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| Ref: CINTRA/SOP/003.02 | Date of issue: 18 Dec 2020 | Next review date: 17 Dec 2023 |
| Title : CINTRA SOP on Emergency Response Plan | | |
| Audience : Admin Staff, Research Staff and students of CINTRA | | |

1. **Aim**

This Standard Operating Procedure (SOP) defines the evacuation procedure in support of the Emergency Management Directive with the aim of unifying response during an emergency.

2. **Scope**

This SOP on Emergency Response Plan (ERP) is develop for the building emergency procedures for fire evacuation in CNRS International-NTU-Thales Research Alliance (CINTRA).

3. **Definition**

3.1 **Campus Wardens (CWs)** refer to staff of Campus Security Division (CSD) who responded in any emergency within NTU Yunnan campus.

3.2 **Director** refers to the Director of CINTRA.

3.3 **Emergency Coordination Team (ECT)** is a team who coordinates the evacuation of occupants. The team should consist of:

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| Emergency Coordination Team | |
|------------------------------------|--|
| Liaison Officer | Dr Dinh Xuan Quyen / Dr Liang Kun (deputy) |
| Emergency Coordinator | Choo Hwee Pin |
| Fire Warden at Level 6 | Dr M. Danang Birowosuto |
| Fire Warden at Level 5 | Dr Zeng Yonquan |

3.3.1 **Liaison Officer (LO or “Main Site Controller”)** is Dr Dinh Xuan Quyen, a senior member of the Centre management, and in his absence, deputized by Dr Liang Kun, who assumes command of the emergency, co-ordinate any resources required to contain an emergency and to brief/hand over command to uFSM or to SCDF/Police upon their arrival.

3.3.2 **Emergency Coordinators (ECs)** to ensure that occupants are mustered at the Fire Assembly Area (FAA) at turf area along Nanyang Drive between Research Techno Plaza & S1

3.3.3 **Fire Wardens (FWs)** to ensure that occupants are evacuated from a building quickly. There should be at least two FWs per floor at any one time.

3.4 **Fire Assembly Area (FAA)**, as shown in Appendix 1, is located at turf area along Nanyang Drive between Research Techno Plaza & S1

3.5 **Laboratories** refer to all the laboratories under CINTRA.

3.6 **Laboratory Manager** refer to person handling laboratory activities.

3.7 **Laboratory Staff** refers to the person-in-charge of the laboratory who oversees the day to day operational aspects of the laboratory.

3.8 **Principal Investigator** refers to the fund approving officer, can be a Professor or any Researcher who is in charge of the awarded fund/project.

3.9 **Singapore Civil Defense Force (SCDF)** is the main agency in charge of the provision of emergency services in Singapore.

3.10 **University Fire Safety Manager (uFSM)** is a competent person engaged by ODFM who oversees all Fire Safety operational matters in NTU. The UFSM coordinates with Liaison Officer regarding the emergency status and notify the SCDF when necessary.

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4. Roles and Responsibilities of Emergency Response Personnel

4.1 Director CINTRA shall:

- Establish the ERP and emergency teams and to ensure resources are readily available in implementing the ERP;
- Ensure the communication of ERP is made known to all personnel for implementation of the ERP.

4.2 Liaison Officer (LO or Main Site Controller) shall:

- Put on the “Main Site Controller” vest and proceed to the command post at the FAA and takes charge of the emergency for the school including collating information on the status of the emergency (e.g. rooms cleared, location of fire, confirmation of casualties, status of persons unaccounted for);
- Co-ordinate with uFSM, Fire Command Centre (FCC) and/or Campus Security Division (CSD) for emergency site control management;
- Relocate the FAA to an alternate location if the current FAA is under threat or may hinder emergency rescue efforts;
- Receive updated evacuation status from the ECs (Site Incident Coordinators) – Ms Choo Hwee Pin;
- Relinquish authority to the Police or SCDF upon their arrival on the scene and report status to the officer-in-charge with regards to the evacuation and/or emergency in progress;
- Inform Director CINTRA and/or OHSE of the incident;
- Appoint Dr Liang Kun as deputy during his absence to evaluate the proper actions to be taken;

4.3 Emergency Coordination Team (ECT)

4.3.1 Emergency Coordinator (EC)

On hearing the first alarm:

- Put on emergency response “Emergency Coordinator” vest.

On hearing the second alarm:

- Be at the Command Post to receive status of building from FWs whether the floors in the building are cleared;

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- Confirm any missing persons quickly, if necessary;
- Report and update the evacuation status to the LO (Main Site Controller) or his deputy and/or UFSM.

4.3.2 Fire Wardens (FWs)

On hearing the first alarm:

- Put on the “Fire Warden” vest, collect whistle and flashlight¹;
- Check floor fire alarm sub-panel to confirm if activation is on your floor;
- If alarm is activated on your floor - (3-minutes Pre-alarm ringing):
 - i. Check location for fire or sprinkler being discharged;
 - ii. Notify NTU - Emergency number (6790 5200) if fire is discovered;
 - iii. State: “Emergency! Your name, contact no., building and location” or you may activate call point in the same area to confirm emergency if you cannot reach a phone;
 - iv. Ensure occupants evacuate floor immediately. Do not wait for second stage alarm; and
 - v. Leave for the FAA. Once it is confirmed that the room occupants had evacuated and is empty. Display notice (Figure 1) at all exit doors.

If alarm is not activated on your floor, return to your workplace to wait for further announcements or the re-activation of a second alarm.

On hearing the second alarm - (continuous ringing):

- Ensure occupants evacuate using the nearest emergency exits;
- Check all rooms on your level, including toilets and pantry. (Note: If rooms are locked, knock thrice on the door to alert the occupants);

¹ These equipment are important for assisting movement in a darkened area (in the event of a power failure) and for attracting attention where necessary. Alternative: handheld alarm.

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- When all occupants have evacuated from the floor, put up the display notice - “EVACUATION IN PROGRESS” signage (Figure 1) on each of the exits to ensure no re-entry. Doors to remain unlock for escape and entry by fire fighters;
- Leave for the FAA;
- Report status to Emergency Coordinator at the Command Post.



Figure 1: “EVACUATION IN PROGRESS” signage

4.4 All Staff

- 4.4.1 Upon hearing the fire alarm, all staff shall lock important files, cash, shut down machinery etc. and remain alert. Do not make unnecessary telephone calls to verify the nature of the alarm.
- 4.4.2 Guided by the respective Fire Wardens, all staff should immediately evacuate by using the nearest exit and proceed to the assembly point when:
- (i) the announcement for evacuation announcement is declared over the public address system; or
 - (ii) the second fire alarm is activated; or
 - (iii) instructed by their Fire Wardens
- 4.4.3 When evacuation is declared, all staff should guide students/visitors on their respective floor/department to immediately evacuate
- 4.4.4 When evacuating, do not panic but quickly walk down the staircase by the nearest exit and proceed to the assembly point.
- 4.4.5 DO NOT use the lift.

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4.4.6 The assembly point is located at turf area along Nanyang Drive between Research Techno Plaza & S1

4.4.7 All staff/students/guests/visitors shall not re-enter the building once at the assembly point unless instructed otherwise by the SCDF in attendance.

A 2-stage fire alarm system is adopted for the safe evacuation of occupants in any emergency at Research Techno Plaza. This must be observed at all times during office hours (0800 hours to 1745 hours each working day) as well as after office hours (1745 hours to 0800 hours).

4.5.1 Principal Investigator (PI)

4.5.2 The PI should ensure researchers and students under their supervision abide by the rules and regulation of the laboratories.

4.5.3 The PI shall ensure researchers and students under their supervision have attended all necessary on-line safety courses and complete their risk assessments before commencement of work.

5. **Fire Evacuation Drill**

5.1 Fire evacuation drills shall be conducted at least once a year.

5.2 All personnel in the building(s) shall participate in the drill.

6. **General**

Remember, it is your own interest to:-

- a) know how to report a fire - sound the alarm without delay.
- a. know what to do in the event of fire – avoid panic and confusion.
- b. know the locations of nearby fire extinguishers and hose reels – learn the proper way to use them.
- c. know the means of escape in case of fire and to keep staircase, landings and other escape routes clear of obstructions at all time.
- d. do not use the lift, in the event of a fire.
- e. familiarize yourself of the surrounding buildings for speedy evacuation.

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7. Emergency Response Structure

The standardized emergency response structure (Figure 2) consists of the followings:

| Emergency Response Personnel | Appointed By |
|--|----------------------|
| Liaison Officer (LO) or Main Site Controller | Director CINTRA |
| Emergency Coordinators (EC) or Site Incident Coordinator | Director CINTRA |
| Emergency Coordination Team (ECT) | Director CINTRA |
| University Fire Safety Manager (UFSM) | Term Contractor (TC) |
| Fire Response Team (FRT) | Term Contractor (TC) |
| Campus Warden (CW) | Campus Security Div |

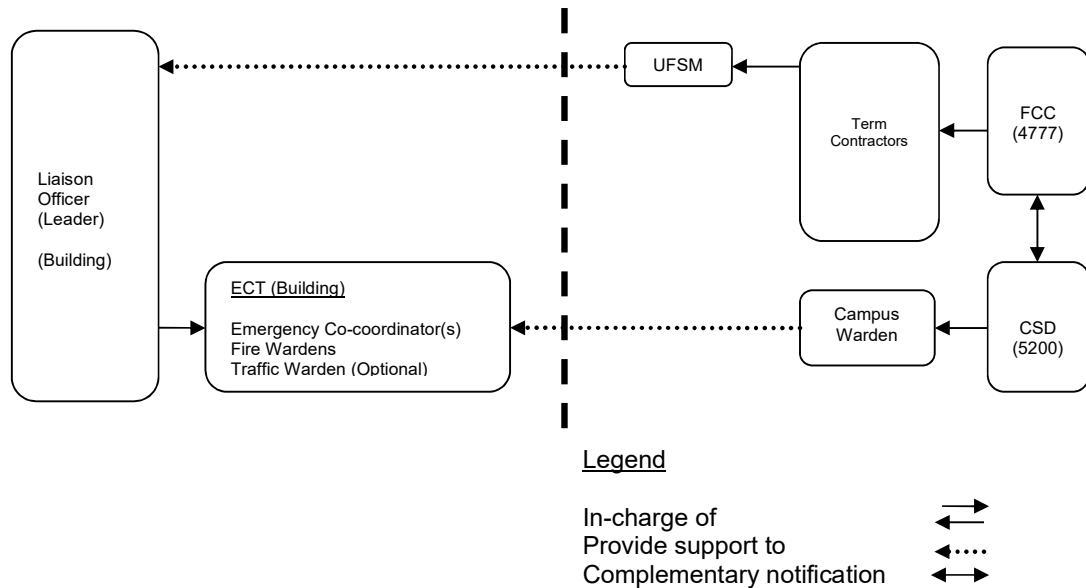


Figure 2: Emergency Response Structure

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8. Display of Emergency Phone Numbers

| IMPORTANT TELEPHONE NUMBERS TO CONTACT DURING EMERGENCY | |
|--|------------------|
| | Telephone Number |
| Police | 999 |
| Fire Engine / Ambulance | 995 |
| Non-Emergency Ambulance | 1777 |
| Fault Reporting Centre | 6790 4777 |
| Emergency and Campus Security (24 Hour Hotline) | 6790 5200 |
| NTU Medical Centre | 6793 6828 |
| Dr Dinh Xuan Quyen (Liaison Officer) | 9720 0927 |
| Dr Liang Kun (Dy Liaison Officer / CINTRA Safety Officer) | 6790 6595 |
| Choo Hwee Pin (Emergency Coordinator) | 6790 6595 |

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Annex 1

First Fire Alarm

| Role | Check Panel | Put on Emergency response ID Vest | First Aid AED | Spill Kit | SCBA | Equipment | Marshalling Area | Fire Assembly Area | Summary of Duties |
|--------------------------------|-------------|-----------------------------------|---------------|-----------|------|------------------------|------------------|--------------------|--|
| Liaison Officer | | X | | | | | | | Overall co-ordination. |
| First Aid Group | | X | | | | | | | Get ready first aid item. |
| Emergency Coordinator (ECT) | | X | | | | | | | |
| Fire Warden | X | X | | | | Whistle & torch light. | | | Confirm fire or sprinkler discharged. Evacuate occupants if necessary. |
| University Fire Safety Manager | | | | | | | | | Alerted by Fault Reporting Centre (FRC). |
| Fire Response Team | X | | | | | | | | - Alerted by FRC; - Check panel and area; - Fight fire. |
| Campus Warden | | | | | | | | | Alerted by FRC. |

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Second Fire Alarm

| Role | Check Panel | Put on Emergency response Vest | First Aid AED | Spill Kit | SCBA | Equipment | Marshalling Area | Fire Assembly Area | Summary of Duties |
|--------------------------------|-------------|--------------------------------|---------------|-----------|------|---------------------------|------------------|--------------------|--|
| Liaison Officer | | | | | | | | X | Take charge if the situation until relevant authority takes over (e.g. Police/SCDF). |
| First Aid Group | | X | X | | | Stretcher & first aid box | X | | Provide first aid. |
| Emergency Coordinator (ECT) | | | | | | | | X | - Receive building clearance status from FWs; - Update LO. |
| Fire Warden | X | X | | | | Whistle & torch light. | | X | - Evacuate floor and ensure occupant clearance; - Put up "No Entry" signage - Update EC. |
| University Fire Safety Manager | | | | | | | | X | Co-ordinate with LO. |
| Fire Response Team | | | | | | | X | | |
| Campus Warden | | | | | | | | X | Standby for escort duty and/or traffic control. |

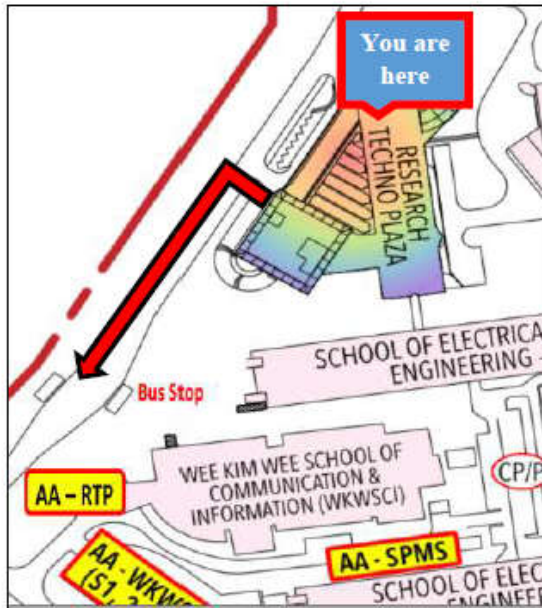
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Appendix 1 – CINTRA Fire Assembly Area

| | |
|-----------------|--|
| Assembly Area : | Research Techno Plaza (RTP) |
| Location : | Car porch area of Wee Kim Wee School of Communication and Information (WKWSCI) |

Assembly Area for Research Techno Plaza



Updated 3 July 2019

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Version History

This Table below reflects the summary of changes made to the document. The full change information is indicated with yellow highlight in the document content.

| Revision | Section | Details of Change | Author | Effective Date | Approved By |
|------------|---|---|------------------|----------------|--------------------|
| 00 | - | Initial Release | Wang Xingli | 21 Aug 2017 | Dr Dinh Xuan Quyen |
| 01 | 3.3 | Add Dr Muhamad Danang Birowosuto as deputy liaison officer | Wang Xingli | 17 Jan 2019 | Dr Dinh Xuan Quyen |
| | 3.3 | Replace: Dr Zeng Shuwen with Liliana Tjahiana | | | |
| | 3.3 | Amend Table as indicated | | | |
| | 4.2 | Replace: Dr Zeng Shuwen with Liliana Tjahiana | | | |
| 02 | 3.3 | Amend the Emergency Coordination Team as indicated | Dr Zeng Yongquan | 18 Dec 2020 | Dr Dinh Xuan Quyen |
| | 4.2 | Replace Dr Wang Xingli with Choo Hwee Pin and remove Liliana Tjahana | | | |
| | | Replace Dr Muhamad Danang Birowosuto with Dr Liang Kun as deputy liaison officer. | | | |
| Appendix 1 | Update the location of CINTRA Fire Assembly Area. | | | | |

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