

**2025**

**WELCOME**

# HOW DO WE PREPARE FOR EMERGENCIES



- QRA (Quantitative Risk Assessment done by Approved Inspection Authority) – for all MHI Sites.
- On Site Emergency Plan is drafted – based on the risks identified in QRA and credible scenarios are considered. Pre Plans / Incident Action Plans are drawn up and form part of the OSEP.
- The OSEP is finalized and signed off by 2 witnesses and HSE Manager. It is then shared with Local Authority – an accompanying letter of acceptance required. **The OSEP must follow the guidelines on SANS 1514 (Major Hazard Installation: Emergency response planning. Covers provisions for establishing, implementing and maintenance of On-site and Off-site emergency plans in terms of the relevant national legislation on major hazard installations.)**

- **Orientate the Site Emergency Team and the Management team on the OSEP.**
- **Schedule IMS training.**
- **Plan for a table-top exercise. TEST THE PLAN**
- **Debrief and close out all recommendations and findings for continuous improvement.**
- **Schedule Full Exercise with external stakeholders. TEST THE PLAN**
- **Make any necessary amendments. Plan is valid for 3 years.**

# Actions for any incident !



## Considerations:

**Avoid Rushing In**

**Approach From Upwind**

**Observe from a distance**

**Stay Clear of vapours or liquids (some may be colourless)**

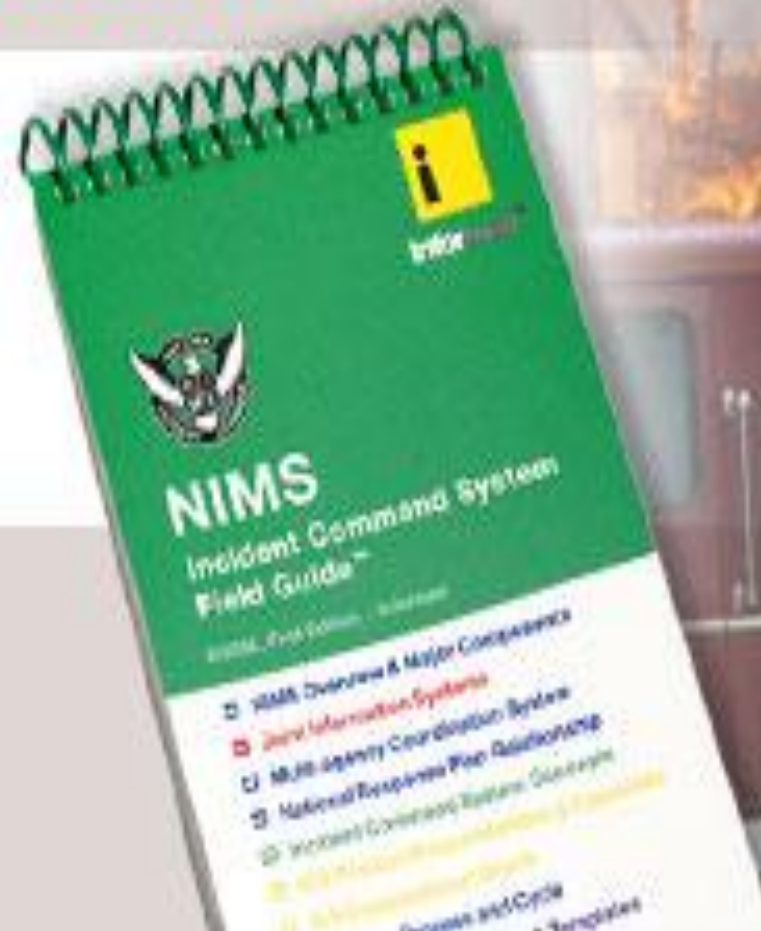
**Identify what is involved**

**Communicate – Call for Help**

**Stand by from a safe distance**

## INCIDENT COMMAND

One Structure  
One Protocol  
One Goal



In 1970 over a 13 day period .....

- 16 Lives lost and 700 structures destroyed
- Half a million acres burned in California
- Many agencies responded and tried their best – numerous problems hampered the response.



# ENGEN TRR COMPLEX – INCIDENT MANAGEMENT TRAINING



- **DESIGNATED FIRE SERVICE**

The ENGEN TRR COMPLEX is a Designated Fire Service in terms of the Fire Brigade Services Act 99 of 1987. As such Engen is the Controlling Authority and is responsible for all fire incidents at the TRR Complex. eThekweni Metro Fire supports the TRR/DMT complex where necessary.

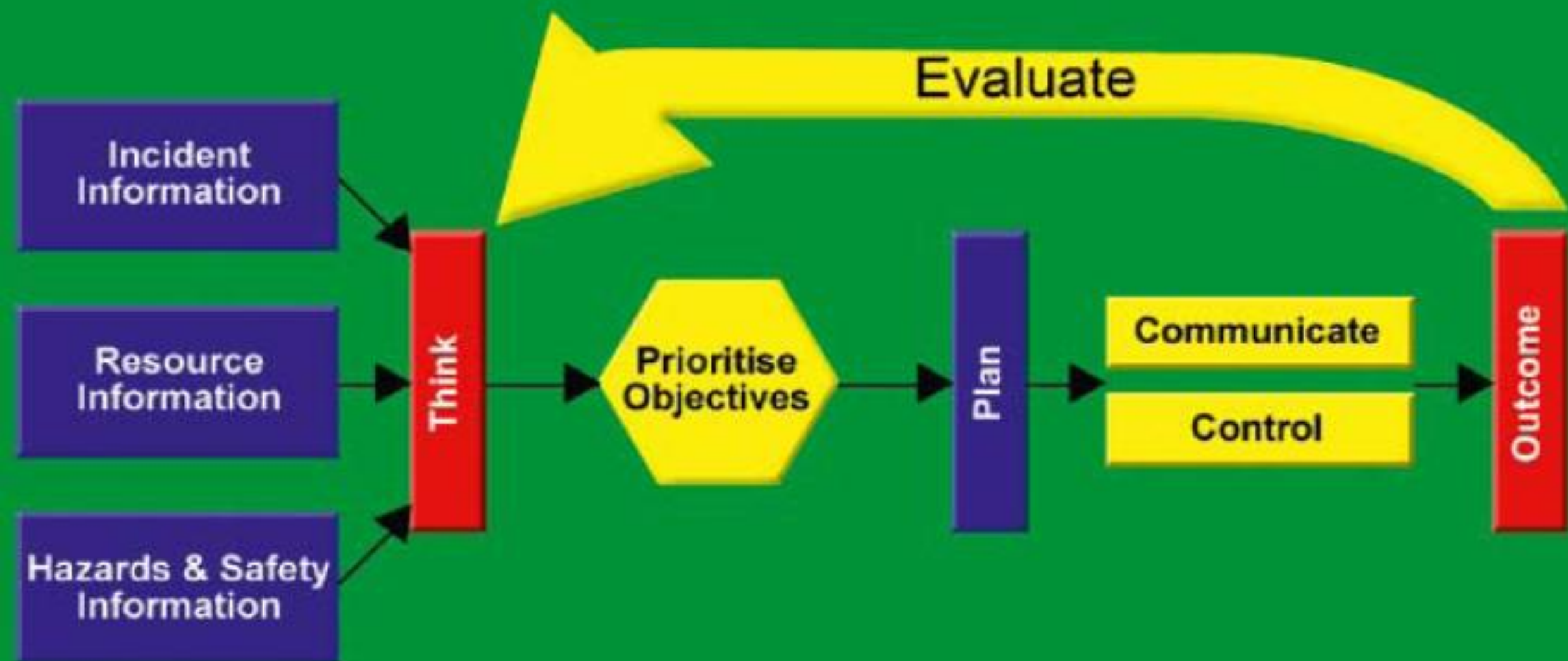
- **We need to ensure we satisfy the requirements of a Designated Fire Service.**

- **Island View - eThekweni Metro Fire is the Authority. TNPA Fire is the fire service within the complex but they are not a designated service therefore eThekweni is overall in charge of the complex.**

- In simple terms, incident management is about **managing** an incident, regardless of the magnitude of said incident.
- It is a strategy that is used to ensure that there is **order** during the life of the incident.

- Point for discussion:
- **TERMINAL ALARM SOUNDS AND YOU ARE THE SENIOR PERSON IN CHARGE.**
- **WHAT STEPS DO YOU TAKE TO DEAL WITH INCIDENT.**
- **Example – Responding to a Fire in the plant.**

# Managing Incident: Decision-making Model



# Control Centre is our nerve centre ( Previously Call Centre)



- Get Help on the way irrespective of how small.
- False Alarm good intent.
- Tests our response – we can only get better.
- **By Telephone 3111 ( Temporarily directed to Security and in transition to PCC) STC –(Shift Team Co-Ordinator)**
- Simple radio Procedure – Talk slowly – your name followed by the person you are calling
- Example – Staging Officer calling Fire Officer

**F**ind

**I**nform

**R**estrict

**E**vacuate / **E**xtinguish

## INCIDENT INITIATION

Alarms – **TRR Complex Alarm** ( Currently in old Call Centre at EHQ in transition to be moved to PCC ) \*

- Fire alarm — 3 X 3 second blasts on the hooter
- Toxic gas or flammable vapour cloud release — continuous blast of 30 seconds
- Major emergency — continuous short blasts for 30 seconds

### FIRE:

Three Blasts of Three Seconds

### UNCONTROLLED VAPOUR RELEASE:

One Continuous Blast of 15 Seconds

### MAJOR EMERGENCY:

Continuous Short Blasts for 30 Seconds

### ALL CLEAR:

Two Blasts of Five Seconds

If we choose **not** to sound the alarm, **THE CONSEQUENCES ARE:**



Evacuation will not take place

Fire Water Pumps delayed in starting up

Security will not be informed – Gates not closed

Everyone will carry on as normal – people may wander into the Hot Zone if it is an LOPC

## Level 1 incident – any emergency incident which:



**Can be dealt with by the on-site shift personnel, normal standby resources and the predetermined outside resources.**

**Does not have the potential to effect outside the refinery's boundaries.**

**Is unlikely to be a danger to life.**

**Any outside reporting / communications with the local authorities can be handled by the normal standby personnel.**



# LEVEL I INCIDENT

**OM & S Supervisor's Vehicle or The Fire Appliance on Site**

**Report to this vehicle for instructions.**

**One IC – One set of instructions for Control and accountability.**



This post will be situated **(UPWIND)** as close as possible to the incident scene as is appropriate. Once it is established, the senior person at the FCP will advise all parties via radio of its exact position.





Emergency Access	Emergency Access	Emergency Access	Emergency Access
Refinery Alarm	Location	Hazards/hazmat	Distance -Binoculars
Location	Hazards/HAZMAT	Last known location	Placard/product ID
Wind Direction	Victim-Condition/Weight/Size	Type of Space/Structure	E.R.G. Book
Hazards/Hazmat	Suspension Trauma	Product	List precautions
Evacuate Area	Type of Structure	Diagram	MSDS / Helpline
Special PPE (SCBA)	Special PPE	P&ID	Technical Rescue personnel
Pre plan	Technical Rescue personnel	Technical Rescue Personnel	HAZMAT Protection
Mobilize Fire Crew	Technical Rescue Trailer	Technical Rescue Trailer	Additional Resources Required
Additional Resources Required	Additional Resources Required	Additional Resources Required	FCP Position
Fixed Fire Protection	Set Perimeter	FCP Position	Set Perimeter
Set Perimeter	FCP Position	Set Perimeter	Evacuate Area
Area Evacuation	Staging Area	Evacuate Area	PPE /RPDs /PASS/DSU
Safety	Radio Comms Test	Safety	Atmosphere (IDLH) Gas Monitoring
Atmosphere (IDLH) Gas monitoring	High Angle Rescue Team	Isolate	Establish Zones
Accountability	P.P.E.	Tagged Out/Blinded	<del>Decom</del> Corridor
FCP Position	Compliant Lighting/Torches	Atmosphere (IDLH) Gas Monitoring	Metro Chemical unit
Incident Action Plan	Radios /Comms	Radio Comms Test	Spill /Salvage Specialist
Rescue Team Activation	Action Plan	Rescue Team	Check PPE
Compliant Lighting/Torches	Victim RPD	Back Up Entry Team	Radio Comms Test
Radios /Comms	Bomb Proof Anchors	PPE /RPDs /PASS/DSU	Drains/Sewer/Low lying Area
staging Area	Main Line	First Aid Bag	Run Off
Fire water pumps	Belay/Back Up Line	Victim RPD	Community Consideration
Foam Levels	Tag Line	Compliant Lighting/Torches	Environmental Impact
Water Levels	Harness/fall Protection	Main LINE	Staging Area
Sea water Supply via IV	Karabiner and Knots safety check	Belay/Backup Line	
Outside Resources	Rescue Basket in place	Harness / Fall Protection	
	Patient Packaging and Removal	Air Monitoring	
<b>Termination</b>		SKED	<b>Termination</b>
Accountability	<b>Termination</b>	Patient Packaging and Removal	Accountability
Equipment Removal	Accountability		Decontaminate Tools
Secure Scene	Equipment Removal	<b>Termination</b>	Remove Equipment
Debrief	Secure Scene	Accountability	Secure Scene
	Debrief	Equipment Removal	Hazmat Waste Disposal
		Secure Scene	
		Debrief	

- **2 Ambo's onsite**
- **What happens if we have a Fire and Medical or multiple casualties?**
- **How do we warn our responders to withdraw?**



## What is a Level 2 incident – any emergency incident which:



- **Cannot be dealt with entirely by the on site shift personnel and requires the activation of the Emergency Head Quarters or**
- **Is an MHI case or**
- **Has the potential to effect outside the refinery's boundaries or**
- **Has the potential to result in major asset damage and/or could result in a Refinery shutdown or**
- **Is or has the potential to endanger life or**
- **Has major environmental or company reputation impact**

- **Report to the Emergency Director (E.D.) or Interim co-ordinator & receive instructions.**
- **Sign in on the emergency organizational chart.**
- **Pick up and read the roles and responsibilities cards that are relevant to your assigned role/s.**
- **You may have to perform several functions until the EHQ is fully staffed.**



- **Assuming command is a formal process**
- **Take accountability for decisions.**
- **Only one IC , interference can have serious consequences.(In the TRR Complex The Fire Officer and STC share this responsibility for the entire complex )**

## Transfer of command

- **Historical Update**
- **Priorities and objectives**
- **Current Plan**
- **Resource assignments**
- **Incident Organization**
- **Resources Ordered / Needed**
- **Facilities Established**
- **Status of communications**
- **Any constraints or limitations**
- **Incident Potential**
- **Delegation of Authority**



# Transfer of Command at an incident may take place if:

A more qualified person assumes command.

Normal Turnover of personnel on long or extended incidents.



# Long Protracted Incidents

- If the incident is going to extend more than 24 Hours.
- The management team must plan for reliefs to ensure all teams involved have adequate rest.
- A roster can be created to ensure Control of the incident is maintained whilst staff are rested.
- Mistakes happen when there is inadequate rest periods.



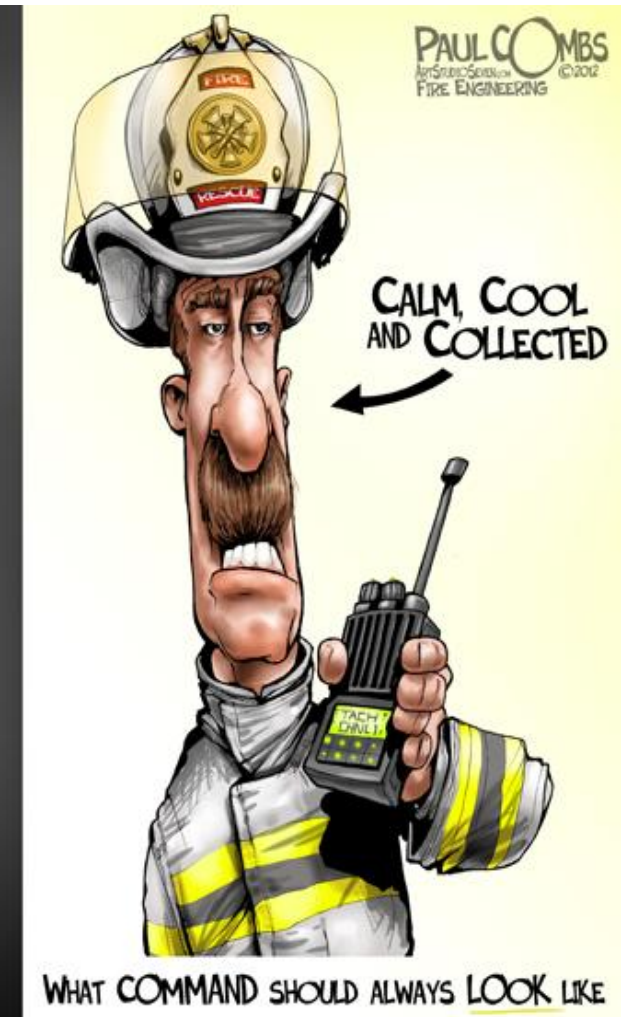
If you are the first to arrive at the EHQ .....

- Start up the 2 projectors, switch on the radios in the Radio Room.
- Inform the OM & S Supervisor and Fire Officer that you are at the EHQ to support the team.
- Facilitate and support the operation of the EHQ until relieved.
- Write down important information on the Incident information board for all arriving team members to read and gain insight on the incident.





LEVEL II INCIDENT



- **The Incident Commander will take overall control of the on-site response to the incident**
- **This will be the Shift Fire Officer who will be assisted by the OM & S Supervisor.**
- **Their main functions are:**
- **To make Tactical decisions**
- **To control the activities of the Operations Fire Crew as well as the permanent Fire Crew as they respond to the incident.**
- **To co ordinate the activities of the Durban Metro if required**
- **The STC will respond to the process aspects of the incident – shutting units down and making safe as required to resolve the incident.**

## Level 2 incident – any emergency incident:



- **Pre – determined external response**
- **eThekwini Fire – fire where the fire alarm has been sounded**
- **Ambulance Service – injury or illness requiring transport to a hospital**
- **All external responders must report to the staging area**
- **Engen is accountable – staging area is to minimize the clutter in the hot zone , sometimes – manpower and not vehicles are necessary.**

# ENGEN TRR COMPLEX – INCIDENT MANAGEMENT TRAINING



- *What would happen if all these vehicles went into the Hot Zone.*
- Island View has a similar problem whereby SAPS members want to go into the incident.  
The IC has to take charge –  
Persons not required must be at the staging area.

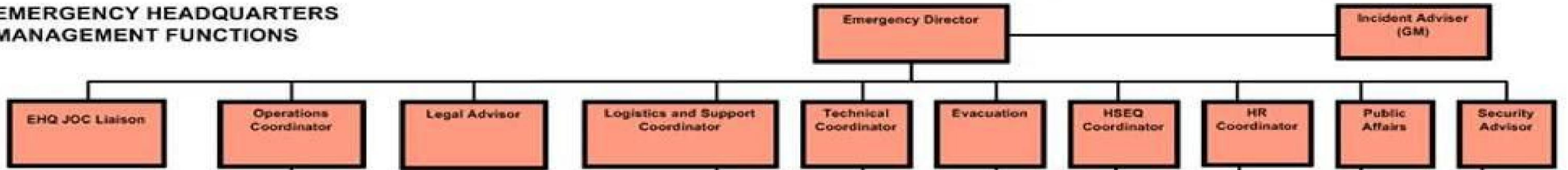
**The Hot Zone has PPE requirements.**



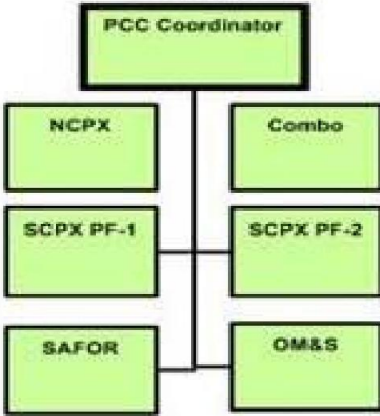
- **The Emergency Head Quarters Group takes overall control of the incident**
- **Their main functions are:**
- **To execute the Engen Site Emergency Plan**
- **To prevent escalation and resolve the incident**
- **Returning the TRR Complex to a safe and stable condition.**
- **To work with the STC and Incident Commander**

# EMERGENCY ORGANISATION CHART LEVEL 2 RESPONSE

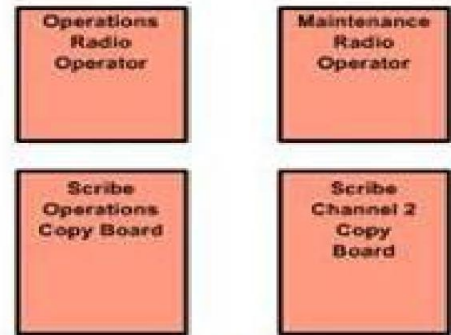
## EMERGENCY HEADQUARTERS MANAGEMENT FUNCTIONS



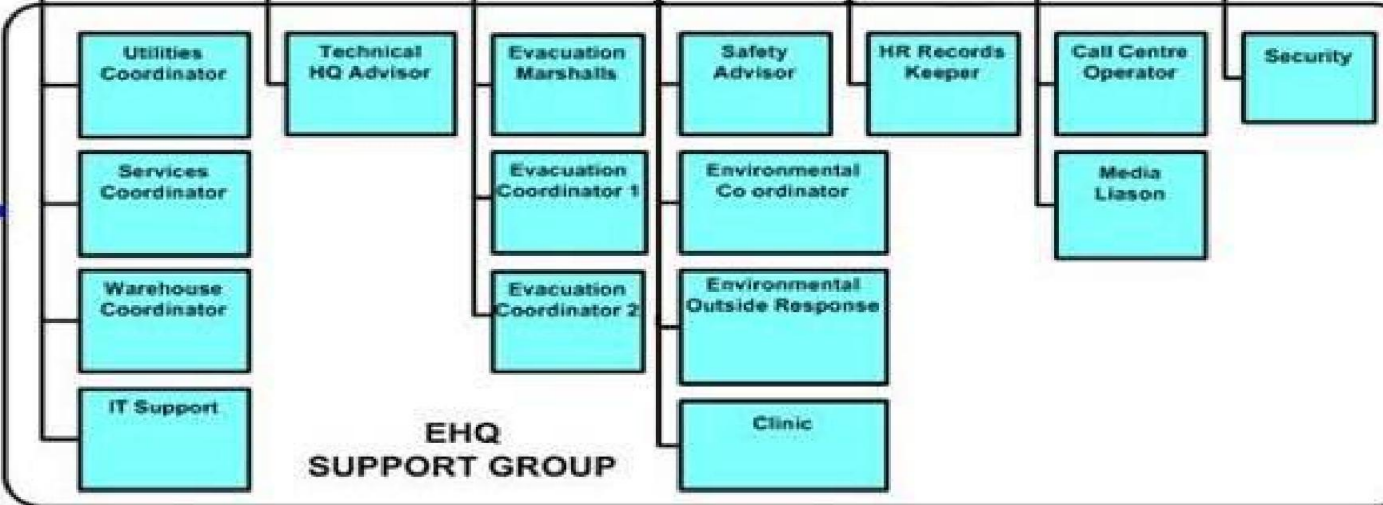
## PROCESS CONTROL CENTRE



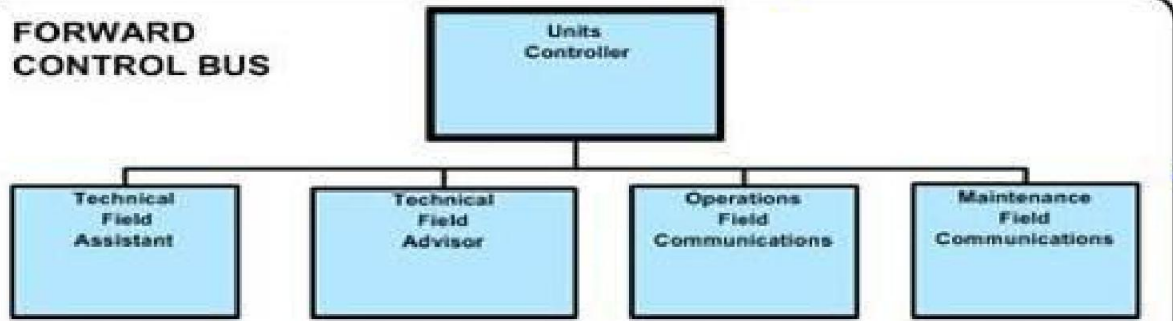
## EHQ COMMUNICATIONS



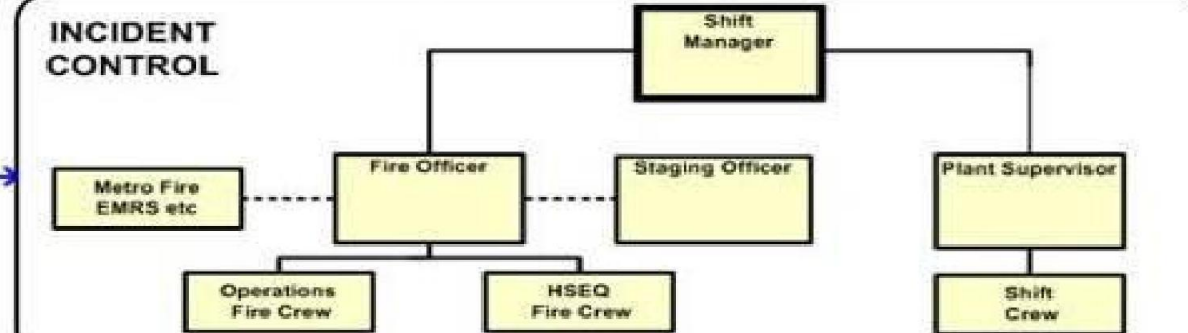
## EHQ SUPPORT GROUP



## FORWARD CONTROL BUS



## INCIDENT CONTROL



# SCRIBES

Important function of capturing information from Fire Officer and OM & S Supervisor

What if you are a scribe and receive a radio message that you are not sure of ?



# JOC MEMBERS FROM EXTERNAL AUTHORITIES



# EMERGENCY DIRECTOR



# FIRE CREW MEMBERS DONNING PPE



## POST INCIDENT RESPONSE - THE MAIN STEPS TO BE FOLLOWED

- **Ending the emergency – ALL CLEAR**
- **Care for People**
- **Reporting**
- **Re – entry precautions (non affected areas)**
- **Preservation of evidence**
- **Size up losses**
- **Make the site safe for investigation (affected area)**
- **Equipment inventory**
- **Site clearance after investigation (affected area)**
- **Start the business recovery process – repair planning and execution**
- **Planning the restart of operations**

- SEVERE WEATHER
  - LEVEL I and II
  - [..\..\incident action plans Nov 17\IAP Training\Incident Action Plan - Tank Surface Fires.docx](#)
  - [..\..\annual exercise\OSEP\IAP X 101\X101 - Tank Data Sheet - Rev 1.doc](#)
- [..\..\annual exercise\2018\Engen Crisis Management Plan - 2017 .pdf](#)

**Thank you for attending**



**Suggestions**

**Questions ?**