

# Emergency Response Planning Guidelines Sample Report



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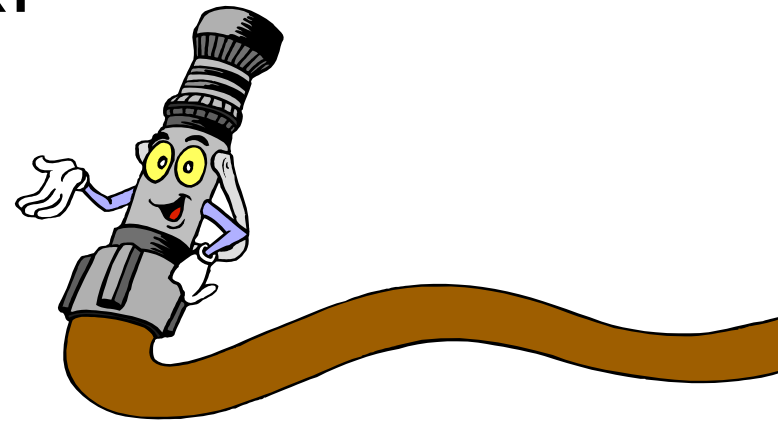
# SCOPE

- Introduction
- Emergency Response Plan (ERP)
- Guidelines for ERP
- Duties and responsibilities of Fire Safety Committee
- Action to be taken in the event of fire
- Conclusion

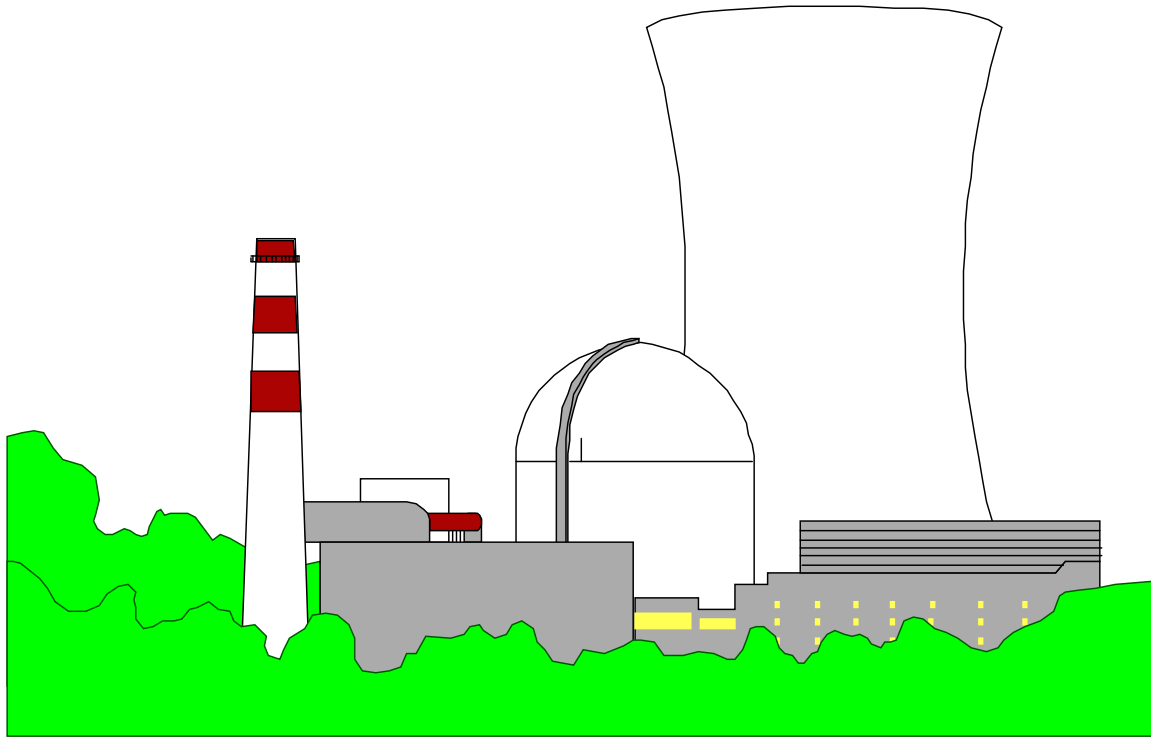


# Learning Objectives

- Able to explain the need of ERP
- Able to explain the fundamental requirements for the formation of a Fire Safety Committee
- Able to formulate an ERP



# What is a Emergency Response Plan?



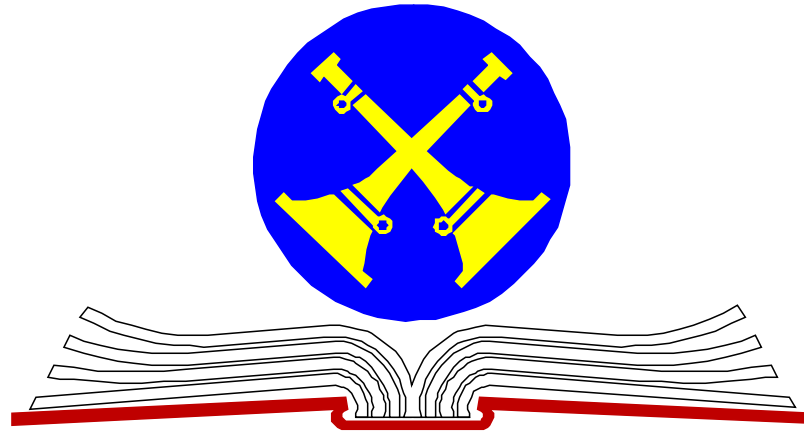
# A plan which contains information on:

- Types of fire safety measures provided for in designated premises
- Duties and responsibilities of the FSC
- Actions required from FSC
- Floor layout plans
- Evacuation planning guidelines



# Emergency Response Plan

Owner of the building or his designated official will be responsible for the preparation & implementation of the ERP



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# Requirements of a Emergency Response Plan

- Prepare ERP within 6 months from commencement of operation
- Prepare in accordance with guidelines
- Form a Fire Safety Committee to assist to plan, organize & conduct fire safety programme
- Review annually or as and when required by Commissioner
- ERP kept at FCC or other place easily available



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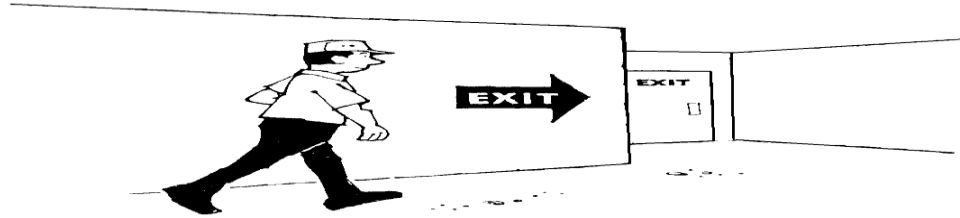
# Why organise for fire emergencies ?

- **Dangerous operational practices**
- **Combustible & smoke producing materials**
- **Indecisive, delay & lack of responsibilities**

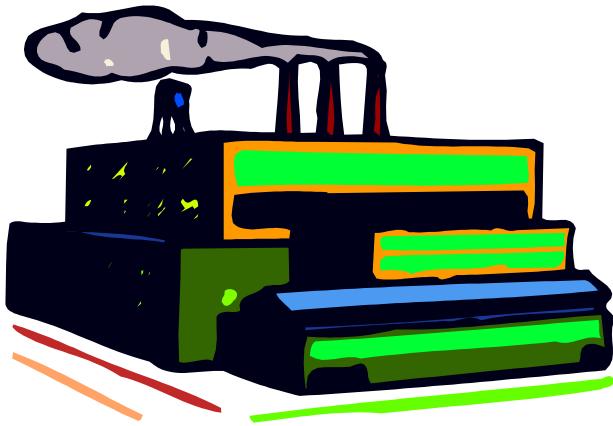




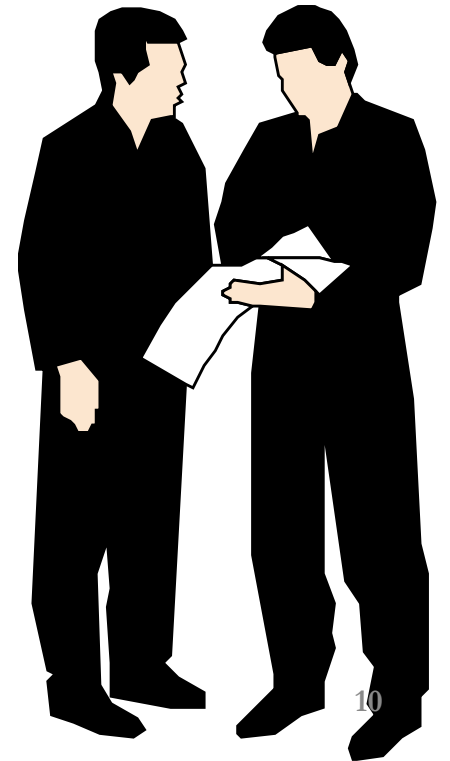
# Emergency Response Plan needed to



- **avoid panic**
- **evacuate safely and orderly**
- **tackle incipient fires with available fire-fighting equipment**
- **provide good information and assistance to firefighters**
- **effect timely protection of machineries and property**

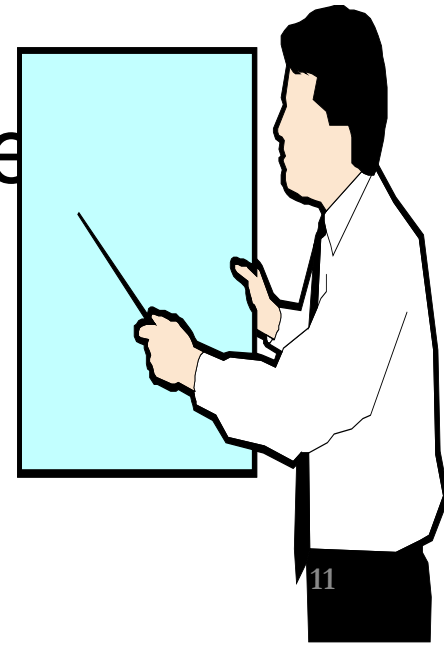


# Guidelines for ERP



# Contents of ERP

1. Aim
2. Situation
3. Execution
4. Service Support
5. Command and Signal
6. Plan Review and Maintenance
7. Annexes



# AIM

- Detail the various measures and operational actions that need to be undertaken by the company in the event of any fire or hazmat emergencies
- Minimize injury to personnel and damage to property.

# SITUATION

- Introduction
- Area of operations
  - Location – Annex A
  - Surroundings
  - Layout – Annex B & C
  - Special Hazard and Risk Assessment – Annex E

# EXECUTION

- Concept of Operations
  - Divided into 3 phases - overview
- Emergency Actions to be taken
  - Phase 1
    - Notify SCDF + Relevant agencies
    - Contact number of neighbouring premises
    - Working population size during Sundays/Public Holidays
  - Phase 2A
    - Conduct evacuation

# EXECUTION

- Emergency Actions to be taken
  - Phase 2B
    - Emergency Shutdown Procedure
    - Fire Fighting, Hazmat Monitoring, Containment and Rescue
    - IPP
  - Phase 3
    - Clean up/decontaminate
    - Other Emergency Plans eg APP – Annex D
    - Grouping and Tasks – Annex F and G
    - Key personnel emergency contact numbers

# SERVICE SUPPORT

- Fixed installations
  - Detection/Extinguishing system
  - Safety/First aid equipment
  - Others



# COMMAND AND SIGNAL

- Incident Organisation Chart
- Location of Command Centre



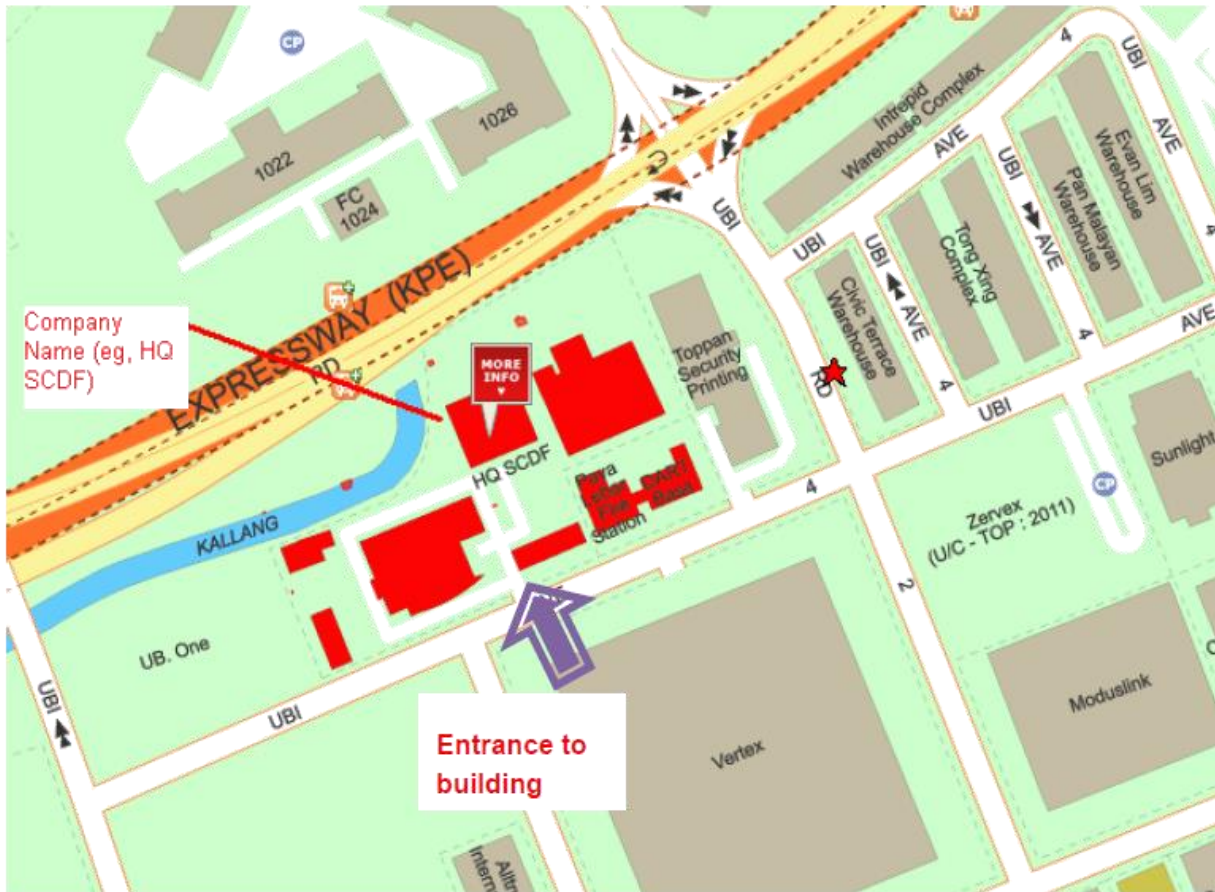
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# PLAN REVIEW AND MAINTENANCE

- Communication of Plan
- Table Top Exercise
- Conduct of Emergency Drill
- Review of Hazard Risk Assessment

# ANNEXES

## ANNEX A



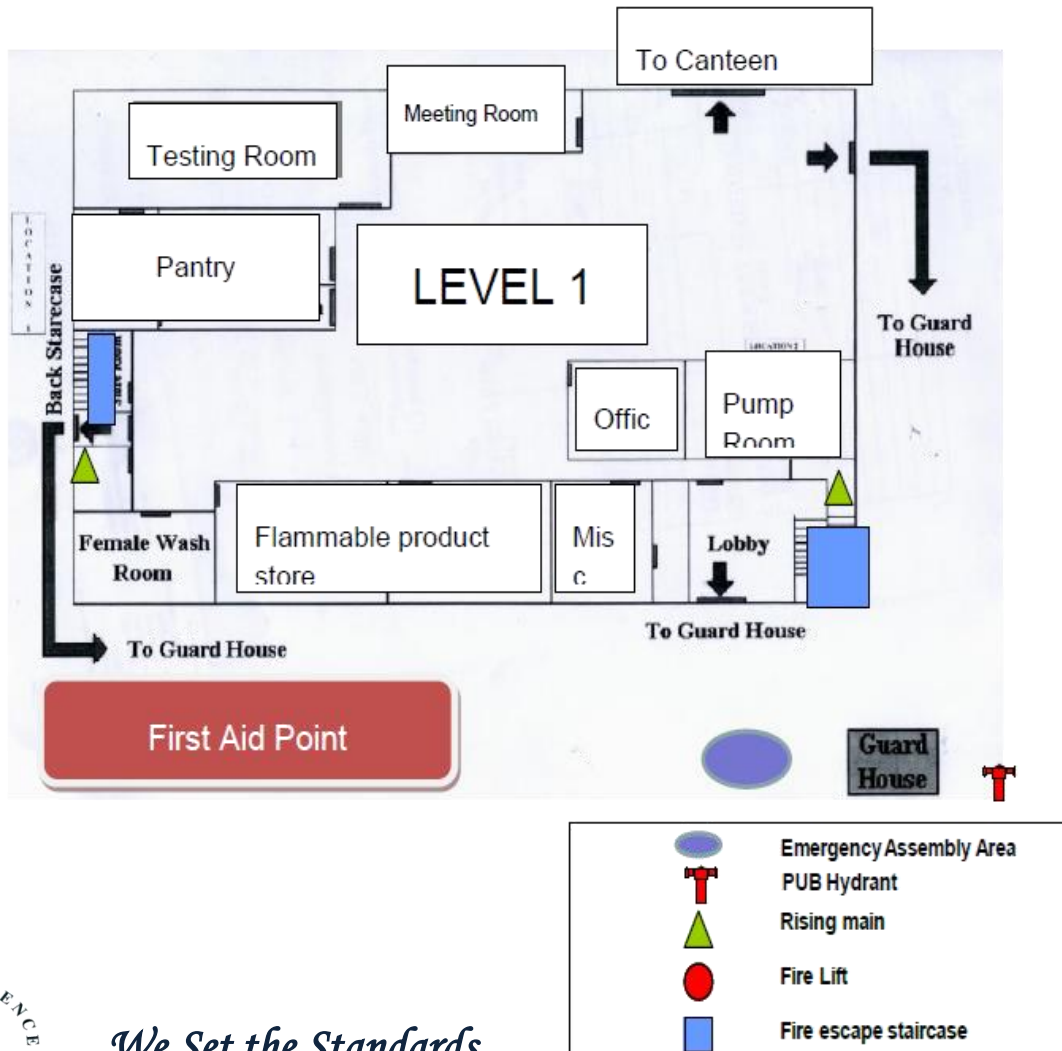
COMPANY SITE PLAN



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# ANNEXES

ANNEX B



COMPANY LAYOUT PLAN



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# ANNEXES

Inventory of Petroleum & Flammable Materials (P&FM) / Hazardous Chemicals & Agents

**ANNEX C**

Type of P& FM / Hazardous Chemicals & Agents	UN Class	Physical Form	Location Stored	Unit Capacity of Packaging / Container (Metric Tonnes / Kg)	Total No. of Packaging / Container	Maximum Qty Stored On-site (Metric Tonnes / Kg)
Eg: Diesel	1202	Liquid	Beside guard house	5000 MT (Ltrs)	2 Units	10000 MT (Ltrs)



# ANNEXES

## ANNEX D

### FOR INSERTION OF EVACUATION PLANS AND OTHER PLANS SUCH AS:

- 1) EVACUATION PLAN\*
- 2) ARSON PREVENTION PLAN\*

\* Refer to guidelines:-

[http://www.scdf.gov.sg/content/scdf\\_internet/en/building-professionals/fire-safety-permit-and-certification/emergency-response-plan1.html](http://www.scdf.gov.sg/content/scdf_internet/en/building-professionals/fire-safety-permit-and-certification/emergency-response-plan1.html)

- 3) In Place Protection Plan^

^ Refer to guidelines:-

[http://www.scdf.gov.sg/content/scdf\\_internet/en/community-and-volunteers/community-preparedness/community-programmes/cd-emergency-handbook.html](http://www.scdf.gov.sg/content/scdf_internet/en/community-and-volunteers/community-preparedness/community-programmes/cd-emergency-handbook.html)

**PREMISES EMERGENCY DATA**

Reference No: \_\_\_\_\_

Name of Premises: \_\_\_\_\_

Address of Premises: \_\_\_\_\_ (S) \_\_\_\_\_

Date of Last Survey: \_\_\_\_\_ Conducted By: \_\_\_\_\_

**1. THREAT ASSESSMENT**HRI Class:  HFLP  ISP  TICP  FMP  BAP  RAP  Non-HRIRisks present:  Sensitive Installations  Flammable Materials  TICs  
 Biological Agents  Radiological Agents (Tick where applicable)

Mixed Used Premises:

Is the building IPP ready: Yes/No

**2. OCCUPANCY LOAD**

Location	Peak Hrs	No. of Occupants (Peak Hrs)	Non-Peak Hrs	No. of Occupants (Non-Peak Hrs)
Block 1	XXXX-YYYY hrs		AAAA-BBBB hrs	
Block 2				
Tower 1				
Tower 2				
<b>Total Premises Occupancy</b>				

**3. OCCUPANCY USAGE & KEY ACTIVITIES**

Block / Tower	Level	Usage & Key Activities
Block 1	Basement 1 - 3	
	Level 1 - 10	
	Level 11 - 20	
Warehouse	Level 1 - 2	
Chemical Plant B		

ANNEXES

## **ROLES AND RESPONSIBILITIES OF CERT**

### **SITE MAIN CONTROLLER (SMC)**

**SMC is the senior member of the installation management. He is the person who is overall in-charge of the emergency response operations in the installation and liaises with senior officials of government agencies such as SCDF, SPF, NEA, etc. Under circumstances whereby the SMC is unable to leave the plant, he/she may appoint another suitable representative to link up with the Incident Manager at TACT HQ.**

#### **THE KEY RESPONSIBILITIES OF THE SMC INCLUDES:**

- (a) Coordinate the activities of external emergency organizations and work closely with the Incident Manager at TACT HQ during consequence management;
- (b) Provide TACT HQ with the following information:
  - i) Site Layout Map;
  - ii) Building plan;
  - iii) Company Emergency Response Plan;
  - iv) Company's hazmat inventory and location of hazmat inventory;
  - v) Overall workers population;
  - vi) Incident resources available at site;
- (c) Provide the Incident Manager with the necessary information and decisions to any actions that concerns the company SOPs and policies;
- (d) Authorize the shutdown of operations in the installation;
- (e) Authorize the release of information to the media and government agencies; and
- (f) Assist the Incident Manager in determining the termination of the emergency and authorizing re-entry upon complete recovery.

# ANNEXES



# ANNEXES

## ANNEX G

### Detailed Grouping and Tasks

S/NO	GROUPING	GENERAL TASKS	PHASE	DETAILED TASKS	REMARKS
1	Site Main Controller	Eg: Overall In-charge of emergency response operations & liaise with government agencies.	I	Carry out initial Response & call SCDF / SPF	
			II		
			III		
2	Site Incident Controller	Eg: Overall In-charge of actual ground response operations.	I	Activate on-site CERT	
			II		
			III		
3	Emergency Response Team	Eg: Responsible for fire fighting, rescue & first aid.	I	Conduct basic emergency response such as fire fighting, Hazmat mitigation, containment, rescue & first aid.	
			II		
			III		

# Evacuation Model (course project)

- The 3 models you will choose 1
- Explain why you use the model

# Fire Evacuation

- <8-storey
  - a single stage alarm
  - evacuate immediately
  - total evacuation upon hearing the alarm



**Fire flr**



**Total Evac  
upon 1st  
alarm**

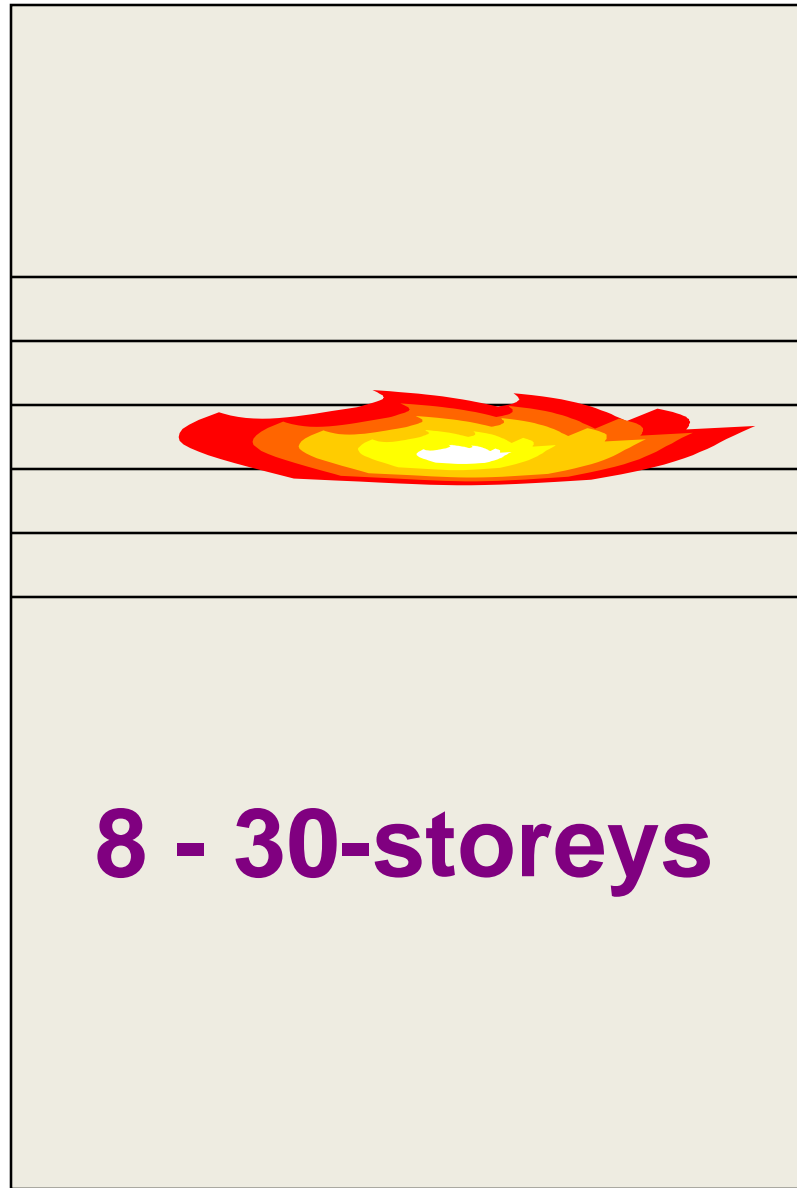


# Fire Evacuation

- >8-storey & < 30-storey
  - two stage alarm
  - 1st alarm alert signal & standby for total evacuation
  - 2nd alarm is activated on all floors upon confirmation of fire



Fire flr

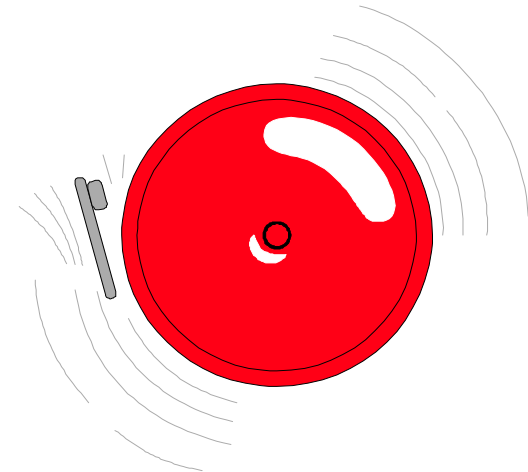


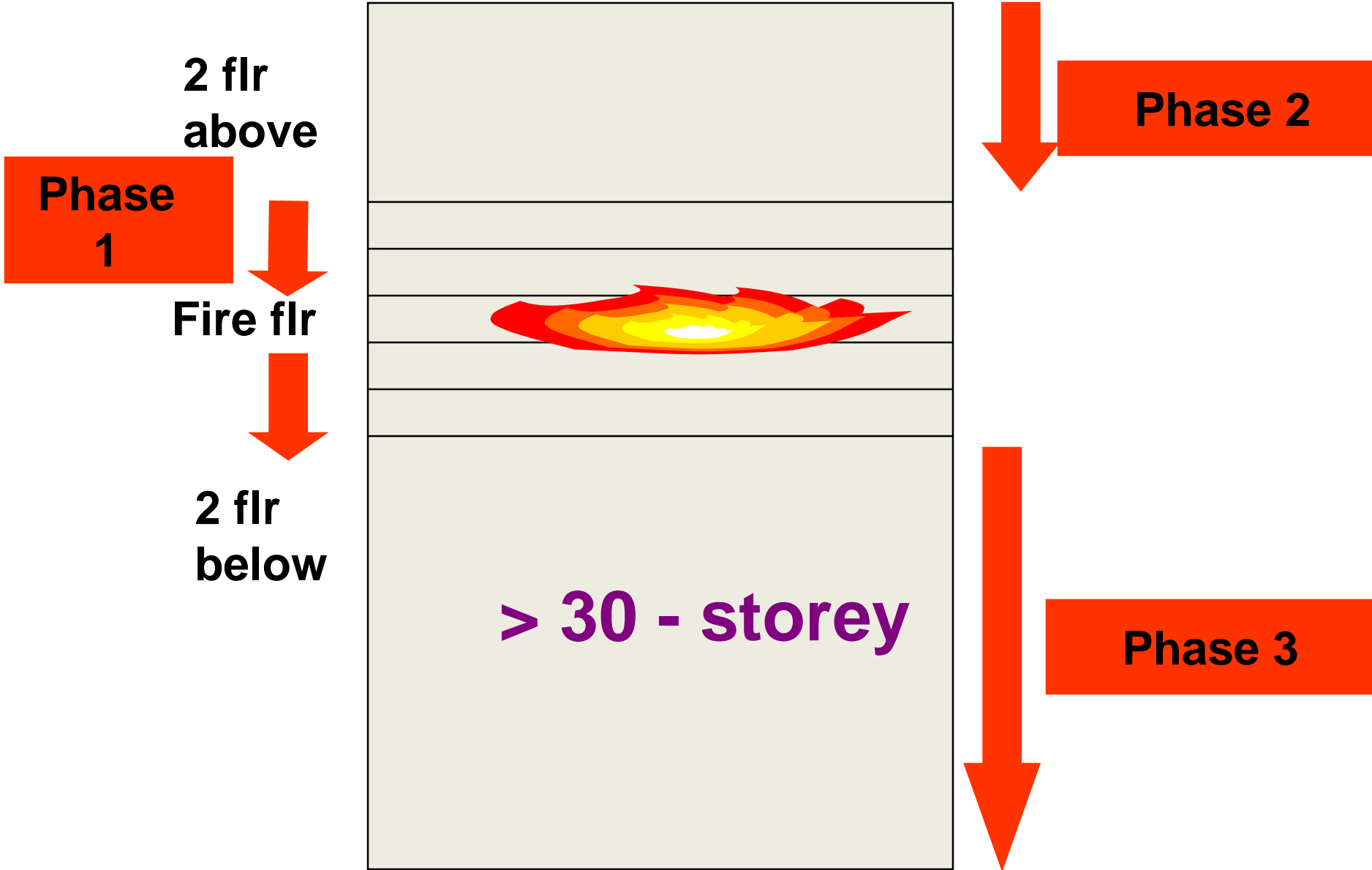
Total  
Evac  
upon  
2nd  
alarm



# Fire Evacuation

- 31-storey & >31-storey
  - 2 stage alarm & phase evacuation
  - 1st alarm will sound to alert
  - 2nd alarm will sound to evacuate by phases
  - 1st phase, occupants on the fire floor, 2 floors above & 2 floors below
  - 2nd phase, occupants on all floors above fire floor
  - 3rd phase, all floors below the fire floors
  - [2-A-B]





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## Current Evacuation Guidelines - 3 Basic Models

	Low-Rise	Medium-Rise	High-Rise
<b>Height</b>	Less than 8 storeys	8-30 storeys	More than 30 storeys
<b>Alarm type</b>	Single-stage alarm	2-stage alarm	2-stage alarm
<b>Evacuation Strategy</b>	Total Evacuation	Total Evacuation	Phased Evacuation

## Revised Evacuation Guidelines - New Model

	Low-Rise			High-Rise
	No EVCS	With EVC But has Atrium Space e.g Dept Stores	With EVC & Compartment ed Floors e.g Industrial Building	
Height	Less than or equal 24m			More than 24m
Alarm type	Single-stage Alarm	2-stage alarm	2-stage alarm	2-stage alarm
Evacuation Strategy	Total Evacuation	Total Evacuation	Phased Evacuation	Phased Evacuation

# Selecting AA

- Identify at least 2 or 3 alternate locations outside
- Familiar and readily accessible
- Able to accommodate the full occupant load (or evacuees)
- Far enough to avoid falling debris, collapsing structures and/or spread of the fire.
- A distance **at least equal to** height of the building, **and no less than 20m away** is recommended or alternately, it can be in a protected area shielded from the burning building by a fire barrier or fire wall, or it may be in an adjacent building if it offers sufficient protection and is able to accommodate the evacuees.)
- The AA shall not interfere with the fire fighting operations and/or its responding forces.
- Where AA is located across any road, there shall be someone designated to control traffic so that no traffic accident will occur due to occupants crossing the road to the AA.

# Consideration for Evac model

- As fast as possible/as many floor as possible (rules of thumb apply, not more than 20 floors each time)
- Stampede



# Duties & Responsibilities of Fire Safety Committee

# Fire Safety Committee

- **Coordinator / assistant,**
- **Fire Wardens / assistant,**
- **Chief Security Officer / assistant,**
- **Telephone Operator,**
- **CERT**

# Action to be taken in the Event of Fire



# Action to be taken in the event of fire

- Informant
  - Raise alarm
  - Note what they see, if possible
  - Fight fire, if it is an incipient fire
- All occupants
  - lock important files, cash, shutdown machineries, etc
  - Remain alert
  - Evacuate immediately by FW
  - Guide customers/guests/visitors
  - Do not use lift





# Action to be taken in the event of fire

- Coordinator/Asst
  - SCDF notified
  - Proceed to FCC
  - Mobilize CERT
  - Silence the alarm bell (not to reset!)
  - Do evacuation where necessary
  - Make correct announcements that suit the situation
  - Monitor building evacuation using building evacuation status chart
  - Report condition of fire & number of persons missing to SCDF



# Action to be taken in the event of fire

- Fire Warden/Asst – on hearing 1<sup>st</sup> stage alarm
  - Check sub alarm panel
  - Conduct physical check
  - Prepare for evacuation if fire not on his floor
  - Report to FCC if fire on his floor & effect evacuation immediately

# Action to be taken in the event of fire

- Fire Warden/Asst – on hearing evac announcement
  - Check all rooms & evacuate everyone on his floor
  - Pay attention to the disabled, children, pregnant women
  - Report to FCC
  - At AA, conduct roll call using floor register & hand-over to Chief Security Officer

# Action to be taken in the event of fire

- Chief Security Officer/Asst – Deploy Guards
  - At ground floor staircase exit, main entrance & exit
  - Patrolling
  - Direct SCDF to FCC
  - Direct traffic
  - Monitor status at AA & report to FCC



# Action to be taken in the event of fire

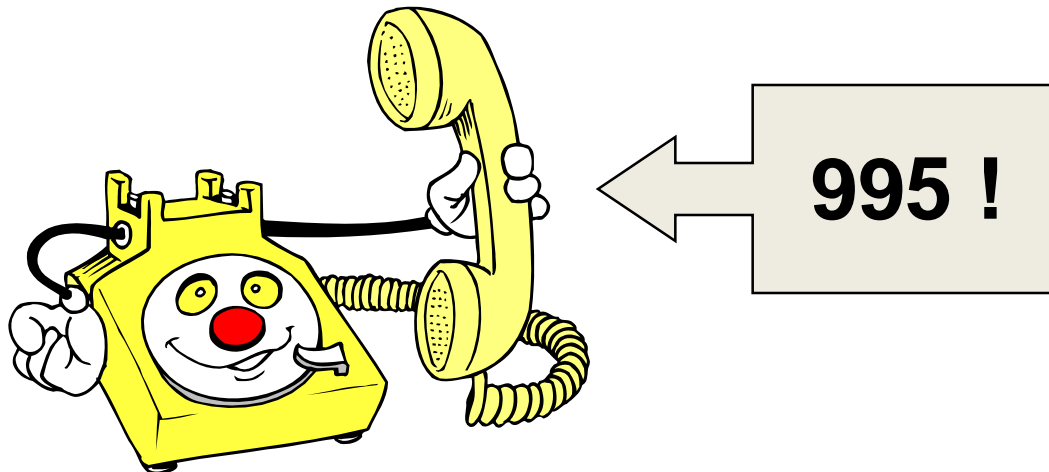
CERT – on hearing 1<sup>st</sup> stage alarm

- Ascertain location of fire
- Use Fire Lift to 2 floors below fire floor
- Bring Fire Lift to ground floor & wait for SCDF
- Extinguish fire



# Action to be taken in the event of fire

- Telephone Operator – on hearing 1<sup>st</sup> stage alarm
  - Notify SCDF
  - Proceed to the FCC to man the PA system



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# Action to be taken in the event of fire

**Fire Warden/Asst**

Floor Register

**Fire Warden :** \_\_\_\_\_

**Storey :** \_\_\_\_\_

Unit No.	Name of Occupants & contact	Evacuation Status.	
		Present	Absent

# Fire Occurring Outside Office Hours

## SECURITY PERSONNEL

- Confirm with SCDF
- Notify Coordinator/Asst
- Fight fire



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# After operating hours..

- **Who to appoint?**
  - **Transfer of responsibility**
  - **By appointment eg Duty Officer; or**
  - **Someone that is always there**
  - **Must be trained**

# CONCLUSION

The formulation of Emergency Response Plan is important to ensure that all staff and occupants are ready to react effectively to a fire situation

