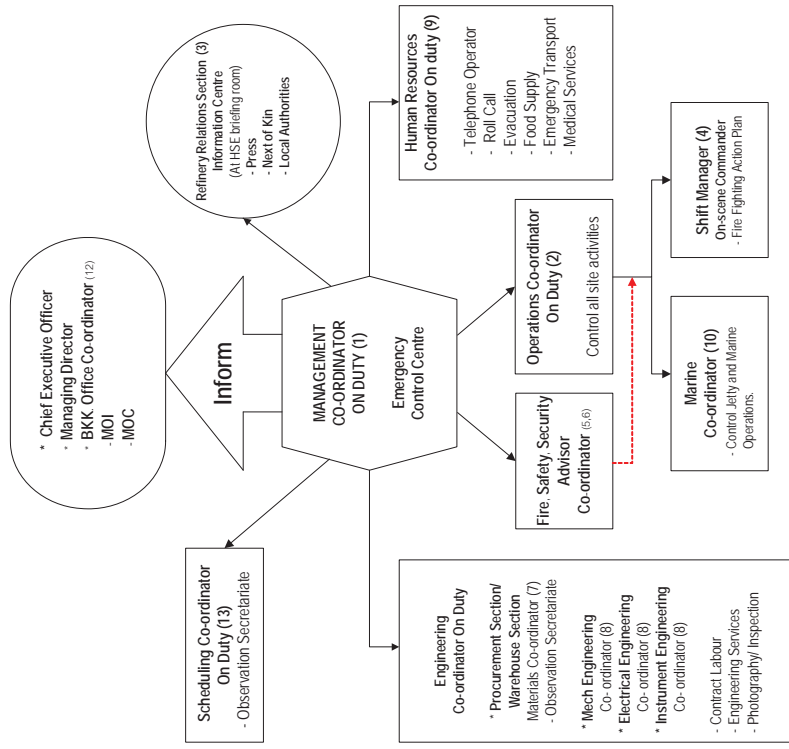
STAGE 3 (Red Alert)

If it is likely that the situation will be difficult to control the Executive Vice President-Refinery and Petrochemical / Mgt. on duty at the scene will declare "Emergency Red Alert" Then the full emergency organisation is implemented and emergency plan will be executed. Emergency Red alert outside normal working hours implement organisation as inside normal working hours as soon as possible Personnel on Duty will initiate necessary preparation action and will be replaced by inside normal working hours organisation ASAP.

**EMERGENCY ORGANIZATION FOR FIRE/ EXPLOSION WITHIN
REFINERY AREA INSIDE NORMAL WORKING HOURS**



**EMERGENCY ORGANIZATION FOR FIRE/ EXPLOSION WITHIN
REFINERY AREA OUTSIDE NORMAL WORKING HOURS**





Section 6 : FIRE & EXPLOSION ON THE PRODUCT JETTY

EMERGENCY INITIATION

STAGE 1

The initiation of any action in the event of an explosion or outbreak of fire on the jetty will normally be taken by Area D Production unit Operation Manager Offsite/Hygiene, Area D Production unit Operation Manager Tank Management/Oil Movement/Distribution Operation or Loading Master and the jetty crew without additional assistance.

If the fire occurs on a ship at the berth it is the responsibility of the ship's personnel to take appropriate action with assistance from the jetty crew. If this action succeeds in dealing with the incident further action should be limited to the Area D Production unit Operation Manager Oil movement/Lorry loading or his deputy informing the following individuals as soon as possible.

- In normal working hours:
- Executive Vice President-Refinery and Petrochemical
 - Manufacturing Manager-Refinery, Engineering Manager
 - Area D Production unit Operation Manager Tank Management/Oil movement /Distribution Operation
 - Area D Production unit Operation Manager Offsite/Hygiene
 - Marine Manager
 - Occupational Health, Safety and Fire Manager
 - HR Service Manager

Outside normal working hours: - Duty Rota Personnel

A Fire Incident Report must be prepared immediately.

SECTION 6
FIRE & EXPLOSION ON PRODUCT JETTY

STAGE 2

Should Stage 1 action be unsuccessful, or if, in the opinion of the Area D Production unit Operation Manager Tank Management/Oil movement /Distribution Operation his deputy or the jetty foreman, the incident is of a type and/or severity requiring additional assistance, the Area D Production unit Operation Manager/Oil movement/Lorry loading , his deputy or the jetty foreman should immediately request Assistant Shift Manager Oil Movements to sound the fire siren and inform the Telephone Operator to deploy the full resources of the Refinery Fire Fighting Organisation.

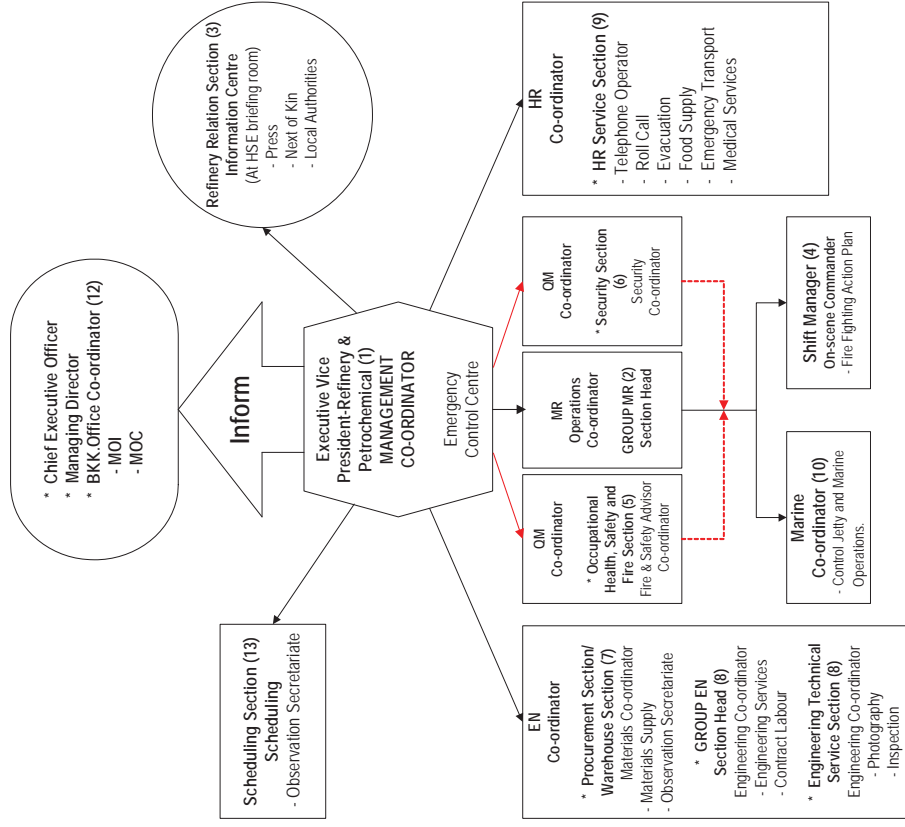
During normal working hours this will alert the personnel who will be responsible for further action. Outside normal working hours the appropriate duty rota personnel and site house personnel will be alerted by the Telephone Operator who will take immediate action upon hearing the fire siren. All duty personnel period involved have to arrive the Refinery and report to Emergency Control Center within 30 minutes.

Security Section has separate instructions that in case of this emergency only certain specified vehicles will be allowed on the Jetty.

STAGE 3 (Red Alert)

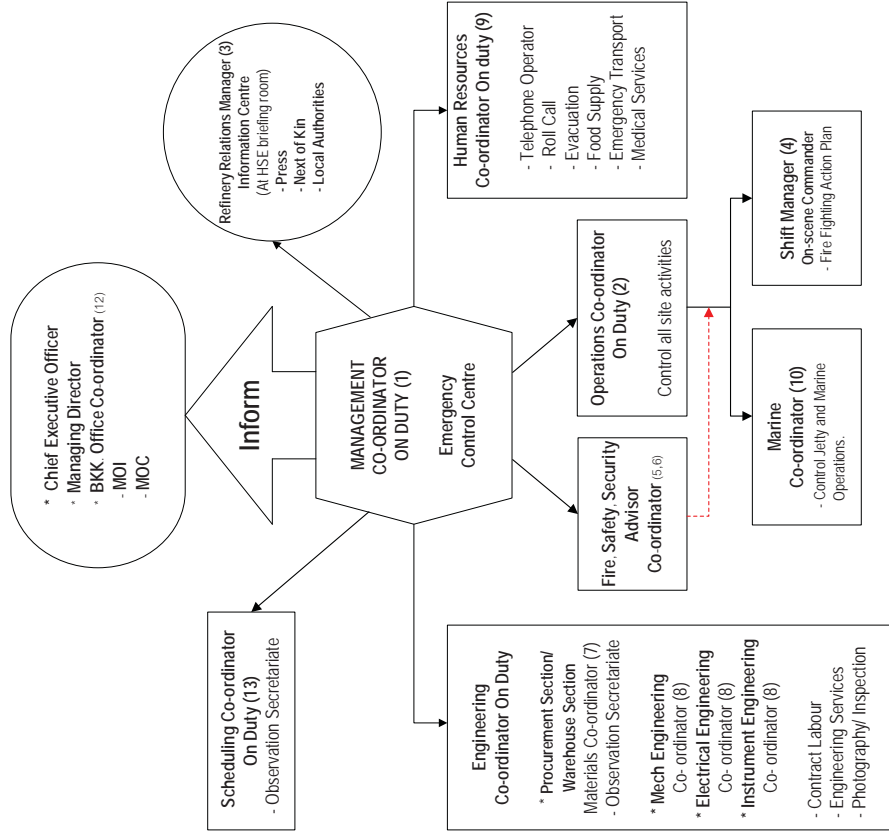
If it is likely that the situation will be difficult to control the most senior manufacturing man at the scene will declare "Emergency Red Alert" Then the full emergency organisation is implemented and emergency plan will be executed.

**EMERGENCY ORGANIZATION FOR FIRE/ EXPLOSION ON PRODUCT
JETTY INSIDE NORMAL WORKING HOURS**





**EMERGENCY ORGANIZATION FOR FIRE/EXPLOSION ON PRODUCT
JETTY OUTSIDE NORMAL WORKING HOURS**



1. Fire on Product Jetty/Berth - No Ship Alongside

- The Jetty Foreman
- Press the fire alarm push button.
 - Start fire fighting by jetty gang team.
 - Telephone Loading Master/ Assistant Shift Manager / Area D Production unit Operation Manager
- Oil movement/Lorry loading
- Assistant Shift Manager Oil Movements
- Proceed immediately to the jetty.
 - Establish nature of fire.
 - Telephone Executive Vice President-Refinery and Petrochemical and Manufacturing Manager-Refinery and Area D Production unit Operation Manager Oil movement/Lorry loading/ Operations Manager/Fire station during normal working hour or Duty Rota outside normal working hour via Telephone operator
 - Supervise the jetty gang to fight fire and prevent fire spreading.
 - Contact ships and terminals in the area via radio and telephone.
- The Emergency Manual should be implemented if the above action is not successful.

2. Fire on Product Jetty/Berth - Ship Alongside

- Action on Product Jetty/Berth
- The Jetty Foreman
- Press the fire alarm push button.
 - Stop loading pumps.
 - Close shore manifold valves.
 - Ensure fire water pump is started if not initiate manual start.
 - Start fire fighting by jetty gang team.
 - Stand by to disconnect hoses and let go ship's mooring lines.



Assistant Shift Manager Oil Movements

- Proceed immediately to the jetty.
- Establish nature of fire.
- Advise master to disconnect hoses from the ship's manifold and sail immediately from the jetty.
- Supervise jetty gang to pick up hoses from the ship and let go mooring line.
- Contact tug boat by radio to tow the ship off the berth if the ship is unable to move under her own power.
- Telephone Executive Vice President-Refinery and Petrochemical and Manufacturing Manager-Refinery/ Area D Production unit Operation Manager Tank Management/Oil Movement/ Distribution Operation, Fire station during normal working hours or Duty Rota outside normal working hours.

The Refinery Emergency Procedure should be implemented if the fire is still active.

Action on Ship

Deck Officer on Duty

- Activate fire alarm.
- Report immediately to the Master.
- Cease all cargo operations.
- Close all valves and cargo tank openings.
- Stand by to disconnect hoses from the ship's manifolds.

Master

- Bring engines to stand by and wait for shore instruction.
- When required to leave the berth by Loading Master or shore representative.
- Instruct Deck Officer on duty to disconnect hoses from the ship's manifolds.
- Let go all moorings and cast off the berth immediately.
- Bring the ship to the safe anchorage and wait for shore instruction.
- Inform Head Office.



3. Fire on Ship Alongside at Product Jetty/Berth

Action on Ship Officers and Crews

A. In Engine Room

- Ship's personnel who discover on outbreak of fire immediately raise the alarm to indicate the location of fire.
- Inform shore personnel, alert all the crew.
- Stop cargo and/or ballast operations.
- Stand by to disconnect hoses.
- Drain hoses.
- Start fire fighting and prevent fire spreading by the ship's fire fighting station team.
- Secure deck and pump room.
- Stand by fore and aft.
- Prepare to ship anchor if applicable.
- Check all personnel.
- In case of big fire:
- Get all personnel out form Engine room and stop all engines.
- Close all doors, skylights and ventilators.
- Operate Engine room CO₂ system. (if provided)



B. On Deck/Pump Room

- Ship's personnel who discover an outbreak of fire immediately raise the alarm to indicate the location of fire.
- Inform shore personnel, alert all the crew.
- Stop cargo and/or ballast operations.
- Close all valves and cargo tank openings.
- Stand by disconnect hoses if possible.
- Close all accommodation doors ports, etc.
- Actuate LPG bullet spray if applicable.
- Start fire fighting and prevent fire spreading by the ship fire fighting station team.
- Prepare to slip ashore if applicable.

In case of big fire in pump room:

- Get all personnel out from pump room.
- Close door, skylights and ventilation.
- Operate Engine room CO₂ system. (if provided)

The Master

- a) Take command on the bridge.
- b) Inform Head Office, Shore on radio, telephone.
- c) Summon Tug.
- d) Stand by engines.
- e) Raise the ship's fire alarm by a series of prolonged blasts on the whistle, each blast of not less than 10 seconds duration.
- f) When require to leave the berth by Loading Master/ Assistant Shift Manager or shore personnel.
 - Let go all moorings (and anchor if applicable) and cast off the berth immediately by her own engines on tug.
 - Bring the ship to the safe anchorage.
 - Keep close contact with shore on radio.

Action on Product Jetty/Berth

The Jetty Foreman

- a) - Press the fire alarm push button.
- Stop loading/discharging operations.
- Close shore manifold valves.
- Alert on the jetty fire fighting team to be ready for assistance if required by ship.
- Inform Loading Master.
- Disconnect hoses and stand by to let go moorings.
- Call service boat to stand by at jetty.

Loading Master

- Proceed immediately to jetty.
- Contact the Master.
- Contact tug boat and other concerning departments.

4. **Fire on Ship at CBM / SBM**

In the vent of a fire on board a ship at CBM / SBM, it is considered that the ship is at sea.

The master and the ship's personnel will arrange to organise the fire fighting team on board.

Mooring Serang who is on board will contact Marine (Marine Manager, Berthing Master) the master or senior officer to ascertain what assistance can be rendered by shore equipment or by shore personnel or tug boat or service boat equipped with fire fighting appliances.



Action on Ship

- The ship's personnel who discover on outbreak of fire immediately raise the alarm to indicate the location of fire.
- Raise the ship's fire alarm by a series or prolonged blasts on the whistle, each blast of not less than 10 seconds duration.
- Apply nearest suitable extinguishing agent to limit the area of the fire.
- Extinguish the fire.
- Prevent re-ignition.
- If the above action is still not successful, it should be superseded by tanker's emergency plan.
- Cease cargo/ballast operations immediately.
- Close all valves and cargo tank openings.

Mooring Secang

- Contact jetty foreman by radio to close shore valve immediately when cargo operations stopped.
- Contact Marine (Marine Manager, Berthing Master) on shore to inform Executive Vice President-Refinery and Petrochemical and Manufacturing Manager-Refinery and Operations Manager during normal working hours or Duty Rota outside normal working hours.
- Marine on Duty immediately proceed to the ship.
- Supervise shore gang to close hose string, butterfly valves at ship/shore connection and stand by to disconnect hoses.
- Contact tug boat and service boat equipped with fire fighting appliances to stand by for assistance if required.
- Contact local agents for services e.g. motor launch, information to the government pilot and etc.
- Inform other ships and terminals in the area about the current situation.

The decision whether or not to remove the ship from the CBM / SBM will be made by the master in consultation with the Refinery Management, depending on the circumstances prevailing at the time of the incident. If the ship is required to cast off from the CBM / SBM, the following action should be taken.



Marine Manager, Berthing Master on Ship

- Supervise shore gang to disconnect hoses from the ship's manifolds and lower them to the sea bed.
- Order shore gang and mooring launch on stand by to let go all moorings.
- Call tug boat if required by the master to cast the ship off from CBM / SBM.
- Advise the local agents to arrange the government pilot to be on board.
- Assist the government pilot and the master to communicate with the shore gang during the removal of the ship from CBM / SBM.

Marine on Shore/ Loading Master

- Telephone Executive Vice President-Refinery and Petrochemical and Manufacturing Manager-Refinery / Area D Production unit Operation Manager Tank Management/Oil Movement/ Distribution Operation, during normal working hours or Personnel on Duty outside normal working hours.
- Assist in communication between ship and shore.
- Provide possible and immediate assistance as required by ship.

The Master of the Ship

- Bring the engines to stand by.
- Call the ship's personnel to unberth the ship.
- Ask for tug boat if the situation requires.
- Pick up the government pilot on board.
- Bring up the ship to a safe anchorage and continue to extinguish fire.



SECTION 7

OIL SPILLAGE AT SEA

Section 7 : OIL SPILLAGE AT SEA

Reference: Oil Spill Contingency Plan (MMLR-EEM-01)

OBJECTIVE

The objective of this Oil Spill Contingency Plan is to effect a quick mobilisation of personnel and equipment to provide a timely and credible response to an oil spill (mainly a marine oil spill); so as to minimise long term damage to the Environment, and to protect the health and safety of personnel, within reasonable expenditure and manpower.

Three levels (which follow by National plan) of response depending on the size and risk of the spills may be distinguished:

Tier-1

Spill is a small spill with limited risk, defined here as no more than 45 m³ arising from operational incident and can be taken under control by the company's own resources (Oil spill equipment at Jetty).

Tier-2

Spill is a moderate spill volume was 46 – 1,000 m³. At this state TOP Duty and Marine Harbour Department will take in charge of Oil Scene Commander and will follow to National plan. Helpful has request to IESG association and government.

Tier-3

Spill is a major spill beyond the national response resources. A regional assistance is required.

The Oil Spill Emergency Response: Refer to Oil Spill Contingency Plan (MMLR-EEM-01)



SECTION 8

FIRE IN AREA OF SITE HOUSE

Section 8 : FIRE IN AREA OF SITE HOUSE

EMERGENCY INITIATION

STAGE 1

In the event of a fire in or in the vicinity of a site house the occupant should immediately inform the Refinery Telephone Operator of the location of the fire, and then proceed to fight the fire until assistance arrives. All the site houses are equipped with one fire extinguisher in the kitchen and the occupants are provided with a key to the fire boxes located on the site. Each fire box contains two fire hoses and a nozzle.

STAGE 2

On receipt of the fire message the Telephone Operator must immediately:-

1. Sound the site house telephone alarm.
2. Inform the Shift Manager or Assistant Shift Manager of the incident, the location of the fire, and the Shift Manager or Assistant Shift Manager should immediately sound the fire alarm. The Shift Manager / Assistant Shift Manager and the operations fire crew will then proceed with all fire fighting equipment to the scene of the fire following procedures outlined in the fire fighting action plan.

During normal working hours all other employees not directly involved in the incident must stay away from the site of the emergency but should be prepared for action should Stage 3 be implemented.

Outside normal working hours, the appropriate duty rota personnel will be alerted by the Telephone Operator who will take immediate action upon receipt of the fire advice. All duty personnel period involved have to arrive the Refinery and report to Emergency Control Center within 30 minutes.

STAGE 3

The Operations Co-ordinator on arrival at the scene of the emergency will assess the situation and, in his opinion, full implementation of the Emergency Plan is necessary he will instruct the Telephone Operator to proceed with the Stage 3 call out of duty personnel.

In extreme cases of emergency, Stage 3 call out may be ordered immediately by the Shift Manager or more senior Operations Dept. personnel.

The organisation chart same as the fire in the refinery



SECTION 9 FIRE IN AREA OF THE ADMINISTRATION / TRAINING AND FUNCTION BUILDING

Section 9 : FIRE IN AREA OF ADMINISTRATION / TRAINING / FUNCTION BUILDING

EMERGENCY INITIATION (Reference : Technical data emergency preparedness and response for the Phubai building : QMOS-STD-03)

In the event of a fire in or in the vicinity of a administration / training and function center building the occupant should immediately raise an alarm and inform the telephone operator or security guard and assess the situation if capable and safety to perform basic fire fighting or occupant should evacuate from the incident until assistance arrives as indicated below.

In normal working hours: Shift Manager Fire fighting team (Administration building team) or Refinery fire fighting team.
Occupational health safety and fire manager
Support team from Occupational Health, Safety and Fire section.

Outside normal working hours: Shift Manager
Refinery fire fighting team.
Duty personnel

SECTION 10

CRISIS MANAGEMENT

Section 10 : Crisis Management

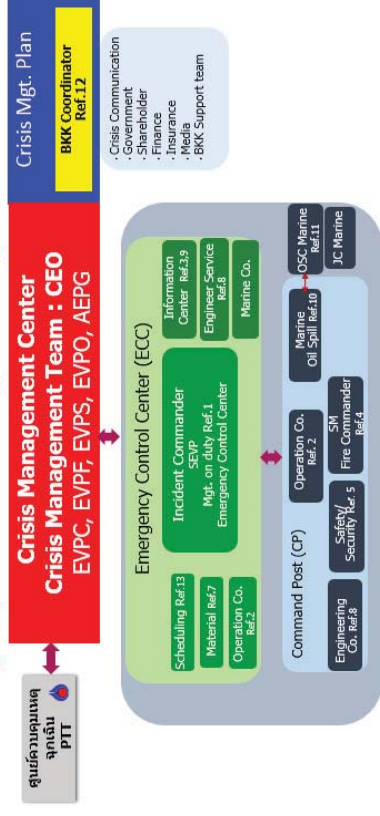
INTRODUCTION

The crisis management stage, RED Alert, addresses the acute phase of the crisis. From the organizational perspective, efforts are focused on containing the crisis and resuming operations as quickly as possible. Up to this point, a crisis can result when such a group takes an activist stand against incident that occurs in the Company a crisis management team needs to undertake a study of every possible crisis that could hit the organization, and develop a scenario for the response to each one. This list of possible crises coupled with the responses required for each takes time and investment, but it is the best disaster insurance we can have. This study is kept in desks, on computers, in easy reach of every member of the crisis management team. Once the plan is ready, the training and preparation for implementation takes place. It is not possible to write more than broad outlines for the action required in the event of a crisis. Nevertheless, and can be classified in the following crisis management structure

ORGANISATION

This is shown crisis management structure, and is the same organisation for "Fire/Explosion in the Refinery" in Section 5. The emergency duties of personnel are the same as listed in Section 3.

Emergency and Crisis Management Organization





SECTION 12

CHEMICAL & FLAMMABLE OR TOXIC GASES RELEASE EMERGENCY INITIATION

Section 12 : CHEMICAL & FLAMMABLE OR TOXIC GASES RELEASE EMERGENCY INITIATION

STAGE 1

The initial action in the event of Chemical / Flammable or Toxic gases Release in the refinery will the normally be taken by the Shift Manager and the personal of the Operation Dept. without additional assistance by using water spray to reduce vapors. They will try to shut off ignition source, isolate area until vapor of chemical /flammable or toxic gases has dispersed, Stop release (if can do it without risk). Wear appropriate personal protective equipment, Continuous measuring concentration of chemical / flammable or toxic gases; \

If this action succeeds in dealing with the incident further action should be limited to the Assistant Shift Manager / Shift Manager on duty informing the following individuals as soon as possible.

- Executive Vice President-Refinery and Petrochemical
- Area A Production Unit Operations Manager
- Area B Production Unit Operations Manager
- Area C Production Unit Operations Manager
- Area D Production unit Operation Manager Tank Management/
Oil movement /Distribution Operation
- Area D Production unit Operation Manager Offsite/Hygiene
- Area E Production Unit Operations Manager
- Area F Production Unit Operations Manager
- Occupational Health, Safety and Fire Manager

Outside normal working hours: - Management on duty

Issue/Revision No: 12/00	Issue Date: 01/09/17	Page No: 1 of 2	Code No: QMOS-SSM-01
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STAGE 2 (Blue Alert)

Should Stage 1 action be unsuccessful, or if in the opinion of the Shift Manager, the incident is of a type and/or severity requiring additional assistance, the Shift Manager or area Assistant Shift Manager should immediately sound the fire siren, and the Telephone Operator will deploy by group pagers the full resources of the Refinery Emergency Organization, as described later in this section.

During normal working hours this will alert the staff who will be responsible for further action.

Outside normal working hours the appropriate Duty Rota personnel and site house personnel will be alerted by the Telephone Operator who will take immediate action upon hearing the fire siren. All duty personnel period involved have to arrive the Refinery and report to Emergency Control Center within 30 minutes. The initial action by above mentioned staff will be handling chemical /flammable or toxic gases release.

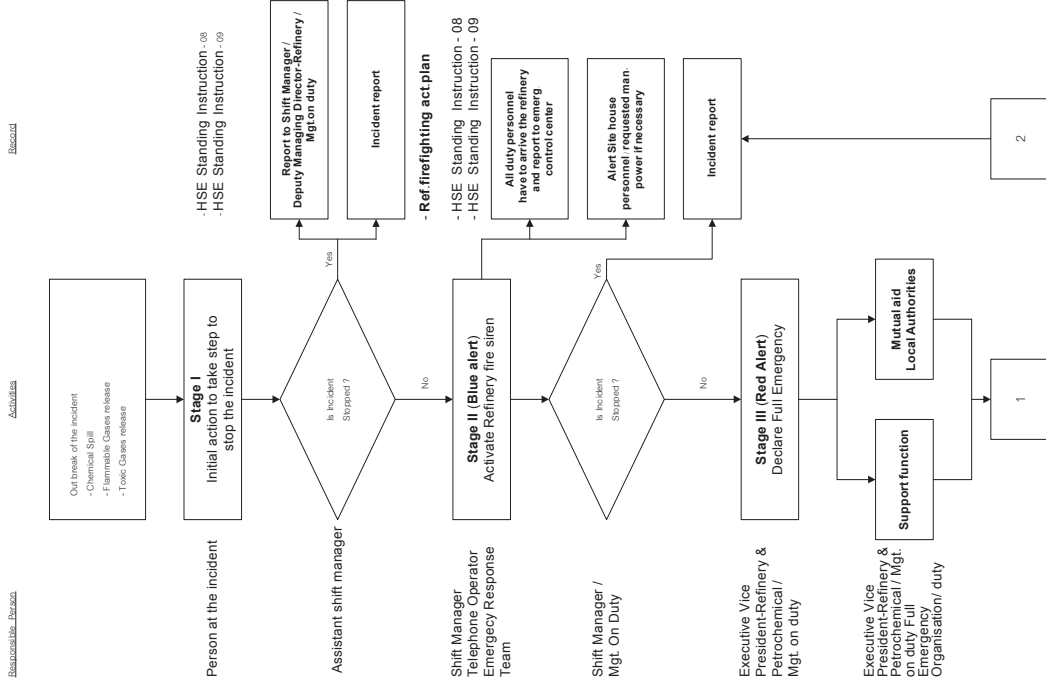
STAGE 3 (Red Alert)

If it is likely that the situation will be difficult to control the Deputy Managing Director-Refinery / Mgt. on duty at the scene will declare "Emergency Red Alert". Then the full emergency organization is implemented and emergency plan will be executed. Emergency Red Alert outside normal working hours implement organization as inside normal working hours as soon as possible Personnel on Duty will initiate necessary preparation action and will be replaced by inside normal working hours organization ASAP.

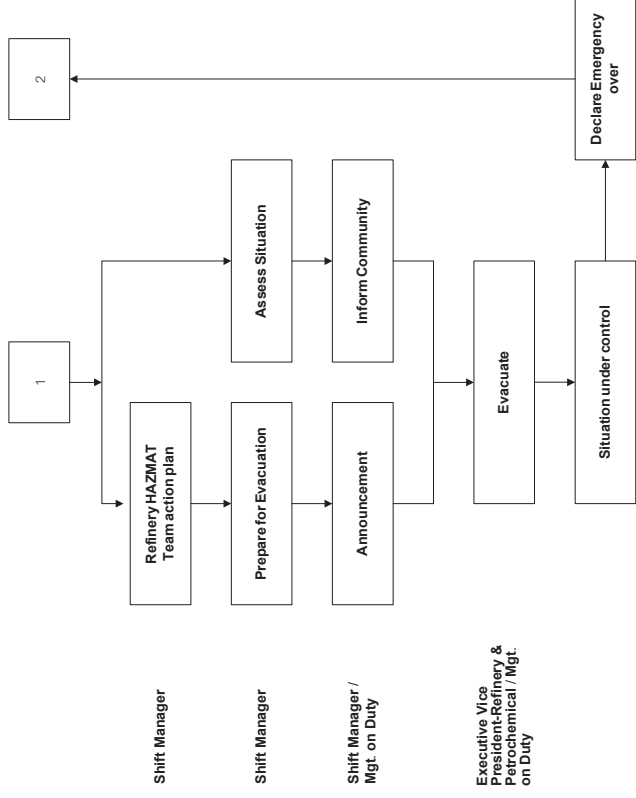
Issue/Revision No: 12/00	Issue Date: 01/09/17	Page No: 2 of 2	Code No: QMOS-SSM-01
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Section 13 : SEQUENCE OF EMERGENCY CHEMICAL & FLAMMABLE OR TOXIC GASES RELEASE



SECTION 13
SEQUENCE OF EMERGENCY CHEMICAL & FLAMMABLE OR TOXIC GASES RELEASE



SECTION 14

REFINERY CHEMICAL & FLAMMABLE OR TOXIC GASES RELEASE ACTION PLAN



SECTION 15

RADIOLOGICAL INCIDENT RESPONSE

Section 15 : RADIOLOGICAL INCIDENT RESPONSE

Reference: Radiation Emergency Plan Work Instruction (QMOS-SWI-09)

OBJECTIVE

The objectives of this Radiological Incident Response Plan are

- To ensure that arrangement are in place for a timely, managed, controlled, coordinated and effective response at the scene to any radiological incident.
- To ensure that, for reasonably foreseeable incidents, radiation risks would be minor
- For any accidents that do occur, to take practical measures to mitigate any consequences for human life and health and the environment.

Four levels (which follow by OAP) of response depending on the category related threats for the proposes of the requirements may be distinguished:

Level-1

Releases of radioactive material or external exposure, including very low probability events are postulated that could give rise to doses to severe deterministic health effects of people inside the research facility, laboratory or the building. The emergency response could be promptly executed and managed within the on-site organization.

The potential incident that cause by our asset (registered radioactive sources) would be fallen into this category.

Level-2

Releases of radioactive material or external exposure are postulated that could give rise to doses to severe deterministic health effects of people inside the company boundary. The emergency response could be effectively managed and co-ordinated with the on-site response organization.

The potential incident that cause by outsource asset (from contractors) would be fallen into this category.

