KING ABDULLAH UNIVERSITY OF SCIENCE & TECHNOLOGY

EMERGENCY RESPONSE GUIDE

PART 1

OVERVIEW

KAUST 911 CCC Emergency Contact	911 (landline) or 012 808-0911 (Mobile)
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1. Overview

1.1 Scope of Plan

This **KAUST Emergency Response Guide** serve as a tactical level guide in response to a disruptive event or incident, and provides detailed emergency response procedures, with the objective to protect life, limit damage to property and protect the environment. This guide outlines emergency response procedures to protect its community, including faculty, staff, students, contractors, and visitors from hazards caused by technological failures, natural disasters and human caused.

This **KAUST Emergency Response Guide** is in alignment with the **KAUST Emergency Management Plan (EMP)**. The **EMP** serves as the overarching plan, guiding KAUST leadership to manage and coordinate emergencies on a strategic level (University Executive Committee) and a tactical level (Emergency Operations Team). The EMP follows an all-hazard approach as per the Federal Emergency Management Agency (FEMA) guidelines and principles. Refer to the EMP for more details.

1.2 Emergency Operations Team (EOT) Goals

- Protect lives, minimize property loss, and protect the environment.
- Provide for the rapid resumption of critical operations and essential services.
- Compile accurate documentation and records for post-incident reviews and cost recovery activities.

1.3 KAUST Emergency Response Guide Organization

- **Part One – Overview:** Provides an overview of the KAUST preparedness and response strategies, outlines department/entity roles and responsibilities.
- **Appendices:** A restricted document – contains the sensitive information related to personnel contact information, critical infrastructure, and other essential information.
- **Part Two:** Hazards Specific Guides/Procedures that augment the EMP.

1.4 Authorized to Activate the EMP

The following individuals are authorized to activate the EMP:

- Incident Commander (EOT)
- Manager Fire & Emergency Services
- Emergency Manager

1.5 Criteria for Activation of the EMP

- Advance Warning – A situation which has the **potential to escalate** and significantly impacting KAUST.
- A situation or incident with moderate or major impact on the health and safety of the KAUST community, or essential services, resources, critical infrastructure, or the environment, which requires a coordinated incident response.
- A situation or incident impacting KAUST beyond the normal response capability of existing resources.
- Emergency declared by local government, which has the potential to impact KAUST.
- This includes KAUST operations at remote facilities/off-site locations.

1.6 EMP Approval

The EMP will be reviewed by Emergency Management. Upon the completion of the review and final changes, the EMP will be distributed as per the distribution list in the EMP and implemented.

1.7 Definitions & Abbreviations

KAUST	King Abdullah University for Science and Technology
ER	Emergency Response
Emergency	An urgent unexpected and usually dangerous situation that poses an immediate risk to health, life, property or environment and that requires immediate intervention or response.
KAUST EMP	KAUST Emergency Management Plan – covers all KAUST activities on campus and provides tactical guidance and strategic oversight of KAUST impacting incidents.
EOT	KAUST Emergency Operations Team. Implements emergency response procedures at university level.
ERP	Emergency Response Plan (this document)
ERT	Emergency Response Team – Department Level
Hazard Specific Plan	Describe the courses of action unique to particular threats and hazards. e.g., fire, medical, evacuation, etc.
First Responder	The purpose of the first responder at the operations level, is to protect life, property, or the environment from the effects of the incident/occurrence/ release, not stop it.
AAR	After Action Review
BCP	Business Continuity Plan

OSHA	Occupational Safety and Health Administration is a large regulatory agency of the United States.
FEMA	The Federal Emergency Management Agency is an agency of the United States Department of Homeland Security,
All-hazards Approach	Addresses capabilities-based preparedness to prevent, protect against, respond to, and recover from emergencies.
Hazard	An event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, damage to the environment, interruption of business, or other types of harm or loss.

1.8 Reference Documents

- KAUST Emergency Management Plan (online). Accessible from: https://hse.kaust.edu.sa/services/fire-emergency-services/emergency-management

2. Roles and Responsibilities – Tactical & Strategic Level

2.1 KAUST Emergency Operations Team (EOT)

Team of personnel to be notified, partially assembled or fully activated to provide management of and support to campus emergency response, continuity and recovery operations on a *tactical level*.

EOT Role:

- Tactical command and control over emergency operations.
- Activation of KAUST Emergency Response Departments.
- Deployment of resources.
- Emergency messaging related to safety and operations.
- Situation reports to the UEC.

2.2 KAUST University Executive Committee (UEC)

The UEC consists of the University senior executive leaders and chaired by the President. The UEC are the University thought leaders and provide *strategic* council and support during an emergency. The UEC convenes separately from the EOT, providing advice and support. The UEC do not concern themselves with managing the actual emergency incident and therefore do not take command of the emergency. The UEC focusses purely on strategic support to the EOT and the overall University strategy and reputation. The UEC is notified/briefed on moderate and major emergencies and

activated as needed.

3. EOT Notification & Activation

When is the KAUST EOT activated?

The EOT is activated by the Incident Commander and the ***KAUST Emergency Response Plan*** is activated when it is apparent to the Incident Commander that a situation or incident has the potential to, or have a

- Moderate or major impact on KAUST community, property, essential services, critical resources, infrastructure, operations or reputation of KAUST and or,
- require a coordinated approach to bring to a close and or,
- may require additional support and/or resources, beyond the existing capacity.

It is always possible that a minor situation or incident may escalate, triggering the Incident Commander to activate the EOT and brief the UEC.

In case of a university-impacting situation or incident, the Incident Commander will brief the UEC and the UEC Chair will make the decision to activate the KAUST Crisis Center (KC2).

4. Incident Notification and Escalation

For incidents ***within*** KAUST:

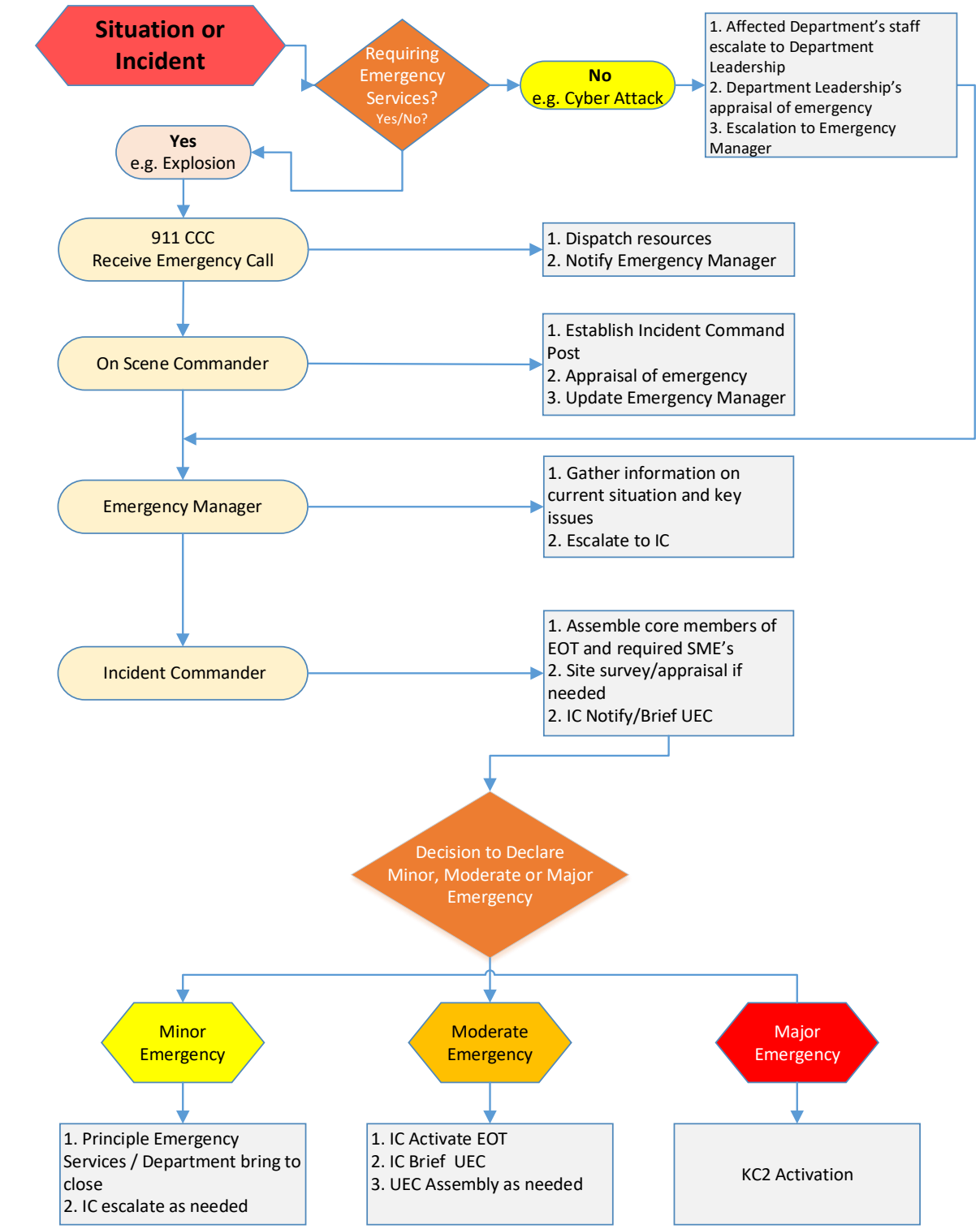
- Call KAUST 911 on number 012 8080 911 from a mobile phone and call 911 from landline within KAUST for immediate emergency assistance.
- KAUST 911 will mobilize emergency responders and notify the KAUST Emergency Operations Team (EOT) to assist with coordination of resources and support.
- KAUST 911 or the affected department's leadership will provide the KAUST Emergency Manager (EM) with preliminary information concerning the incident or situation.
- Emergency Manager notify the Incident Commander (IC) and share available information.
- Refer to the Situation/Incident Escalation Flow Chart on Page 8 below for more details.

5. Incident Levels

The table below provide a breakdown of the **levels** of emergencies, **impact**, **resources required,** and emergency management **level notified/activated.** This table applies to incidents within KAUS.

Level of Emergency	Impact	Resources & Capabilities Required	Incident Escalation
Minor Emergency	Minor impact on: • individual(s)/property • one location • contained small area: ○ small fire ○ incident with minor injuries ○ contained hazmat spill	• KAUST Principal Emergency Services/Emergency Support Functions bring to a close • No need for mass emergency communications.	911 CCC or Affected Department - ➢ Escalate to EM ➢ EM escalates to IC. ➢ IC escalate as needed. ➢ IC will escalate reputational risk to the UEC
Moderate Emergency	**Moderate impact** on: • Multiple individuals/properties • May also affect adjacent areas and infrastructure e.g., pluvial flooding impacting operations. • Disruption (less <48-Hours) of essential services ○ IT network outage ○ Water supply failure ○ Power outage	• Requires a coordinated approach by management and response personnel. • Requires additional resources. • Activation - EOT/UEC as needed. • Activation - Crisis Communications Plan • Mass emergency communications	911 CCC or Affected Department - ➢ Escalate to EM ➢ EM escalates to IC. ➢ IC activate EOT. ➢ IC escalate to UEC. ➢ President or designee activate UEC as needed. ➢ IC brief EOT/UEC
Major Emergency	Major impact on KAUST Threatens: • Death/serious injury • Prolonged disruption (greater > 48-Hours) of essential services • Cyber attack • Pandemic • Act of terror • Envir. disaster • Natural disasters • Major fire/explosion • Reputational damage	• Beyond the normal capabilities of KAUST Emergency Services and resources • Requires significant coordination of additional internal and external resources. • Mass emergency communications	Incident Commander - ➢ EOT & UEC notification ➢ KAUST Crisis Center (KC2) activation (EOT/UEC) ➢ KC2 briefing

SITUATION/INCIDENT ESCALATION FLOW CHART



6. Emergency Operations Team (EOT) - Meeting Agenda

Assessment	- Examine the scope of the disruptive event or incident and potential implications. - Complete Situation Report(s). - Provide a status update on agreed actions (from previous meeting).
Confirm assessment of the incident	- Each subject matter expert to confirm current impact to critical activities and associated resources. - Perform detailed assessments as time permits.
Set objectives	- What are the business priorities at this time? - Are there any directives from the University Executive Committee (UEC)? - What parameters and restraints do we need to work within? - Write down agreed objectives for the team and timeframes.
Agree actions	- Capture agreed actions using the Management Information System- Information Coordinator. - Agree date/time of next meeting. - Subsequent meetings - Update and review of actions completed.

7. Stand Down and Return to Normal Activities

Stand down from an incident will be determined by the relevant level of command in control at the time and a plan to return to normal will be communicated via the Department/Entity Head.

Following incident stand down, if safe to do so, departments should return to their normal place of work and continue their previous activities and operations.

Staff involved in the emergency response should take part in debriefs and lessons learned and provide input into the After-Action Review (AAR) if requested. Utilize the incident to identify

areas of improvement that is needed to the ERP.

8. Incident Termination

- The Incident Commander in consultation with the EOT and the On-Scene Commander, will assess the situation as it relates to the impacted areas, and declare the *All-Clear,* once safe to do so.
- Receive and review Preliminary Damage Assessment Report.
- Commission an investigation and ensure all evidence is preserved.
- Conduct After Action Review (AAR).
- Lessons Learnt: Ensure that the Emergency Response Plan is amended where necessary.

Appendix A – Contact Lists

KAUST University Contact List:

Contact	Contact Details	Service
Government Affairs	054 470 1111	On-Call 24/7
KAUST 911 CCC	911 (landline) or 012 808-0911 (Mobile)	911 Command Center. Fire Service, Ambulance, Security & Incident support **within KAUST**
HSE	054 038 3173 (Mobile)	On call HSE 24/7
IT Helpdesk	910 (landline) or 012 808-0910 (Mobile)	08:00 – 22:00 (Sunday – Thursday). Diverts to on call cover out of hours.
FM Helpdesk	959 (landline) or 012 808-0911 (Mobile)	08:00 – 17:00 (Sunday – Thursday). Diverts to on call cover out of hours.
HR Emergency Contact	0544 700 277 (Mobile)	On call HR 24/7
Human Resources Helpdesk	HRHelpdesk@kaust.edu.sa	08:00 – 17:00 (Sunday – Thursday)

EMERGENCY RESPONSE GUIDE

PART 2

HAZARD SPECIFIC GUIDES & PROCEDURES

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1. FLOOD/ADVERSE WEATHER PREPAREDNESS & RESPONSE

Although rare, severe rainfall and storm events can and have led to serious flooding and wind caused damage in this region. Such rainfall events have historically occurred in this area, where sudden and severe rainfall caused flooding which resulted in many lives lost in Jeddah. More localized flooding events, such as those caused by damaged or leaking water pipes, can also result in significant building damage and disruption if not handled promptly.

1.1 FLOOD/STORM PREPAREDNESS

A number of pre-event preparedness and resilience activities should take place before an adverse weather event occurs:

- KAUST responsible departments should always monitor weather forecasts from Marine Operations Center (MOCC) and Civil Defense for notification of adverse weather events in the area, paying particular attention to Storm/Sandstorm/Heavy Rain/Hail/Flood Warnings.
- At all times during the year, because adverse weather conditions can occur during any season, all departments should employ a strategy on applied resilience with regards to supplies, resources and personnel rosters as part of an on-going contingency plan.
- All departments should also have in place any necessary service level agreements with external providers for additional services or supplies which may be required during a prolonged adverse weather event.
- Facilities Management (FM) shall ensure all preparedness arrangements are in place and the early convening of actionable meetings when an adverse weather warning is received. A summarized “Flood / Adverse Weather Preparedness Action Plan is depicted in the table below.
- There are a number of departmental specific mitigation measures and preparatory activities which should be taken on receipt of an adverse weather warning. These include, but are not limited to the following recommendations:

FLOOD / ADVERSE WEATHER PREPAREDNESS & RESPONSE PLAN

1. Continual Monitoring "CIVDEF" Warnings / Official Weather Forecasts

- Marine Operations Control Center / Civil Defense / KAUST Emergency Alerts / LENS Updates
- Give Advance Notice & Alerts to all Department Heads

2. Convene Emergency Preparedness Action Meetings

- Departments carry out all necessary preparatory checks & actions
- Source updated & accurate related information - Civil Defense / GA
- Communication of relevant information & instructions to community a.s.a.p.

3. Assess Potential Impact & Emergency Status

- Is KAUST going to be affected? / How badly?
- Request continual updated information & weather forecast tracking
- Ensure all departmental inclusion
- Consider EOC Activation

4. Establish Prioritization of Preparedness & Resilience Actions

Current Situation / Key Issues / Strategic Aims & Priorities / Actions

- Establish Communications with Emergency Services
- Ensure all support services are prepared & on standby
- Obtain best & early information for Schools, Transport & Community
- Establish BCM Team

5. Final Check on Requirements

- All of FM mitigation actions carried out & checked again?
- Enough supplies in stock? - Food, Water, Fuel, Resources, Personnel, Transport & Service Providers?
- Have relevant communications been issued?

6. Decision & Management Process

- Ensure Dynamic Risk Assessments are carried out & Continuous Updates Logged
- Consider Evacuation, Temporary Accomodation & Additional Resources Required
- Should University Opeartions / Services be suspended?

7. Post Event / Stand Down of Alert

- Enter Recovery Phase / Request Damage Assessment Report / Inform Insurance
- Liaise with BCM Unit on all recovery issues
- Formal Stand Down of Major Emergency & Close of Incident
- Ensure all information was recorded & Initiate Incident Debriefs & Report

Roles & Responsibilities - Operational Level

HSE & Emergency Management

- Continually monitor all weather forecasts, communicating and advising on all updates.
- Assess the need to activate the Emergency Operations Team.
- Keep the Incident Commander informed of the situation.
- Liaise with I.T. and Security to ensure preparation and operational readiness.
- Liaise with FM and Security to identify hazardous conditions, especially construction areas for any loose items which may be displaced in high winds. Give instructions to remove any such materials indoors or tie down items which cannot be moved.
- Monitor all associated environmental impacts, inform regulatory authorities and advise on any mitigation measures.

Facilities Management

- Carry out a KAUST wide check for leaves and debris etc. which may be blocking any drainage channels.
- Check operability of all pumps in Lift Stations.
- Carry out a check on availability of and fuel levels on all university generators, (fixed and portable).
- Ensure there is enough additional fuel (petrol and diesel) to enable prolonged usage.
- Check the running condition of any portable pumping capabilities and vacuum trucks.
- Identify key low-lying or known areas where water can lie and deploy vacuum pumps to these locations.
- Drain all holding ponds and move equipment and supplies out of flood prone areas.
- Utilities to ensure protection, as far as reasonably practicable, of all critical functions, ensuring protection from water egress to essential sub stations and treatment plants etc.
- Shut down KAUST irrigation systems and any non-essential water supplies.
- Strategically employ the use of sandbags, flood barriers and any available damming material to protect critical infrastructure and venerable areas were deemed necessary.
- Meet with all contractors in construction areas and ensure checks are carried out for any loose items which may be displaced in high winds. Remove any such materials indoors or tie down items which cannot be moved.
- Recreation and Marine liaise with Marine Operations Control Center and CMOR to consider cancellation of any scheduled marine, beach and outdoor pool activities.
- Put in place arrangements to have predesignated areas such as the Campus Diner, Al Marsa, The Recreational Clubs and the Central Services Diner to act as Reception Areas for any members of the community which may be temporarily displaced through flooding.

- Housing division to assess any temporary housing; vacant units, vacancies at the KAUST Inns and external accommodation to temporarily house any displaced members of the community during and post flooding.
- Carry out a full primary and secondary emergency communications check and have all portable equipment fully charged.
- Transport division to assess availability of all transport and monitor road going condition warnings, especially for external motorway journeys and consider the possibility of having to either cancel unnecessary transits, or facilitate additional journeys as required.
- Transport division to have plans in place to provide highline / 4x4 vehicles to assist with any necessary community evacuations.
- Ensure all vital/sensitive equipment and chemical stores etc. be removed from Level Zero area in the Campus or take precautionary protection measures.
- Assess all Campus building roofs and external areas for loose objects or debris and remove.
- Ensure all Campus building roof channels, drains and downpipes are clear and flowing freely.
- Ensure a plan is in place including an RVP, holding area and unloading areas for all supply deliveries to KAUST and communicate this to all service providers.
- Ensure all sensitive and reactive substances are removed to secure higher storage areas in the Chemical Warehouse.
- Ensure all catering, retail and service units have enough supplies, resources and personnel to function for long durations.

Emergency Communications

- Marine Operations Centre closely monitor all forecasts on an hourly basis distributing updates to key personnel.
- On receiving an official government adverse weather warning, GBC in liaison with the Emergency Operations Team (EOT) Incident Commander to send out a KAUST advisory announcement to the community.
- TKS be prepared to consider closure of all schools and preschool facilities and give early warnings.
- Community Life to consider closure of all KAUST vendor facilities and give early warnings.
- KAUST Health check their Internal Emergency Plan and assess availability of all staff, especially those which may need to be transported in from Jeddah and KAEC (establish if the necessary transport is available).
- HR have criteria in place to give advance travel warnings, specific transport arrangements, and/or work from home notices to personnel who live external to KAUST.

- HR have contingencies in place for a situation where high numbers of staff may not be able to attend for work.
- Continue to monitor all forecasts for the possible need to release staff from work early to get home safely or put in place arrangements to temporarily house staff who cannot return home.
- Consider cancellation of travel arrangements for personnel arriving in or travelling out of KAUST and KSA.
- Liaise closely with FM Department for any necessary preparedness arrangement required.

KAUST 911 Command & Control Center (CCC)

- Ensuring the correct personnel from the correct departments are mobilized and notified as necessary.
- Coordinate two-way radio communications checks and call group allocation.

Principal Emergency Services – Security/KAUST Fire Department/KAUST Health

- All services to ensure availability of all on-call personnel and any additional rostered personnel which may be required, for current shift and the entire event duration.
- All services should liaise with IT and 911 CCC to ensure full operability and resilience of communications systems.
- All services to liaise with 911 CCC, Marine Operations Control Centre and Emergency Management to monitor up to date weather forecasting and probable resource location requirements.
- All services ensure the operational readiness of all vehicles and brief all personnel of the depth capabilities of each vehicle and limitations regarding driving in flood waters etc.
- All services ensure all units have two-way radio communications and no sole workers should be deployed to areas of danger without backup.
- All services should ensure all vehicles and portable motorized equipment are fully fueled up before the event and arrangements are in place for required refueling.
- All services should be aware of the possible increase in service demands due to rescue requirements, alarm activations and fires caused in evacuated buildings etc.
- All services understand their roles in a community wide evacuation and be prepared to assist where required.

KAUST Fire Department

- The Fire Department to assess the availability of any small craft, inflatables etc. which may be utilized as rescue flotation devices if flooding becomes severe or prolonged.
- Fire Department personnel should be briefed on Electrical Disconnect practices if water depth hits electrical circuits/devices.
- The Fire Department should liaise with FM Department regarding assistance they may give in preparedness measures, such as the deployment of sandbags and flood barriers etc.
- The Fire Department check all portable pumping equipment water rescue equipment and the appropriate PPE for all water rescue related activities.
- Ensure full safety briefings to all emergency service personnel, to include notice of the dangers of electrocution around water and that no personnel should enter fast flowing or contaminated flood waters without the appropriate levels of PPE.

KAUST Security

- Security to have plans in place to assist with any staged evacuation of the community.
- Have equipment in place to cordon flood impacted/hazardous areas, and close roads where necessary.
- Security to ensure vehicles are fitted with PA systems to communicate instructions or safety announcements in impacted/hazardous areas.

KAUST Health

- KAUST Health Paramedics to have necessary transport plans in place to maximize efficiency and ability to respond to patient demands, including the use of highline or 4x4 vehicles.
- In case of an overflow of the KAUST Health facility as it relates to the number of casualties, KAUST Health will activate the Emergency Response Plan, which needs to be kept up to date.
- KAUST Health to ensure agreements are in place to transport overflow casualties to designated hospitals in the region and have identified these hospitals.
- KAUST Health to ensure agreements are in place with designated hospitals to assist with casualty transport and care when necessary.

I.T. Department

- I.T. and all Emergency Services carry out a full primary and secondary communications check and have all portable equipment fully charged.
- Work with the Emergency Services and 911 CCC to put in place any additional arrangements to give greater resilience to emergency service communications.
- Liaise with all departments for functionality and resilience checks on all communication and network equipment.
- Assist all departments in their set up and testing of additional emergency radios/telephones.
- Carry out a KAUST-wide assessment of any weather sensitive equipment and take the required control measures to protect it, including the shutting down of some services if necessary. Any such planned disruptions in services should be communicated to management and the community.
- Assist GBC in any communication media channels or devices they may need to implement community alerts.
- Deploy personnel to any EOC activation to assist with any IT requirements.
- Have in place communication, network resilience and data recovery plans and liaise with BCM teams on all such matters.
- Have in place resilient communication systems and devices so as to ensure external communications during a prolonged outage.

All Departments

- Be prepared to assess the possibility of potentially having to give the instruction to cancel any unnecessary university activities and for personnel to work remotely from home.
- Finance Department to ensure BCM establish criticality links with core operations, especially I.T. for all continuity and recovery plans if needed.
- Government Affairs be prepared to establish links with any external agencies which may be required if the situation becomes prolonged.
- Government Affairs to establish field points of contact in external areas which may be experiencing the adverse conditions to gain information and gauge impact.
- All departments have appropriate staffing and resources in place and additional resources on-call, monitor the forecasts and await further instructions.
- GBC be available to work with the EOC and other departments to send out any necessary community information and warnings by all media available.
- GBC to publish Flood Safety Awareness notice on the LENS to include the following:
    - ***Do not try cross or drive in any fast-moving water.***
    - ***Avoid all flood waters without the correct PPE as flood waters can contain sewage and skin irritants.***

- ***Beware of dislodged drainage covers which can suck a person in at great force.***
- ***If you must enter flood waters use a stick etc. to test the ground in front of you and always keep 2 points of contact with the ground.***
- ***Give assistance to those who need it, young and elderly etc.***
- ***Keep clear of any flooded areas where electric cables are down, or water has encroached on electrical equipment for the risk of electrocution.***
- ***Move to higher ground where possible.***
- ***Move any valuable, critical, sensitive or electrical equipment to a higher floor.***
- ***Monitor all flood/storm alert notifications for instructions and possible evacuation alerts.***

Note: When major flooding is expected, the EOT may make a recommendation to the UEC regarding the evacuation of KAUST community. *Refer to the Evacuation Procedure, Page 12 below.*

1.2 FLOOD/STORM EMERGENCY RESPONSE

In addition to all of the preparedness measures as outlined above, KAUST stakeholders supporting the emergency will follow the below guidelines outlining the actions these emergency support functions should take during an adverse weather event/flooding.

Roles & Responsibilities

All Personnel & Community Safety Procedures During a Flood:

- All personnel and community members continually monitor and adhere to all weather forecasts and instructions issued from all responsible departments.
- Act responsibly and calmly to all instructions given by the responsible departments.
- If during business hours evacuate the affected areas immediately.
    - Secure vital equipment, records and chemicals (move to higher, safer floors).
    - Shut off all electrical equipment (if safe to do so).
    - Secure all laboratory experiments.
    - Contact KAUST 911 CCC to provide updates of affected areas.
    - Be patient when calling 911 CCC as operators will be busy dealing with several calls.
- Do not return to your building unless you have been instructed to do so by emergency response teams, or senior management.
- Use extreme caution around appliances or electrical receptacles near water.

- Follow instructions given by the 911 CCC operator, emergency response teams, or senior management for immediate action.
- Outside business hours move valuables to Higher Ground/Floors.
    - Shut off any utility supplies, electricity, gas and water and switch off and unplug any electrical devices/appliances if safe to do so.
    - Move everybody to a higher floor or higher ground, be prepared to evacuate (Refer to Evacuation Plan).
    - Follow orders issued by emergency response teams/agencies and be prepared to evacuate when asked.
    - Prepare an emergency grab bag with some essentials; change of clothes, flashlight, medications etc.
    - Vacate the area for higher/safer ground if requested.
- Avoid Moving Water:
    - Avoid moving water and areas where the depth of the water is unknown.
    - Use a stick to check the firmness of the ground in front of you and always keep two points of contact with the ground.
    - Do not walk, drive or swim in flooded areas.
    - Floods waters can be contaminated with sewage, chemicals and irritants etc.
    - Avoid already flooded and high velocity flow areas. Do not attempt to cross flowing streams of water.
    - Pay particular attention to dislodged and open drainage/sewage covers, which can suck a person in with great force.
- Stay Clear of Electrical Wires:
    - Electricity and water do not mix! Stay clear of any downed power lines, exposed electrical wires, or electrical outlets and devices in contact with water.
- If driving:
    - Never try to drive through floodwaters. What appears to be fairly shallow water can be enough to make the tires lose contact with the road and wash the car away, possibly trapping passengers helplessly inside. Turn around and go another way.
    - If the vehicle stalls, leave it immediately and seek higher ground. Rapidly rising water may engulf the vehicle and its occupants and sweep them away.
    - A 4x4 vehicle has no greater capability than any other vehicles unless it has a high-level air intake snorkel fitted.

KAUST 911 Command & Control Center

- Obtain all crucial information and complete the Incident Report Form.
- Mobilize the necessary emergency response services.
- Liaise with Marine Operations Center for up-to-date forecasting information and disseminate to responding crews.
- Send Security to the Emergency Operations Center (EOC) if activated.
- Keep complete log of all events for prioritization of resources and share with EOT etc.
- Monitor University areas affected by the flood/storm on CCTV and pass relevant information on the Emergency Services and the EOT.
- Issue any pre-arrival instructions of affected members of the community.

Principal Emergency Services / On-Scene Commander

- Respond to the affected area/s immediately.
- Decide if evacuation is necessary and on strategy – Communicate this to the EOT.
- Liaise with other Emergency Services for a coordinated approach to rescue and evacuation.
- Rescue all venerable persons to safe designated reception areas, assist with moving people to higher ground.
- Establish communications links with all affected areas and Reception Centers.
- Assist maintenance crews to alleviate affected areas.
- Request any special equipment or assistance required, e.g., portable pumps, inflatable boats, PPE, heavy lifting equipment etc.
- Update the EOT Incident Commander and advise if EOC should be activated.
- Security to set up all fixed and dynamic safety cordons, barriers and close roads/areas where required.
- All services to coordinate on any instructions given by the EOT.
- Ensure the safety and welfare of all personnel under your command.

Emergency Operations Team (EOT)

- Receive incident report from the On-Scene Commander.
- Notify and inform the University Executive Committee (UEC).
- Ensure Insurance and Business Continuity / Recovery Team are notified.

- Consider and make recommendations on the requirement of closure of schools, university business operations, research activities, marine activities and support activities.
- Consider and make recommendations on transport and travel arrangements.
- Consider and make recommendations on the requirement of partial or total community evacuation.
- Give necessary instructions to mobilize and activate nominated reception centers.
- Give necessary instructions regarding activation of all temporary housing / accommodation arrangements.
- Give necessary instructions to mobilize any internal contingency arrangements regarding, fuel, water and catering supplies.
- Give necessary instructions regarding activation of any external resilience arrangements for supplies, e.g., fuel, heavy equipment, pumps, transport, potable water, road sweepers etc.
- Ensure the availability of relief shifts and personnel for all departments working at the prolonged duration event.
- Ensure the implementation of a formal Information Management System to record all events and associated activity.
- Coordinate with GBC and the EOT Communications Officer Officers to ensure an appropriate and effective level of all communications and community alerts.
- In consultation with senior management, make a decision to involve the Coast Guard and/or National Guard.
- Keep the UEC informed of all critical decisions, actions and support requirements.
- Liaise with Insurance and Business Continuity Teams to commence recovery operations.
- Ensure full recording of all decisions and associated activity through the Information Management System.

University Executive Committee (UEC)

- Provide strategic-level guidance to the EOT.
- Review and approve requests for external assistance (e.g., National Guard, Coast Guard, Civil Defense and Red Crescent etc.).
- Review and approval of requests for additional resources and finances to secure adequate support required to manage the emergency for its entire duration.

2. EVACUATION & SHELTER-IN-PLACE PROCEDURES

During a disruptive incident, personnel may be instructed to evacuate the affected area/building (e.g., alarm activation, verbal instructions, as per general procedures in ***Figure 1*** below) or shelter-in-place. This document provides the basic actions to be undertaken should any of these instructions be issued and it is essential that all personnel are familiar in this regard. This will facilitate a swift and efficient response for effective incident management.

Personnel should make themselves familiar with the KAUST "Building Evacuation Plan" – "*HSE-8-700(1)"* and the "Campus Evacuation Routes and Assembly Points Plan" (Both referred to in Appendices):

https://facilities.kaust.edu.sa/assets/HSE/Safety/LabSafety/Documents/Campus_Emergency_Exits.pdf

Figure 1 – General Evacuation Notice

This plan gives direction on 3 possible scenarios regarding incidents where evacuation should be considered:

1. **Shelter In Place**
2. **Building Evacuation**
3. **KAUST-Wide Evacuation**

2.1 SCENARIO 1: SHELTER IN PLACE

Shelter-In-Place simply means seeking immediate, temporary shelter inside a building, facility or residence. Depending on the nature of the emergency incident, it may be more appropriate to keep individuals safely inside a building or facility rather than to have them evacuate. An air quality issue or other threatening external factor may be present and sheltering in place keeps you inside an area offering more protection.

Note:
All Shelter-In-Place Plans must align with the KAUST Schools' "Lock Down" Drills policies and procedures. When a Shelter-In-Place instruction is given to the KAUST Community in general, the schools' management must initiate their "Lock Down" arrangements. Consideration must be given to all KAUST Schools in the event any Shelter-In-Place instructions are given, and communication lines must be kept open with the school management.

Examples of where Shelter-In-Place may be appropriate include:

- A toxic release affecting the campus.
- A violent explosion, fire, or incident outside the building.
- A sandstorm.
- A threat or danger external to the building or location.
- Or other incident when directed by the Emergency services.

When the "Shelter-In-Place" instruction is given, personnel must follow the general actions outlined below:

- Stay In – Tune In: Stay indoors, preferably upstairs and tune in any predetermined communication media e.g., Facebook, Twitter, Mass Text Notifications, Emails, Help Desks, KAUST TV, Radio etc. - Listen and watch for any public address systems etc.

- Close and lock all doors and windows. If possible, close and seal vents and ducts with tape and/or wet towels etc. (If external gas leak).
- Move to the inner core of the room/building away from any windows and doors leading to the outside.
- Remain in place until appropriate University or emergency personnel tell you it is safe to leave.
- Do not go outside or attempt to drive unless you are specifically instructed to Evacuate.

2.1.1 SHELTER IN PLACE: EXTERNAL GAS RELEASE

This Plan, based on the Shelter-In-Place scenario relating to an outdoor toxic release provides guidance to all personnel i.e., 1st person, emergency response teams, On-Scene Commander and the Incident Commander on the actions to be implemented should this incident occur.

FIRST PERSON

- Follow Shelter-In-Place instructions issued by the Building/Area Manager.
- Stay inside the building.
- Close all doors and windows.
- Seal off openings to your room if possible.
- Move to the inner core of the room/building away from any windows and doors leading to the outside.
- Do not use elevators as they may pump air through the building.
- Remain in place until you are told that it is safe to leave.

BUILDING MANAGERS - Until Arrival of Emergency Services

- Ensure all personnel remain in building(s) until it is determined that it is safe to leave.
- Provide the OSCC / EOC with regular updates.

ON-SCENE INCIDENT COMMANDER

- Upon notification, the HAZMAT team and HSE Environmental Protection Team will be deployed to the incident scene to take air quality samples, identify the source, contain leak if possible and use plume prediction software to manage evacuation if necessary.
- Report any violations to and seek assistance from the official authorities.
- Follow relevant Emergency Action Codes
- Always implement safe working procedures, use and wear the appropriate personal protective equipment before re-entering the area/building.
- Implement actions/procedures as per the Emergency Management Plan.
- Implement actions/procedures as per the Security Guidelines.
- Provide Building Managers with regular updates on the current status of the situation.

INCIDENT COMMANDER

- Notify all Building Emergency Coordinators to activate shelter in place instructions.
- Notify and inform Utilities management to shut down ventilation systems as a precaution.
- Give the instruction to implement positive ventilation where available.
- Obtain regular updates from all Building Managers on the status of the situation and coordinate any assistance where required.
- Provide regular updates to the Crisis Management Team and the BCM Unit of the situation.

2.1.2 SHELTER IN PLACE: EXTERNAL THREAT / DANGER

This Plan, based on the shelter in place scenario relating to an external threat on the campus grounds provides guidance to all personnel i.e., 1st person, 911 command & control dispatcher, On-Scene Commander, Emergency Services, the Incident Commander and the Crisis Management Team on the actions to be implemented should this incident occur.
Note: Each department, floor and area should pre-identify a suitable lockable room/area which offers their staff best lock-down protection and communicate its location to all staff.

FIRST PERSON

Note: First person response options:

1. Lock yourself in

- Move from the outer core and corridors of the building towards an inner core room with a lock.

- If you are near an Office, Lab or other room that locks from the inside this will be your best option.
- Turn off lights and all audio equipment. Place mobile phones on silent.
- Remain as quiet and calm as possible, and out of sight.
- Call 911 Dispatch Centre (call 012 808 0911 from your mobile). Provide the following information:
    - Your specific location - building name and office/room number.
    - Number of people at your specific location.
    - Injuries - number persons injured, nature and types of injuries.
    - Type and description of threat – as much information as possible as to the nature, number and weight of threat.
- Lock all windows. Cover and stay away from the windows or openings that have a direct line of sight into the hallway.
- Keep yourself out of sight and take adequate cover/protection i.e., concrete walls, thick desks, filing cabinets (cover may protect you from projectiles).

2. Evacuate the building or move to an area that can be locked.

- Look and listen to where the threat is. If you see members of the campus community fleeing from a particular area, this is a clear indication that the threat is in that area and may be coming towards you.
- Move away from the threat, away from the noise and commotion.
- Continually reassess the situation for opportune times to make your escape to a safer location if you feel exposed. Gaps in external activity may be the best option for this. Inform 911 of your location if you have moved.
- If you feel safer where you are, stay there and inform 911 of your location.

3. Hide or Run

- Hide. If for some reason you are caught in an open area such as a hallway you can try to hide, but make sure it is a well-hidden space. Remain as quiet and calm as possible.
- Run. If you think you can safely make it out of the building by running, then do so.
- If you decide to run, do not run a straight line. Attempt to keep objects such as desks, cabinets, fixtures, etc. between you and the threat.

Things not to do:

- Do not open the door for anyone, unless you are sure it is the Emergency Services.
- Do not sound the fire alarm – You do not want to draw people out into the danger area.

- Do not immediately react to the Fire Alarm, carefully assess the situation first and make a judgement if it's safe to remain in place, it may have triggered it in an attempt to draw people out.
- Do not scream.
- Do not run in a straight line.

911 COMMAND & CONTROL DISPATCHER

- Upon receiving the call, obtain all crucial information and complete the Incident Report Form.
- Notify key KAUST personnel i.e., Security Director, Security Managers and Emergency Management Team.
- Direct trained 'First Responders / Negotiators' to scene (if any).
- Implement Emergency Procedures upon approval (e.g., notify National Guard Quick Response Team and other Government Agencies via Joint Command Centre).
- Activate Emergency Operations Centre (EOC).
- Once EOC operational and running, 911 to revert to day to day running of campus operations.

EMERGENCY RESPONSE TEAM (SECURITY)

- KAUST Security Manager & Manager Campus Operations to proceed to the scene and assume role of On-Scene Commander.
- Deploy security and emergency services personnel to scene (keeping in mind safety of all concerned).
- Establish inner/outer perimeter and Forward Command Post.
- Maintain scene integrity until official 'Handover' to designated Government Agency (MOD).
- Once handover complete, KAUST Security Services will continue in support capacity only.

BUILDING/AREA MANAGERS

- Coordinate Shelter-In-Place plans, or area evacuations upon instruction from the On-Scene Commander/Incident Commander.
- Provide personnel at assembly area with incident debrief.
- Provide feedback to the Incident Commander.

Incident Termination:

- Brief personnel at assembly areas regarding the decision to return to building(s).
- On-Scene Commander: Conduct a formal incident investigation.
- Provide the Incident Commander with a report on the above.

INCIDENT COMMANDER

- Establish safe area to set up EOC.
- Try determining exact situation and potential danger.
- Ensure safe approach by all response personnel.
- Push out any relevant community alerts.
- Ensure collection and safe harboring of all evacuated personnel.
- Work with HR and Academic Affairs to establish details on those affected.
- Determine need for additional resources (e.g., external security resources, senior management involvement).
- Consider evacuation versus possible consequences of exposure to danger.
- Ensure outer perimeter is intact and secure.
- Notify and inform the Crisis Management Team Leader of the situation.

Incident Termination:

- In consultation with the On-Scene Commander and external emergency services make a decision to return personnel to the building(s).
- Commission an investigation.
- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.
- Implement Critical Incident Stress Management Debriefing if required.

CRISIS MANAGEMENT TEAM

- Crisis Management Team Leader will:
- Make a decision regarding a campus-wide evacuation.
- Coordinate and request assistance from the Emergency Operations Coordination Center Coordination Group.
- Notify and request the Incident Commander to coordinate the campus-wide evacuation.
- Coordinate and request external assistance (e.g., National Guard, Police, Coast Guard, Civil Defense and Red Crescent etc.).

2.2 SCENARIO 2: BUILDING EVACUATION

In the event of a fire, fire alarms will be triggered by:

- Smoke detectors, heat detectors, water flow detectors, beam detectors, or by manual pull stations.
- Note: Toxic Gas Monitoring (TGM) Alarms in certain lab buildings will trigger the shutdown of all gas sources as well as sending an automated message to the Lab TGM Response Team and the building fire alarms.
- Personal Gas Monitors in certain research labs should also indicate when it is required to evacuate a building.

In the event of an emergency or situation likely to develop into an emergency, where the alarm has not been automatically activated, manually activate the alarm by means of the pull stations and/or the TGM Pushbuttons located at strategic points in the building and isolate all power via the Emergency Shut-Off Switch on leaving the lab.

ACTION PRIOR TO EVACUATION:

Upon hearing the alarm, and ***time permitting:***

- Classrooms – Lecturers and students to gather personal belongings, leave in an orderly manner, reporting to the correct Assembly Point.
- Laboratories – PI/Lab Managers/Senior Supervisors to instruct students regarding safe soft shut-down of any laboratory equipment e.g., gas cylinders, flammable liquid vessels.
- Offices- Staff to secure all vital documents and records, implement soft shutdown computers and printers.
- Utilities – Senior Supervisor to instruct technical staff regarding safe soft shut-down procedures.
- Staff members remain responsible for mobility impaired personnel and visitors, take visitors with you.

EVACUATION PROCEDURES:

1. **Do not** use elevators during an emergency.
2. Exit the building via the designated escape routes.
3. Proceed to the nearest designated assembly area for the building.

Refer to ***Figure 2*** below – Map showing Campus assembly points.

When evacuation procedures have been initiated, Building/Area Managers, Fire Wardens, faculty and senior staff shall assume responsibility for the evacuation in an orderly manner.

Figure 2 – Campus Assembly Areas

ASSEMBLY AREAS:

- Move in an orderly fashion to your Assembly Area point e.g., ***Figure 3*** below.
- Remain at the assembly area and do not wander around.
- Building Managers, Fire Wardens, Faculty and Staff members will assist in maintaining order in the assembly areas until permission to re-enter has been given.
- Appointed personnel (Building Custodian, Fire Wardens and Senior Staff) will assist at the assembly areas, providing feedback to the Emergency Services.
- Security personnel will secure the perimeter of the building and prohibit anybody re-entering until it is safe to do so.
- Follow instructions given by Security personnel and the Emergency Services Incident Commander.
- Do not make any comments/statements regarding the incident while evacuating the building, simply follow the evacuation guidelines and exit the building. All enquiries regarding the incident must be referred to management when outside the building.
- Managers/Supervisors are to remain with their staff and students at the assembly area for the full duration of the emergency situation.
- Re-entry: The decision and instruction to re-enter the premises will be made by the Emergency Services Incident Commander.

Figure 3 – Example Assembly Point Signage

Note: Please refer to the KAUST HSE Building Evacuation Plan Policy and the Campus Emergency Exits Document:
https://policy.kaust.edu.sa/Private%20Policies/Health%20Safety%20and%20Environment/Health%20Safety%20and%20Environment%20Procedures%20or%20Processes%20or%20Programs/Building%20Evacuation%20Plan%20Process.pdf

https://facilities.kaust.edu.sa/assets/HSE/Safety/LabSafety/Documents/Campus_Emergency_Exits.pdf

2.3 SCENARIO 3: KAUST-WIDE EVACUATION

KAUST areas impacted by flooding or other adverse events might require KAUST-wide evacuation of community members. The following guidelines will be followed when it becomes necessary to evacuate KAUST-wide community to safe areas.

- The decision to implement evacuation procedures rests with the Emergency Operations Team (EOT).
- The procedures for an evacuation will vary, depending on the nature of the event.
- In all cases when the decision has been made to evacuate, the community will likely be evacuated in stages, beginning with the areas that are in the immediate vicinity of the threat. Other areas may then be evacuated, depending on the nature of the threat. This staged evacuation is preferable to a total, immediate evacuation as it triages the populations most in danger, minimizes the likelihood of gridlock and congestion, and provides for ingress of emergency vehicles and personnel. In all cases, evacuees would be directed away from the vicinity of the threat.
- Community will be alerted by Emergency ALERTS via KAUST Central, group emails, The LENS, and if necessary, security patrol vehicle audio alerts, please follow all specific instructions received.
- Pre-designated community assembly points and Reception Centers / Holding Areas i.e., have been established in the schools and recreational facilities etc. (See ***Table 1***)
- The Evacuation Plan must be operated in tandem with and supported by the Emergency Transport Plan (see below) for an efficient and effective evacuation of all KAUST community members.
- Aspects to be considered regarding 'off-campus' and 'off- residential' relocation:
  - *Transportation requirements*
  - *Provision of shaded areas*
  - *Well-being requirements (provision of medical staff, trauma counsellors, hygiene facilities, food & water)*
  - *Alternate housing (local hotels, Aramco Camp, etc.,)*
- In the event of a Community-Wide Evacuation it is likely that the evacuation will be executed on a phased approach, i.e., initially Shelter-In-Place, then Reception Area, then Transport Pick-Up Area etc. and community members must remain alert and listen for updated messaging regarding the evacuation status as the incident unfolds.

- The EOT will determine what gates evacuees use for exiting KAUST depending on the scenario.

2.4 RECEPTION CENTERS / HOLDING AREAS

Each of the following pre-determined Reception Areas or Holding Areas have established Emergency Evacuation Reception Plans which detail how and where community members report to, are processed and instructed which area to be stationed in while awaiting further site evacuation instructions. On receiving the Community Evacuation Signal from the Emergency Operations Team (EOT) each center will activate their own Reception Action List, e.g., deploying staff into reception roles, altering furniture layouts, clearing designated rooms, arranging catering and welfare facilities and liaising with the EOT for further instructions regarding supplies and transport arrangements etc. Evacuating community members should be familiar with their pre-designated Reception Center and cooperate with all instructions received at each stage in the evacuation process:

- Where possible community members should report to their designated Reception Area as tabled below. This is to avoid over-crowding of any one particular Reception Center and reducing cross Campus/Community traffic and confusion etc.
- On arrival community members should park their vehicle as per instructions; areas must be kept clear for emergency transport vehicles and pick-ups etc.
- Each community family member must report into and record their arrival with the Reception Center Marshals.
- Each community member must follow instructions as to what room/area they are to await further instructions in.
- Any community members requiring special assistance or medical aid will be directed/assisted to the medical holding facility, which will be attended to by trained personnel.
- Each member of the community should bring their medication and medical details (Message in a Bottle) with them when evacuating.
- Community members are responsible for their own safety and for staying together as a family unit, keeping strict control over all children etc.
- Each Reception Center Manager will ensure that an area is identified and staffed to cater for lost or separated children, using the internal P.A. system to reunite children with parents or guardians.

- Each community member must follow Reception Center Staff instructions regarding any arrangements for pets etc. Pets may not be allowed inside certain Reception Area facilities, and this must be complied with for the comfort of all community members.
- In the case of a long duration Reception Area stay (greater than 4 hours) each community member must follow all directions regarding rest, catering and welfare arrangements.
- Each community member can only bring with them into the Reception Areas, basic food supplies, water, small personal items, toiletries, change of clothes etc. similar to required). No large items, such as furniture, electrical or sporting items can be facilitated.
- Each department, business unit, faculty unit, or family which have arranged business or personal visitors to be hosted at KAUST are responsible to ensure communication and direction to their visitors in the event of an evacuation.
- The following Reception Centers and their community catchment areas have been identified:

2.5 EMERGENCY SHELTER LOCATIONS

Reception Area	Catchment Area
The Harbor Sports Club	Town Centre Residents and Lower Areas of Safaa Gardens (South of Juniper / Nakhil Lanes)
The Island Recreation Club	Safaa Island Residents
The Racquet Club	Upper Safaa Gardens Residents (North of Juniper / Nakhil Lanes)
Building 20 Auditorium (Campus)	Campus Area Personnel who haven't been able to return to their residences
All School Gymnasiums	If event occurs during school hours, all school children must be managed on site until pick-up arrangements are in place
Building 24 Innovation Cluster 3 & KRTP HQ Ground Floor Reception Area	For all I &ED KAUST and Tenant buildings for collection and transfer to an assigned Reception Center
Building 13 Campus Diner (Catering)	As directed for staged catering in certain circumstances
Central Services Diner	Central Services Personnel who haven't been able to return to their residences

KAUST Inns	When safe to do so guests and personnel remain in KAUST Inns reception areas to be directly transported from there. If deemed unsafe the Harbor Sports Club is the nominated Reception area
KAUST Members or Visitors just in the process of entering or leaving KAUST	Report to relevant Visitor's Center and await transportation to a designated Reception Center

Table 1 – Evacuation Reception Areas

2.6 EVACUATION TRANSPORT PLAN

A Transport Plan and arrangements must be in place to facilitate the evacuation plan. The KAUST Community Life Department will establish service agreement/s with transport service providers/s to have the necessary transport facilities in place to adequately transport the numbers of evacuees required during an emergency. The Transport Plan will be maintained and tested annually by the KAUST Community Life Department. As part of this testing, it must be established how many KAUST residents who do not have access to their own transport and will require transport in an emergency. The following arrangements must be in place relating to the Transport Plan:

- All arrangements within the Transport Plan must be communicated community wide throughout KAUST, both in advance through a scheduled brochure of related information and repeated by bulletins during an emergency.
- The Transport Plan must include enough vehicles to provide safe passage for community members from:
    - All KAUST Residence areas to Reception Areas or Departure Points.
    - All KAUST Campus areas to Reception Areas or Departure Points.
    - All KAUST Research Park Areas or Departure Points.
    - All KAUST Schools to Reception Areas or Departure Points.
    - All KAUST Reception Areas to Departure Points.
    - All KAUST Departure Points to designated external reception centers.
    - All KAUST Departure Points to Point of KSA Departure.
- The KAUST Stadium has been designated as the main Emergency Evacuation Holding and Marshalling Area for buses leaving KAUST for external destinations by road.

- KAUST Marina and Dive Center have been designated as Departure Points for any sea bound evacuations.
- The EOT shall determine which gates road transport evacuees use to exit KAUST depending on the scenario.
- The pre-designated Pickup and Departure Points are listed in ***Table 2*** below:

Emergency Pickup & Departure Points	Service Area	Vehicles Required
All Normal KAUST Internal Bus Route Stops	All KAUST Residences, Campus, Administration and Service Areas to Reception Centers.	Normal internal bus route buses equipped with loud hailers
All Reception Areas	Transport all evacuees from nominated Reception Centers to KAUST Departure Point Holding Area, or external reception areas.	Normal internal bus route buses, or large external tour buses
KAUST Stadium or Reception Areas	Transport by road all evacuees from KAUST to external reception areas or KSA departure port.	Large tour buses, fully fueled and driven by drivers with competent knowledge of area destinations and proficient in both Arabic and English.
KAUST Marina	Transport by sea all evacuees to nominated external seaport to rendezvous with road transport.	Seaworthy craft with life jackets for all passengers, crewed by competent coxswains with knowledge of local charts, waters and proficient in both Arabic and English.
KAUST Dive Centre	Transport by sea all evacuees to nominated external seaport to rendezvous with road transport.	Seaworthy craft with life jackets for all passengers, crewed by competent coxswains with knowledge of local

		charts, waters and proficient in both Arabic and English.

Table 2 – Evacuation Pick Up & Departure Points

2.7 EVACUATION TEMPORARY HOUSING PLAN

Temporary housing for those displaced in an emergency must be planned for both short and long-term duration displacements. Initial temporary housing plans should be made to try and relocate KAUST community members within the KAUST site if it is deemed safe to do so. Plans should be made to include the following alternative accommodation arrangement in ***Table 3*** below:

Relocation Area	Displacement Scenario
KAUST Inns / Al Khozama Hotel	A certain redundancy percentage of accommodation at KAUST Inns should be maintained for scenarios where small numbers of the community are displaced for short periods. If necessary, all contractors, service providers, business consultants etc. should be moved to accommodation in adjacent areas outside of KAUST. Arrangements and service agreements should be in place with adjacent accommodation providers, e.g., KAEC, Jeddah etc. Al Khozama Hotel Management will be consulted at the time of a housing need to determine the available capacity as an alternative.
Vacant Housing	An up-to-date list of all vacant housing / residences on site, no matter what it's condition and a plan be maintained by KAUST Housing Services, to make the most efficient use of available space. E.g. 1. Completely empty residences 2. Residences where more sharing can be accommodated; normal sharing units not fully utilized, single people in multiple occupancy units, single units with additional space for fold up beds etc. 3. Near completed units under renovation which could be used in an emergency, safety inspection permitting.

Service Provider Residential Units	A review be carried out by Housing Services of all vacant Service Provider Residential units, compounds etc. for possible use during an emergency and an itinerary of requirements to make them habitable. This list and itinerary should be updated annually.
Off-Site Accommodation	A service agreement should be in place between KAUST Housing Services and various adjacent hotels as to their possible accommodation capacity and duration rates etc. for short, medium and long-term displaced personnel.
Improvised On-Site Accommodation	A review of all areas within KAUST facilities which may offer space to house temporary beds etc. during a worst-case scenario where emergency housing is required, e.g., Recreational Halls, School Halls, Auditoriums and Large Conference Areas etc. This review and inventory should be maintained by KAUST Housing Services, and an agreed number of temporary bedding units purchased.

Table 3 – Temporary Housing Options

3. PROLONGED POWER OUTAGE

This Plan for the utility-based incident scenario of prolonged power outage provides guidance to all personnel and relevant departmental management on the actions to be taken should this incident occur.

Note: Refer to Generator lists in ***Figure 4 & Figure 5*** for areas that have dedicated back-up power. The below actions have been developed to reflect a worst-case scenario.

UTILITIES MANAGEMENT

The nominated personnel on duty/call from the Utilities Department must activate their area functional Business Continuity Plans and implement their preassigned roles and responsibilities.

- The nominated personnel must make the relevant internal and external contacts to establish the nature of the outage, cause and possible duration.
- The nominated personnel must establish and maintain links with the external power supply company and any other relevant organization which may have an impact on the outage.
- The nominated personnel must mobilize all internal resilience plans to switch over all available redundancy from alternative supplies.
- The nominated personnel must ensure that all relevant generators and backup sources of power are operating and are supplied with enough fuel to sustain their operation for the duration of the outage.
- The nominated personnel must escalate a report of the incident situation, probable cause and possible duration to senior Facilities Management.
- Senior Facilities Management will determine if the outage requires activation of the KAUST Emergency Management Plan.
- If the EMP is activated, Utilities and Facilities Management will keep the EOC updated on all relevant issues.

GENERAL ACTIONS OF KAUST PERSONNEL

After working hours:

- Remain calm.

- Where possible, turn off all computers, light switches and appliances to avoid a surge impact when the power is restored.
- Call the 911 Dispatch center regarding the situation and if assistance is required in evacuating the building.
- Proceed with caution to an area that has emergency lighting and exit the building.

During working hours:

- Remain Calm.
- Supervisors/Managers call the emergency services to investigate the outage and provide feedback.
- Where possible, turn off all computers, light switches and appliances to avoid a surge when the power is restored.
- If instructed to evacuate, proceed cautiously to the nearest clear exit to the building assembly area.
- Provide assistance to others in your immediate area who may be unfamiliar with the space.
- Mobility assistance to be provided by designated persons.
- If you are in an unlit area, proceed with caution to an area that has emergency lighting. The backlighting on your mobile phone may function as a source of light to help you navigate.
- If you are in an elevator, stay calm. Use the emergency call button. Many elevators have emergency telephones.
- Gather at the assembly area and wait for instructions from management.

SECURITY DEPARTMENT

Assumption: Security systems (stand-alone & IT dependent) are non-operational.

- Implement specified actions as per the Security Guidelines
- Security Manager – notify all security personnel via radio communication/Bravo devices.
- Secure ingress and egress routes.
- Security personnel located at strategic areas i.e., access control gates, access control points at doors/building are requested to conduct manual operations and security checks. Ensure that personnel are not blocked in areas.
- Where necessary, deploy security personnel to sensitive areas e.g., site perimeter, core labs and major facilities.

LABORATORY MANAGEMENT

Assumption: The following utilities are not available: air conditioner, vacuum extraction, compressed air, de-ionized water, electricity, HVAC

- Laboratories – All laboratories are unique depending on the area of research.
- Evaluate work areas for hazards created by power outage.
- If it is safe to do so, secure hazardous materials, shutdown potentially hazardous processes, switch off laboratory equipment using UPS 'soft shut down' procedures, close any valves, secure sensitive equipment and take actions to preserve research. Keep refrigerators and freezers closed throughout the outage to help keep them cold.
- Loss of power to fume hoods may require the evacuation of the building. If it is safe to do so, close the sash of the fume hood if power is lost.
- Ensure personnel have exited the labs, conducted sweep of floors and manually locked the laboratories.
- Ensure personnel have evacuated the building and are gathered at the building assembly area – Conduct muster roll call, account for headcount records.
- Wait for further instructions from management.
- Depending on the outage period, researchers, students may be requested to conduct associated non-lab related work at alternate location or at home, where possible.

OTHER DEPARTMENTAL MANAGEMENT

Office-based staff – Assumption: air-conditioning and power not available (i.e., no power for lighting or office equipment i.e., computers, printers)

- Where possible, staff to conduct manual operations as far as possible.
- Depending on the outage period, Departmental management may request office-based staff to continue working from home using laptops and remote access where available.

FACULTY & STUDENTS

Assumption: power not available for library or classroom (i.e., no power for lighting or equipment i.e., computers)

- Where possible, conduct activities without the use of electrical equipment.
- Where necessary, classes will be postponed.
- Where the electronic library system cannot be accessed, await restoration.

I.T. DEPARTMENT

Assumption – power not available to Building 14, Exchange Building.

- Building 14 and Exchange Building has a UPS back-up (30-35 minutes) for back-up and shut-down procedures - Implement these procedures.
- Implement additional actions/procedures as per the I.T. Business Continuity Plan.

3.1 EMERGENCY GENERATOR LIST & LOCATION

Figure 4 – Emergency Generator Locations

25 Diesel Generators Monitoring Parameters

	LOCATION	Functional Area	Manufacturer	Model	Serial no.	RATING	STORAGE TANK CAPACITY	DAY TANK CAPACITY	FUEL AVAILABLE IN STORAGE TANK LITERS	FUEL AVAILABLE IN DAY TANK LITERS	FUEL CONSUMPTION 80% LOAD	DURATION OF GEN CAN RUN
1	Emergency Building	Central Utility Plants	Caterpillar	3516B	ZAP01435	2 MW (13.8 KV)	20,000 LTRS	5000 LTRS	20,000 LTRS	5000 LTRS	391.74 LI/HR	25.53HRS
2	Emergency Building	University Campus	Caterpillar	3516B	ZAP01440	2 MW (13.8 KV)		5000 LTRS		5000 LTRS	391.74 LI/HR	25.53HRS
3	Emergency Building	University Campus	Caterpillar	3516B	ZAP01436	2 MW (13.8 KV)		5000 LTRS		5000 LTRS	391.74 LI/HR	25.53HRS
4	Emergency Building	University Campus	Caterpillar	3516B	ZAP01476	2 MW (13.8 KV)		5000 LTRS		5000 LTRS	391.74 LI/HR	25.53HRS
5	Emergency Building	Chiller 9	Caterpillar	3516B	YAT00175	2 MW (4.16 KV)	20,000 LTRS	5000 LTRS	20,000 LTRS	4750 LTRS	391.74 LI/HR	25.53HRS
6	Emergency Building	Chiller 9	Caterpillar	3516B	YAT00178	2 MW (4.16 KV)		5000 LTRS		4750 LTRS	391.74 LI/HR	25.53HRS
7	Emergency Building	Chiller 9	Caterpillar	3516B	YAT00176	2 MW (4.16 KV)		5000 LTRS		4730 LTRS	391.74 LI/HR	25.53HRS
8	Emergency Building	Chiller 9	Caterpillar	3516B	YAT00177	2 MW (4.16 KV)		5000 LTRS		4730 LTRS	391.74 LI/HR	25.53HRS
9	Sanitary Lift Station 1	Sanitary Lift Station	Caterpillar	C-15 ATAAC	C5L02425	400 KW	N/A	1400 LTRS		1032 LTRS	80.62 LI/HR	12.8 HRS
10	Sanitary Lift Station 2	Sanitary Lift Station	Caterpillar	GEH 220-2	OLYO0000VMPN02140	200 KW	N/A	1200 LTRS		936 LTRS	41.63 LI/HR	22.48 HRS
11	Sanitary Lift Station 3	Sanitary Lift Station	Caterpillar	GEP 110-2	OLYO0000C54B01121	100 KW	N/A	240 LTRS		160 LTRS	21.95 LI/HR	7.29 HRS
12	Sanitary Lift Station 4	Sanitary Lift Station	Caterpillar	GEP 110-2	OLYO0000C54B01157	100 KW	N/A	240 LTRS		160 LTRS	21.95 LI/HR	7.29 HRS
13	Sanitary Lift Station 5	Sanitary Lift Station	Caterpillar	GEP 110-2	OLYO0000F64B01154	100 KW	N/A	240 LTRS		160 LTRS	21.95 LI/HR	7.29 HRS
14	Sanitary Lift Station 6	Sanitary Lift Station	Caterpillar	GEP 110-2	OLYO0000TE4B01105	100 KW	N/A	240 LTRS		160 LTRS	21.95 LI/HR	7.29 HRS
15	Sanitary Lift Station 7	Sanitary Lift Station	Caterpillar	GEP 110-2	OLYO0000JE4B01139	100 KW	N/A	240 LTRS		167 LTRS	21.95 LI/HR	7.60 HRS
16	Sanitary Lift Station 8	Sanitary Lift Station	Caterpillar	GEP 110-2	OLYO0000LE4B01003	100 KW	N/A	240 LTRS		167 LTRS	21.95 LI/HR	7.60 HRS
17	WWTP	Order Control System	Caterpillar	3406TA	C2G09975	300 KW	2,488 LTRS	1330 LTRS	2488 LTRS	20000 LTRS	60.93 LI/HR	61.10 HRS
18	SWRO	Treated water pump	Caterpillar	3516B	ZAP01226	2 MW (4.16 KV)	40,000 LTRS	6000 LTRS	36000 LTRS	60000 LTRS	391.74 LI/HR	107.21 HRS
19	CLINIC	KMC	Kohler Sawary	750REOZM	2194881	750 KW	15,000 LTRS	1115 LTRS	15,000 LTRS	1113 LTRS	202.11 LI/HR	79.73 HRS
20	SECURITY BUILDING	Security Headquarters	MTU Saudi Diesel	16V2000G43	5361073329	800 KW	13,350 LTRS	3000 LTRS	13250 LTRS	1113 LTRS	218.77 LI/HR	79.73 HRS
21	EXCHANGE BUILDING	Exchange Building	MTU Saudi Diesel	16V2000G43	5361073419	800 KW	13,350 LTRS	3000 LTRS	13250 LTRS	1113 LTRS	218.77 LI/HR	79.73 HRS
22	SECURITY GATE # 1	Gate 1 A	CATERPILLAR	GEP 65	237911	58 KW	N/A	200 LTRS		146 LTRS	16 LI/HR	9.125 HRS
23	VISITORS OFFICE	Gate 1 A	CATERPILLAR	3306	8DOR01368	250 KW	N/A	550 LTRS		440 LTRS	51.4 LI/HR	8.75 HRS
24	FIRE STATION BLDG.	FIRE STATION BLDG.	Kohler Sawary	40REOZJB	2320455	40 KW	N/A	200 LTRS		160 LTRS	12 LI/HR	13.33 HRS
25	sea water intake	sea water intake	Kohler Sawary	300REOZJ	SGM316TTZ	300KW	N/A	1376 LTRS		1170 LTR	67.3 LI/HR	17.4 HRS

Figure 5 – Emergency Generator List

4. PROLONGED I.T. / COMMUNICATIONS OUTAGE

This Plan for the Information Technology based incident scenario of prolonged power outage provides guidance to all personnel and relevant departmental management on the actions to be taken should this incident occur.

Note: Refer to the I.T. Business Continuity Plan. The below actions have been developed to reflect a worst-case scenario.

I.T. MANAGEMENT

The nominated personnel on duty/call from the I.T. Department must activate their functional area Business Continuity Plan and implement their preassigned roles and responsibilities.

- The nominated personnel must make the relevant internal and external contacts to establish the nature of the outage, cause and possible duration.
- The nominated personnel must establish and maintain links with all external providers and any other relevant organization which may have an impact on the outage.
- The nominated personnel must mobilize all internal resilience plans to switch over all available redundancy from alternative supplies.
- The nominated personnel must ensure that all relevant generators and backup sources of power are operating and are supplied with enough fuel to sustain their operation for the duration of the outage.
- The nominated personnel must escalate a report of the incident situation, probable cause and possible duration to senior University management.
- Senior I.T. Management will determine if the outage requires activation of the KAUST Emergency Management Plan.
- If the EMP is activated, I.T. management will keep the EOC updated on all relevant issues.
- Building 14 and Exchange Building has a UPS back-up (30-35 minutes) for back-up and shut-down procedures - Implement these procedures.
- Distribute and activate any alternate communications resilience resources, e.g., satellite phones, additional Bravo handsets, hardwired phones, alternate network Sim cards etc.
- If isolated area of outage, implement alternate seating and workstation strategies in unaffected areas to facilitate business continuity.

- If a prolonged outage is deemed likely, implement resilience plans with service providers to supply localized mobile satellite networks enabling communications for crucial functional areas.
- Implement additional actions/procedures as per the I.T. Business Continuity and Data Recovery Plans.

GENERAL ACTIONS OF KAUST PERSONNEL

- Where possible, back up all devices to save data and turn off all computers to avoid damage of a surge impact when the power is restored.
- Call the 911 Command and Control Center regarding the situation and establish if building evacuation is required.
- Supervisors/Managers call the I.T. Helpdesk to investigate the outage and provide feedback.

SECURITY DEPARTMENT

- Implement specified actions as per the Security Guidelines.
- Security Manager – notify all security personnel via radio communication/Bravo devices, if still operable.
- Establish a direct communications link with KAUST Fire and Rescue, KMS Ambulance Dispatch and National Guard.
- Transfer all 911 logs to manual paper records.
- Secure ingress and egress routes.
- Security personnel located at strategic areas i.e., access control gates, access control points at doors/building are requested to conduct manual operations and security checks.
- Where necessary, deploy security personnel to sensitive areas e.g., site perimeter, core labs and major facilities.

EMERGENCY SERVICES MANAGEMENT

- Ensure all handheld communication devices are fully charged up.
- Use any functional radio operated devices e.g., Bravo to contact EOC / IT / 911 Command and Control and any other relevant departmental support for updates and emergency communications.

- Use any fixed wire communications systems available to contact EOC / IT / 911 Command and Control and any other relevant departmental support for updates and emergency communications.
- Use any battery operated, SIM Card enabled devices to email EOC/ IT / 911 Command and Control and any other relevant departmental support for updates and emergency communications.
- Use any Satellite handheld devices available to contact EOC / IT / 911 Command and Control and any other relevant departmental support for updates and emergency communications.
- Make use of any communication media available for emergency communications with relevant parties and the community e.g., Public Address Systems, Intercom Facilities, Variable Messaging Signs, Loud Halers and any social media which may be available etc.
- If necessary, deploy mobile resources to strategic locations where better communications may be available.
- If necessary, declare some resources as "Runner" communicators to ferry relevant information where required.
- Station a member of personnel in station control room.

LABORATORY MANAGEMENT

- Laboratories – All laboratories are unique depending on the area of research.
- Evaluate work areas for issues created by I.T. / Communications outage.
- If deemed necessary secure hazardous materials, back up all data being currently worked on, shutdown potentially hazardous processes, switch off laboratory equipment using UPS 'soft shut down' procedures, close any valves, secure sensitive equipment and take actions to preserve research.
- Wait for further instructions from management.
- Establish manual and paper records for all activity.
- Depending on the outage period, researchers, students may be requested to conduct associated non-lab related work at an alternate location or at home, where possible.

OTHER DEPARTMENTAL MANAGEMENT

- Where possible, staff to conduct manual operations as far as possible.

- Depending on the outage period, Departmental management may request office-based staff to continue working from home using laptops and remote access where available.

FACULTY & STUDENTS

- Where possible, conduct activities without the use of technical equipment.
- Where necessary, classes will be postponed.
- Where the electronic library system cannot be accessed, await restoration.

INCIDENT COMMANDER

- Establish the possible duration of the disruption from the relevant personnel and decide whether or not to declare a major emergency and activate the EOC – Inform CMT and BCM of situation.
- Notify all relevant Utilities and other department personnel to isolate all non-critical activity till further notice.
- Ensure as far as practical the maintenance of sufficient fire alarm connectivity at all times. If this cannot be established place additional Security and Fire Patrols in Campus area to cover all building.
- If it is established that the duration will be for an extended duration request the implementation of service level agreements with providers of external communications systems, e.g., VSAT Systems etc.
- Ensure I.T. BCP is in place and all critical data has been backed up.
- Establish status of Data Recovery with Cloud providers.
- Provide regular updates to the Crisis Management Team of the situation.

CRISIS MANAGEMENT TEAM

- Assemble to establish if the disruption will be of a duration as to cause significant disturbance to core operations and the community.
  - Decision to be made re closing Campus or continuing with reduced operations.
- Give strategic support to the EOC.
- Liaise with the ERM / BCM Unit to implement the Business Continuity Plan and all Business Continuity and Disaster Recovery arrangements.
- Liaise with all University Departments and Research Faculty to ensure critical operations and research are protected as is reasonably practicable.

- Liaise with any government agencies as required if disruption is prolonged.
- Provide extended funding and payment arrangements with any external providers as and when required.
- Deal with all media and public related enquires and announcements.

5. COOL AIR / CHILLER PLANT DISRUPTION

This Plan for the utility-based incident scenario of cool air disruption provides guidance to relevant departmental management on the actions to be taken should this incident occur.
Note: The below actions have assumed the provision of cooling only for critical areas i.e., I.T. Datacenters and laboratories.

I.T. MANAGEMENT

- Conduct I.T. functions as per usual unless instructed otherwise by management.
- Take note of any temperature changes and significant increase in internal temperature.
- Establish temperature tolerance thresholds for equipment and machinery.
- Where temperature changes have been noted, inform and call out Utilities personnel.
- Where necessary, make a decision regarding shutdown of equipment.
- Failure of air-conditioning units:
    - Where there is a significant increase in temperature in IT data centers, inform and call out Utilities personnel immediately.
    - Where necessary, shut down non-critical I.T. systems due to heat sensitive operating environment.
    - Transfer to I.T. management and system support at redundant sites.
    - Receive further instructions from the CIO.

LABORATORY MANAGEMENT

- Conduct activities and functions as per usual unless instructed otherwise by management.
- Take note of any temperature changes and inform Utilities.
- Monitor critical equipment for overheating.
- Where necessary, make a decision regarding shutdown of equipment.

OTHER DEPARTMENTAL MANAGEMENT

- Dependent on the duration of outage, management will make a decision if staff continues working as usual or are requested to work from home.
- Where possible some personnel may relocate to alternate areas to conduct work, as per “BCM Alternate Seating Strategy”.
- Classes will be postponed, and students will be notified.

6. WATER SUPPLY DISRUPTION

This Plan for the utility-based incident scenario of water supply disruption provides guidance to management on the actions to be taken should this incident occur.

Note: Utilities/Campus Management must isolate noncritical water users, e.g., irrigation, recreation and fountains etc. to ensure water is available for essential water users (i.e., Fire water, domestic water). Based on the fact that essential and non-essential water users have not been identified, the actions below assume the availability of fire water only.

UTILITIES DEPARTMENT (RELEVANT PERSONNEL)

- Ensure static water tank supplies are always kept maintained at the required levels before any event occurs.
- Utilities Director/Manager - ascertain the cause.
  - Damage to water distribution pipework, pumps, mechanical failures, power outage, sabotage etc. and likely duration of interruption.
- Notify relevant management including the Incident Commander
- Ensure the back-up generator for the treated water pumps in the SWRO Plant has started up.
- Work with the Fire Department to ensure they have sufficient water supplies for firefighting.

DEPARTMENTAL MANAGEMENT

- Depending on the duration on the disruption:
  - Staff/students will be informed to work from home (if possible).
  - Students will be notified of the rescheduling of classes.
- All personnel will be notified when water has been restored to the site.
- Develop a schedule of water users with critical dependencies to be added to BCP links.
- Revision of water management and flow control systems to include flow isolators and recycling strategies.

FIRE & RESCUE DEPARTMENT

- Ensure all appliance tanks are always kept full at all times.
- Ensure Water Supply Outage Operations Plans are in place before any such event.
- Plan accessibility to all alternate water supplies for firefighting:
  - High Volume Portable Pumps are in place, serviced and most efficient pumping locations are identified and exercised.
  - Ensure compatibility of equipment to draw water from any static water supplies.
  - Ensure compatibility of equipment to draw water from any externally provided water supplies.
  - Establish exercises to draw water supplies from all open-source water supplies; sea, canals, ponds, swimming pools etc. including the testing of water relay systems for pumping over distances.
  - Establish mutual aid and compatibility exercises with Civil Defense resources available during a prolonged incident.

INCIDENT COMMANDER

- Establish the possible duration of the disruption from the relevant personnel and decide whether or not to declare a major emergency and activate the EOC – Inform CMT and BCM of situation.
- Notify all relevant Utilities and other department personnel to isolate non-critical water supplies until further notice.
- Ensure maintenance of a sufficient fire water supply at all times.
- If it is established that the duration will be for an extended duration request the implementation of service level agreements with external providers to supply water:
  - Tanked potable water supplies for bulk operational requirements.
  - Bottled water supplies for domestic and drinking water requirements.
  - Establish the quantities and intervals deliveries are required.
  - Establish a central store and distribution plan for all externally provided water.
- Provide regular updates to the Crisis Management Team of the situation.

CRISIS MANAGEMENT TEAM

- Assemble to establish if the disruption will be of a duration as to cause significant disturbance to core operations and the community.

  - Decision to be made re closing Campus or continuing with reduced operations.
- Give strategic support to the EOC.
- Liaise with the ERM / BCM Unit to implement the Business Continuity Plan and all Business Continuity and Recovery arrangements.
- Liaise with all University Departments and Research Faculty to ensure critical operations and research are protected as is reasonably practicable.
- Liaise with any government agencies as required if disruption is prolonged.
- Provide extended funding and payment arrangements with any external providers as and when required.
- Deal with all media and public related enquires and announcements.

7. GENERAL UTILITIES DEPARTMENT ACTIONS

This Plan has specifically been developed in collaboration with key persons of the Utilities. Department in respect of a disruption to utility supply i.e., prolonged power outage, cool air disruption, water supply disruption. It provides guidance to relevant personnel on the actions to be taken in this regard.

UTILITIES DEPARTMENT (RELEVANT PERSONNEL)

- Utilities Director/Manager - ascertain the cause.
  - Power outage e.g., internal or external problem and likely duration of the power outage.
  - Cool air disruption e.g., disruption to the main chilled water supply lines, power outage and likely duration of interruption
  - Water supply disruption e.g., damage to water distribution pipework, power outage and likely duration of interruption
- Notify relevant management including the Incident Commander
- Power outage: Ensure the back-up generators that support all power requirements for electrical equipment for utilities, facilities and buildings have started and are in phase (Back-up generators in the emergency generator building and all other generators local to relevant areas). Notify/coordinate with responsible building and facilities personnel.
  - *Utilities/Campus Management to define campus critical power load plus location dependency matrix (i.e., essential and non-essential requirements) in order to determine if existing back-up generators are sufficient.*
- Cool air disruption: Ensure the No.9 chiller (Emergency Chiller) has started up.
  - *Utilities/Campus Management to define campus critical cooling load (i.e., essential and non-essential cooling requirements) in order to determine if the existing back-up chiller is sufficient.*
  - *Determine essential cooling requirements / duration of cooling in this regard.*
- Water supply disruption: Ensure the back-up generator for the treated water pumps in the SWRO Plant has started up.
  - *Utilities/Campus Management to isolate noncritical water users (i.e., irrigation) to ensure water is available for essential water users (i.e., Fire water, domestic water).*
- Ensure monitoring and refueling of diesel generator tanks as per PM Contract.
- Electrical and maintenance staff must be on hand to restart:

- For power outage: Electrical, cooling, and treated water systems when power is restored.
- For cool air disruption: Cooling systems. It takes approximately 20 minutes to restart the chilled water plant.
- For water supply disruption: Treated water supply systems.

8. FIRE

This response plan for the evacuation-based incident scenarios of smoke and fire provides guidance to all personnel i.e., 1st person, 911 command & control dispatcher, On-Scene Commander, Incident Commander, and emergency response teams on the actions to be implemented should this incident occur.

Note: It is the intention for all fire alarms will be linked to detection panels in the Fire Department. Currently not all KAUST buildings are connected; therefore 911 should be called for all fire alarm activations.

FIRST PERSON ACTIONS (STAFF/STUDENT)

ON DISCOVERY OF A FIRE or SMOKE:

Only attempt to extinguish the fire in the following situations:

- There is no personal danger.
- The fire is visible and small, confined to the immediate areas where it started, e.g., in a rubbish bin, electrical appliance, stove and of a clearly defined/identified ignition source.
    - If the fire is spreading rapidly, evacuate the building and close doors behind you to slow the spread of the fire.
- You are between the fire and a safe escape route in the event the fire gets out of control.
    - If the fire is producing large amounts of smoke that you may inhale, keep low, cover your nose and mouth with a moist clothe and make your way to safety.
- The extinguisher is rated for the type of fire you are dealing with and is in good working order. If you do not know what is burning, leave it for the fire-fighters to handle.
- You are confident that you can operate the extinguisher effectively. **Note:** Fire extinguishers and hose reels are available at strategic locations in buildings. These are to be identified on floor plans.
- If you have the slightest doubt about whether to fight the fire – **DON'T**! Instead, get out, close the door behind you and stay out! If you feel that your safety is at risk, leave the incident scene immediately - Raise the alarm, follow evacuation procedure and proceed to the buildings nearest designated assembly area.

IF YOUR CLOTHES CATCH ON FIRE:

- **1. Stop** – Cover your face
- **2. Drop** – To the floor
- **3. Roll** – Over & over on the floor

WHAT TO DO IF YOU'RE TRAPPED:

- Put as much distance (and closed doors) between yourself and the fire as possible.
- Feel doors before you open them – if they are warm to the touch, leave them closed.
- Never enter a smoke-filled area.
- Use clothing to block openings around doors and vents where smoke might enter.
- Put a wet cloth over your nose or mouth. Stay low to the floor to breathe the best air.
- Hang a coat, cloth or sign in a window to identify your location for fire-fighters.
- Do not break windows, oxygen in outside air may provide fuel for the fire - Smoke from the outside can enter through open windows, may contaminate the environment, and will also hamper rescue efforts.

NOTIFICATION FIRE ALARMS, 911, 012 8080911:

NB: It takes less than three minutes for a free-burning fire to reach temperatures over 600˚C! **Therefore, the speed of reporting a fire and accuracy of information is crucial, as all response actions are based on this.**

- Follow the instructions laid down in ***Figure 16***, below relating to raising the alarm as depicted on the "In Case of Emergency" signage throughout Campus.
- Be prepared and describe the nature of the emergency.
- Be specific with respect to your location e.g., building, floor number, building area, classroom/office number.
- Provide as much specific information as you can on the extent and nature of the fire:
    - Your Location?
    - What and where is burning?
    - Are there any injuries?
    - What is the best access?
    - Your own details?
    - Wait on the line for specific questions.

- If there are other people in the vicinity, the person discovering the fire should while attempting to contain it, tell another person to call 911. Having reported it, the second person should assist in putting out the fire and initiate evacuation procedures.
- Professional Fire Services will take over operations as soon as possible. At the same time, actions must be taken to clear all persons from the fire area, other than those engaged in firefighting.

EVACUATION PROCEDURE:

If the fire cannot be controlled or poses a safety risk, and the alarm has not been automatically activated, manually activate the alarm by using the manual pull station, or Break-Glass Unit. Doors should be closed to prevent the spread of fire and smoke to other areas of the premises. Follow the evacuation procedure as per KAUST's Building Evacuation Procedures and proceed to the building's nearest assembly area.

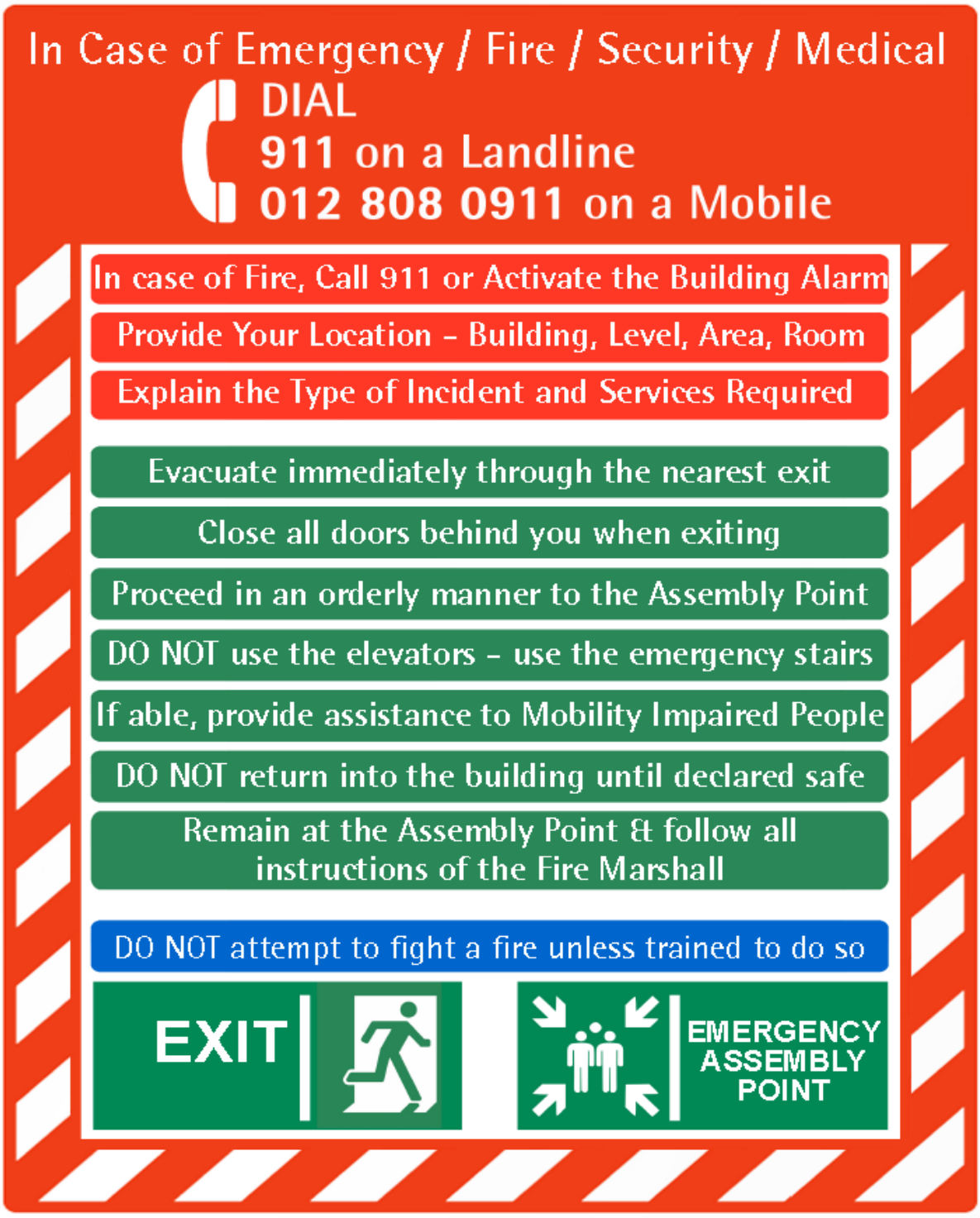


Figure 6 – In Case of Emergency Campus Action Signage

911 COMMAND & CONTROL DISPATCHER

- Upon receiving the call, obtain all crucial information and complete the Incident Report Form.
- Call out on-site emergency response teams as the situation deems necessary i.e., fire, medical and security services providing them with the incident details.
- Where the fire alarm was activated, the 911 Dispatch Centre will detect the signal and contact the Fire department immediately.
- Fire detection panels can provide future notification and location details.

ON-SCENE COMMANDER

- Proceed immediately to the incident scene.
- Take charge of the situation. Make an assessment of life safety aspects for persons in the immediate area.
    - ***Establish if there is an actual fire?***
    - ***Are there any casualties involved?***
    - ***What is on fire?***
    - ***Where is the fire?***
    - ***What is the fire adjacent to / what is the risk of fire spread?***
    - ***What access / egress is there to and from the fire?***
    - ***What resources are needed to deal with the fire?***
- If necessary, evacuate employees in the immediate area.
- If the alarm was not automatically raised, manually raise the alarm to alert other personnel to evacuate the building.
- Provide guidance to emergency response teams and ensure constant communication.
- Ensure personnel have assembled at the building's assembly areas.
- With Departmental Management, provide personnel at assembly area with incident debrief.
- Determine need for additional resources (financial, equipment, materials, human, security)
- Notify the Incident Commander. Provide incident brief, response actions and request assistance for additional resources where necessary.
- Incident Termination:
    - Brief personnel at the assembly area regarding the decision to return the building.
    - Convene the Damage Assessment Team to conduct a Preliminary Damage Assessment.

- Conduct a formal incident investigation.
- Consult with Environmental Protection Manager regarding any contaminated Fire-Water Run-off and/or smoke plume and their possible effects on the environment.
- Provide the Incident Commander with a report on the above.

ADDITIONAL EMERGENCY RESPONSE TEAMS I.E. FIRE / MEDICAL / SECURITY

- Upon notification by the 911 dispatcher, proceed to the incident scene.
- Implement actions/procedures as per the Emergency Management Plan
- Implement actions/procedures as per Security Guidelines
- Liaise with the On-Scene Commander.
- Provide updates to the On-Scene Commander on the current status of the situation e.g., any injuries/fatalities, loss of structural integrity.

INCIDENT COMMANDER

- Receive incident report from the On-Scene Commander.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Make arrangements for additional resources required for incident management e.g., activation of the Emergency Operations Center Coordination Group.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.
- Notify Human Resources Manager and the Registrar regarding injuries/fatalities to staff and students respectively.
- Consult with Environmental Protection Manager regarding any contaminated Fire-Water Run-off and/or smoke plume and their possible effects on the environment.
- For a major incident, notify the Crisis Management Team Leader to activate the Crisis Management Team immediately.
- Incident Termination:
  - Receive and review Preliminary Damage Assessment Report.
  - Commission an investigation and ensure all evidence is preserved.
  - In consultation with the Emergency Services Commanding Officer (i.e., On-Scene Commander) make a decision to return personnel to building and resume regular campus activities.

- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

CRISIS MANAGEMENT TEAM

- Assemble to establish if the disruption will be of a duration as to cause significant disturbance to core operations and the community.
  - Decision to be made re closing Campus or continuing with reduced operations.
- Give strategic support to the EOC.
- Liaise with the ERM / BCM Unit to implement the Business Continuity Plan and all Business Continuity and Disaster Recovery arrangements.
- Liaise with all University Departments and Research Faculty to ensure critical operations and research are protected as is reasonably practicable.
- Liaise with any government agencies as required if disruption is prolonged.
- Provide extended funding and payment arrangements with any external providers as and when required.
- Deal with all media and public related enquires and announcements.

9. EXPLOSION

This response plan for the evacuation-based incident scenario of an explosion on the KAUST Campus provides guidance to all personnel i.e., 1st person, 911 command & control dispatcher, On-Scene Commander, emergency response teams and the Incident Commander on the actions to be implemented should this incident occur.

FIRST PERSON

- Immediately take cover under tables, desks and other solid, stable objects that will give protection against falling glass or debris.
- Immediately after the effects of the explosion have subsided, notify the 911 Dispatch Centre, providing your location, nature of the emergency and your contact details.
- If the building evacuation alarm is sounded, or when you are told to leave by Departmental Management, walk to the nearest marked exit and ask others to do the same. Assist the disabled in exiting the building.
- Do not panic. Remain calm.
- Do not use elevators in case of fire.
- Once outside, move to building's assembly area.

911 COMMAND & CONTROL DISPATCHER

- Upon receiving the call, obtain all crucial information and complete the Incident Report Form.
- Call out on-site emergency teams as the situation deems necessary i.e., fire, medical and security services providing them with the incident details.
- Where the fire alarm was activated, the 911 Dispatch Centre will detect the signal and contact the Fire department immediately.

ON-SCENE COMMANDER

- Proceed immediately to the incident scene.
- Take charge of the situation. Make an assessment of life safety aspects for persons in the immediate area.
- If the alarm was not automatically raised, manually raise the alarm to alert personnel to evacuate the building.
- Provide guidance to emergency response teams and ensure constant communication.
- Ensure personnel have assembled at the building's assembly areas.

- With Departmental Management, provide personnel at assembly area with incident debrief.
- Determine need for additional resources (financial, equipment, materials, human, security)
- Notify the Incident Commander. Provide incident brief, response actions and request assistance for additional resources where necessary.

Incident Termination:

- Brief personnel at the assembly area regarding the decision to return the building.
- Convene the Damage Assessment Team to conduct a Preliminary Damage Assessment.
- Conduct a formal incident investigation.
- Provide the Incident Commander with a report on the above.

PRINCIPAL EMERGENCY SERVICES (FIRE/SECURITY/KAUST HEALTH EMS)

- Upon notification by the 911 dispatcher, proceed to the incident scene.
- Implement actions/procedures as per the Emergency Management Plan
- Implement actions/procedures as per the Security Guidelines
- Liaise with the On-Scene Commander.
- Provide updates to the On-Scene Commander on the current status of the situation e.g., any injuries/fatalities.
- Incident Commander.
- Receive incident report from the On-Scene Commander.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Make arrangements for additional resources required for incident management e.g., activation of the Emergency Operations Center Coordination Group.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.
- Notify Human Resources Manager and the Registrar regarding injuries/fatalities to staff and students respectively.
- For a major incident, notify the Crisis Management Team Leader to activate the Crisis Management Team immediately.

INCIDENT TERMINATION:

- In consultation with the Emergency Services Commanding Officer (i.e., On-Scene Commander) make a decision to return personnel to building, taking into consideration the structural damage and safety aspects.
- Receive and review Preliminary Damage Assessment Report.
- Commission an investigation and ensure all evidence is preserved.
- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

INCIDENT COMMANDER

- Receive incident report from the On-Scene Commander.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Make arrangements for additional resources required for incident management e.g., activation of the Emergency Operations Center Coordination Group.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.
- Notify Human Resources Manager and the Registrar regarding injuries/fatalities to staff and students respectively.
- Consult with Environmental Protection Manager regarding any contaminated Fire-Water Run-off and/or smoke plume and their possible effects on the environment.
- For a major incident, notify the Crisis Management Team Leader to activate the Crisis Management Team immediately.
- Incident Termination:
    - Receive and review Preliminary Damage Assessment Report.
    - Commission an investigation and ensure all evidence is preserved.
    - In consultation with the Emergency Services Commanding Officer (i.e., On-Scene Commander) make a decision to return personnel to building and resume regular campus activities.
    - Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

CRISIS MANAGEMENT TEAM

- Assemble to establish if the disruption will be of a duration as to cause significant disturbance to core operations and the community.
  - Decision to be made re closing Campus or continuing with reduced operations.
- Give strategic support to the EOC.
- Liaise with the ERM / BCM Unit to implement the Business Continuity Plan and all Business Continuity and Disaster Recovery arrangements.
- Liaise with all University Departments and Research Faculty to ensure critical operations and research are protected as is reasonably practicable.
- Liaise with any government agencies as required if disruption is prolonged.
- Provide extended funding and payment arrangements with any external providers as and when required.
- Deal with all media and public related enquires and announcements.

10. ACCIDENTAL AIR CONTAMINATION

This Plan for the evacuation-based incident scenario of accidental air contamination (within buildings) provides guidance to all personnel i.e., 1st person, 911 command & control dispatcher, On-Scene Commander, HSE Manager, Environmental Protection Manager, Emergency Response Teams and the Incident Commander on the actions to be implemented should this incident occur.

Note: Accidental air contamination includes fumes (paint, welding), plumes effecting the environment and dust from sources including construction activities in the building. For gas exposures in laboratories, refer to Action Plan 12 – Gas Release.

FIRST PERSON

- If exposed to fumes/dust/vapors in your work area, notify your manager/Supervisor.
- Where instructed, contact and inform the 911 Dispatch Centre. Provide details including your location and if you feel this poses a health risk to others in the vicinity.
- Follow further instructions from 911 Dispatcher and your Manager, including area evacuation. Where instructed, tell others in the immediate area to evacuate.

911 COMMAND & CONTROL DISPATCHER

- Upon receiving the call, obtain all crucial information and complete the Incident Report Form.
- Call out the relevant personnel as the situation deems necessary i.e., HSE Manager, Environmental Protection Manager and medical personnel providing them with the incident details.

ON-SCENE COMMANDER

- Proceed to the incident scene, using a safe approach.
- Take charge of the situation. Make an assessment of life safety aspects for persons in the immediate area.
- Use any gas detection equipment you have available to try and identify substances and concentrations.

- Where the situation deems necessary, in consultation with the HSE Manager, Environmental Protection Manager and medical personnel, make a decision on partial evacuation.
- Request Utilities to shut-down air conditioning systems through which the fumes/dust/vapors are being dispersed.
- Notify the Incident Commander. Provide incident brief, response actions and request for assistance where necessary.
- Incident Termination:
    - Brief personnel at the assembly area regarding the decision to return the building/area.
    - Convene the Damage Assessment Team to conduct a Preliminary Damage Assessment.
    - Conduct a formal incident investigation.
    - Provide the Incident Commander with a report on the above.

HSE MANAGER

- Upon notification by the 911 dispatcher, proceed to a safe area at the incident scene.
- Assess the situation of terms of health risks to building/area occupants.
- Implement additional actions/procedures as per the Emergency Management Plan, e.g., Shelter-In-Place or Evacuation Plans.
- Liaise with the On-Scene Commander.
- Liaise with Environmental Protection Manager.
- Give regular updates to the EOC.

ENVIRONMENTAL PROTECTION MANAGER

- Upon notification by the 911 dispatcher, proceed to a safe area at the incident scene.
- Assess the situation of terms of contamination risks to building/area occupants.
- Take any air quality samples possible for examination.
- Make use of any Plume Prediction software to establish the likely areas affected for possible further evacuations.
- Implement additional actions/procedures as per the Emergency Management Plan, e.g., Shelter-In-Place or Evacuation Plans.

- Make also necessary contacts with external agencies, National Environment Agency – General Authority of Meteorology and Environment, Adjacent Facilities which may be a source, or also being affected and all other relevant agencies.
- Liaise with the On-Scene Commander.
- Give regular updates to the EOC.

INCIDENT COMMANDER

- Receive incident report from the On-Scene Commander, HSE Manager and Environmental Protection Manager.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Make arrangements for additional resources required for incident management e.g., activation of the Emergency Operations Center Coordination Group.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.
- For a major incident, notify the Crisis Management Team Leader to activate the Crisis Management Team immediately.

INCIDENT TERMINATION

- In consultation with the On-Scene Commander and HSE / Environmental Protection Manager make a decision to return personnel to building / area.
- Receive and review Preliminary Damage Assessment Report.
- Commission an investigation and ensure all evidence is preserved.
- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

CRISIS MANAGEMENT TEAM

- Crisis Management Team Leader will:
- Make a decision regarding a campus-wide evacuation.
- Coordinate and request assistance from the Emergency Operations Coordination Center Coordination Group.
- Notify and request the Incident Commander to coordinate the campus-wide evacuation.
- Coordinate and request external assistance (e.g., National Guard, Coast Guard, Civil Defense and Red Crescent etc.).

11. INTENTIONAL AIR CONTAMINATION

This Plan for the evacuation-based incident scenario of non-accidental air contamination (e.g., through the air conditioning systems in the buildings) provides guidance to all personnel including the Crisis Management Team, Incident Commander, On-Scene Commander, emergency response teams as well as staff/students on the actions to be implemented should a large-scale public health emergency occur.

ALL PERSONNEL (STAFF/STUDENTS)

- If exposed to fumes/vapors in your work area, notify your manager/Supervisor.
- Where instructed, contact and inform the 911 Dispatch Centre. Provide details including your location and if you feel this poses a health risk to others in the vicinity.
- Follow further instructions from 911 Dispatcher and your Manager, including area evacuation. Where instructed, tell others in the immediate area to evacuate.
- Follow the evacuation procedure.
- Await further instructions at the Assembly Point if it is safe to do so.

ON-SCENE COMMANDER

- With the assistance of Building Emergency Coordinators,
  - Coordinate and ensure the safe evacuation of each building.
  - Gather personnel at building assembly points.
  - Ensure personnel are transported to the" Off-campus" assembly points, as identified in the Evacuation Plan.
- Only dispatch personnel with the appropriate PPE to investigate source, remaining conscious of exposure times and risk to personnel.
- Provide KAUST Health with as much substance detail as possible.
- Provide the Incident Commander with regular updates.

EMERGENCY RESPONSE TEAMS: FIRE, MEDICAL & SECURITY

- Upon notification, respective Managers to allocate and deploy teams to each building wearing appropriate PPE.
- Teams to proceed to the designated buildings and implement actions/procedures are per the Emergency Management and Security Guidelines.
- Provide the On-Scene Commander with regular updates.
- Set up Decontamination Procedures were deemed necessary.

HSE MANAGER

- Upon notification by the 911 dispatcher, proceed to a safe area at the incident scene.
- Assess the situation of terms of health risks to building/area occupants.
- Implement additional actions/procedures as per the Emergency Management Plan, e.g., Shelter-In-Place or Evacuation Plans.
- Liaise with the On-Scene Commander.
- Liaise with Environmental Protection Manager.
- Give regular updates to the EOC.

ENVIRONMENTAL PROTECTION MANAGER

- Upon notification by the 911 dispatcher, proceed to a safe area at the incident scene.
- Assess the situation of terms of contamination risks to building/area occupants.
- Take any air quality samples possible for examination.
- Make use of any Plume Prediction software to establish the likely areas affected for possible further evacuations.
- Implement additional actions/procedures as per the Emergency Management Plan, e.g., Shelter-In-Place or Evacuation Plans.
- Make also necessary contacts with external agencies, National Environment Agency – General Authority of Meteorology and Environment, Adjacent Facilities which may be a source, or also being affected and all other relevant agencies.
- Liaise with the On-Scene Commander.
- Give regular updates to the EOC.

INCIDENT COMMANDER

- Notify and inform all emergency response teams and On-Scene Commander of any decision to activate immediate evacuation.
- Obtain regular updates from On-Scene Commander on the status of the situation and coordinate any assistance where required.

- Provide regular updates to the Crisis Management Team Leader of the situation.
- Initiate University Investigation Services to liaise with all agencies on investigation.

CRISIS MANAGEMENT TEAM

- Crisis Management Team Leader will:
- Make a decision regarding a campus-wide evacuation.
- Coordinate and request assistance from the Emergency Operations Coordination Center Coordination Group.
- Notify and request the Incident Commander to coordinate the campus-wide evacuation.
- Coordinate and request external assistance (e.g., National Guard, Coast Guard, Civil Defense and Red Crescent etc.).

12. WATER LEAK

This Plan for the evacuation-based incident scenario of water exposure (offices: sprinkler systems, Labs: poorly installed equipment, coupling failure) provides guidance to all Personnel, i.e., 1st person, 911 command & control dispatcher, On-Scene Commander, Maintenance team and the Incident Commander on the actions to be Implemented should this incident occur.

FIRST PERSON

In the event of accidental discharge of water (e.g., sprinkler heads) in you work area:

- Call the 911 Dispatch Centre and provide details (including your location).
- If it is safe to do so, switch off any electrical equipment.
- Where possible, gather any critical documents and portable electrical equipment e.g., laptops and evacuate the area.

In the event of water exposure in laboratories e.g., due to poorly installed equipment and coupling failure or pressure related drenching of a vicinity:

- If it is safe to do so, switch off electrical equipment, isolate the electricity and water supply.
- Where possible, move equipment that may be damaged by the water.
- Call the 911 Dispatch Centre, provide details (including your location) and follow further instructions.

911 COMMAND & CONTROL DISPATCHER

- Upon receiving the call, obtain all crucial information and complete the Incident Report Form.
- Notify relevant personnel e.g., Maintenance personnel, PI/Lab Manager, emergency services providing them with the details and request them to attend to the situation.

ON-SCENE COMMANDER

- Proceed immediately to the incident scene.
- If necessary, evacuate personnel in the immediate area.
- Ensure constant communication with maintenance personnel.
- In the event the main power supply needs to be isolated: Notify Department Managers/Supervisors in the building.
- All personnel will be requested to save changes to work and shut down any electrical equipment.
- If it is safe to do so, ensure the securing of hazardous materials, shutting down of hazardous processes, switching off laboratory equipment, closing any valves, securing

sensitive equipment and taking actions to preserve research. Keeping refrigerators and freezers closed throughout the outage to help keep them cold.

- Dependent on the situation, make a decision regarding building's evacuation.
- With Departmental Management, provide personnel at assembly area with incident debrief.
- Notify the Incident Commander. Provide incident brief and response actions.

INCIDENT TERMINATION

- Brief personnel at the assembly area regarding the decision to return the building.
- Convene the Damage Assessment Team to conduct a Preliminary Damage Assessment.
- Conduct a formal incident investigation.
- Provide the Incident Commander with a report on the above.
- Make arrangements for salvage operations.

MAINTENANCE TEAM

- Upon notification by the 911 dispatcher, determine the cause and source of accidental discharge.
- Isolate the sprinkler supply for the building.
- Dependent on the extent and location of the water leak (e.g., near electrical cables, distribution boards/boxes) isolate main power supply for the building.
- Notify and provide the On-Scene Commander with regular updates.

INCIDENT TERMINATION

- Assist with Preliminary Damage Assessment and incident investigation.
- Provide recommendations to the On-Scene Commander based on the above.

INCIDENT COMMANDER

- Receive incident report from the On-Scene Commander.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Make arrangements for additional resources required for incident management e.g., activation of the Emergency Operations Center Coordination Group.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.

- For a major incident, notify the Crisis Management Team Leader to activate the Crisis Management Team immediately.

INCIDENT TERMINATION

- Receive and review Preliminary Damage Assessment Report.
- Commission an investigation and ensure all evidence is preserved.
- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

CRISIS MANAGEMENT TEAM

- Assemble to establish if the disruption will be of a duration as to cause significant disturbance to core operations and the community.
  - Decision to be made re closing Campus or continuing with reduced operations.
- Give strategic support to the EOC.
- Liaise with the ERM / BCM Unit to implement the Business Continuity Plan and all Business Continuity and Disaster Recovery arrangements.
- Liaise with all University Departments and Research Faculty to ensure critical operations and research are protected as is reasonably practicable.
- Liaise with any government agencies as required if disruption is prolonged.
- Provide extended funding and payment arrangements with any external providers as and when required.
- Deal with all media and public related enquires and announcements.

13. GAS RELEASE

This Plan for the evacuation-based incident scenario of toxic/non-toxic gas release provides.

guidance to all personnel i.e., 1st person, 911 command & control dispatcher, On-Scene Commander, emergency response teams and the Incident Commander on the actions to be implemented should this incident occur.

Note: Campus Support, HSE and Security are to liaise with laboratory 'facility owners' to identify which specific buildings / laboratories contain toxic or potentially toxic substances. See ***Figure 7,*** *Page 85 below*.

FIRST PERSON

If you suspect a leak:

- Cease all operations immediately.
- Shut-off gas valves (where applicable).
- **Do not** operate any electrical devices (lights, phones or any other electrical equipment can create a source of ignition with enough energy to ignite fumes).
- Remove yourself and all personnel from area.
- Activate fire alarm or suppressant system or call 911.
- **Remember**: Do not call from affected area
- Evacuate the building by the nearest exit. Notify other building occupants in the affected area to do so as well. Assist any disabled persons.
- Proceed to the nearest building assembly area.
- Note: Depending on prevailing weather conditions (e.g., wind direction, gas toxicity, etc.) Security personnel/emergency services may re-direct you to alternate areas.
- Designated areas will provide varying degrees of shelter and other facilities (e.g., shade, toilets, air-conditioning, etc.)
- Do not return to an evacuated building unless the all-clear is given by senior management, in consultation with other specialists i.e., HSE Manager, Environmental Protection Manger and HAZMAT team (fire and medical services).
- When the alarm is triggered:
    - Toxic gas alarms – When lab toxic gas alarms are triggered, follow your specific lab emergency response plan.
    - Nitrogen leaks – When the alarm is triggered in the Nuclear Magnetic Resonance rooms, evacuate the area immediately.
    - Proceed to the nearest building assembly area.
    - Note: Depending on prevailing weather conditions (e.g., wind direction, gas toxicity, etc.) security personnel/emergency services may re-direct you to alternate areas.

- Do not return to an evacuated building unless the all-clear is given by senior management, in consultation with other specialists i.e., HSE Manager and HAZMAT team (fire and medical services).
- "Quenching" of nuclear magnetic resonance equipment:
    - Do not panic, stay calm.
    - Cease all operations and evacuate the area. From a safe place, notify the PI/Lab Manager.
    - Receive and follow instructions from the PI/Lab Manager.

911 COMMAND & CONTROL DISPATCHER

- Obtain all crucial information and complete the Incident Report Form.
- Upon notification/alarm activation, call out emergency response teams as deemed necessary i.e., HSE Manager, Environmental Protection Manager, HAZMAT team (fire and medical Services), Security

ON-SCENE COMMANDER

- Immediately proceed to the incident scene and assess the situation.
- In consultation with the HSE Manager, Environmental Protection Manager and HAZMAT team, make a decision to partially or wholly evacuate the building.
- Order and coordinate the evacuation.
- Consult with HSE Manager, Environmental Protection Manager and other relevant senior management to source/stop/repair any leaks.
- Ensure personnel have assembled at the building's assembly area or other designated areas.
- Provide guidance to emergency response teams.
- Notify the Incident Commander. Provide incident brief and response actions.

INCIDENT TERMINATION:

- Convene the Damage Assessment Team to conduct a Preliminary Damage Assessment.
- Brief staff at the assembly point regarding the decision to return the building.
- Conduct a formal incident investigation.
- Provide the Incident Commander with a report on the above.

HSE MANAGER, ENVIRONMENTAL PROTECTION MANAGER, HAZMAT (FIRE & MEDICAL SERVICES) & SECURITY TEAM

- Upon notification by the 911 dispatcher, proceed to the incident scene.
- Consult with the On-Scene Commander and other relevant senior management regarding sourcing/ repairing the leak.
- HSE Manager, Environmental Protection Manager & Technical expertise: Always implement safe working procedures, use and wear the appropriate personal protective equipment before re-entering the area/building.
- Implement actions/procedures as per the Emergency Management Plan.
- Implement actions/procedures as per the Security Guidelines.
- Security and HAZMAT team remain in contact via designated Bravo Radio channel / mobile telephones.
- Provide updates to the On-Scene Commander on the current status of the situation.

INCIDENT COMMANDER

- Receive incident report from the On-Scene Commander.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Make arrangements for additional resources required for incident management e.g., activation of the Emergency Operations Center Coordination Group.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.
- For a major incident, notify the Crisis Management Team Leader to activate the Crisis Management Team immediately.

INCIDENT TERMINATION:

- Consult with the Emergency Services Commanding Officer (i.e., On-Scene Commander) regarding the decision to return staff back to the area/building.
- Receive and review Preliminary Damage Assessment Report.
- Commission an investigation and ensure all evidence is preserved.
- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

CRISIS MANAGEMENT TEAM

- Crisis Management Team Leader will:
- Make a decision regarding a campus-wide evacuation.
- Coordinate and request assistance from the Emergency Operations Coordination Center Coordination Group.
- Notify and request the Incident Commander to coordinate the campus-wide evacuation.
- Coordinate and request external assistance (e.g., National Guard, Coast Guard, Civil Defense and Red Crescent etc.).

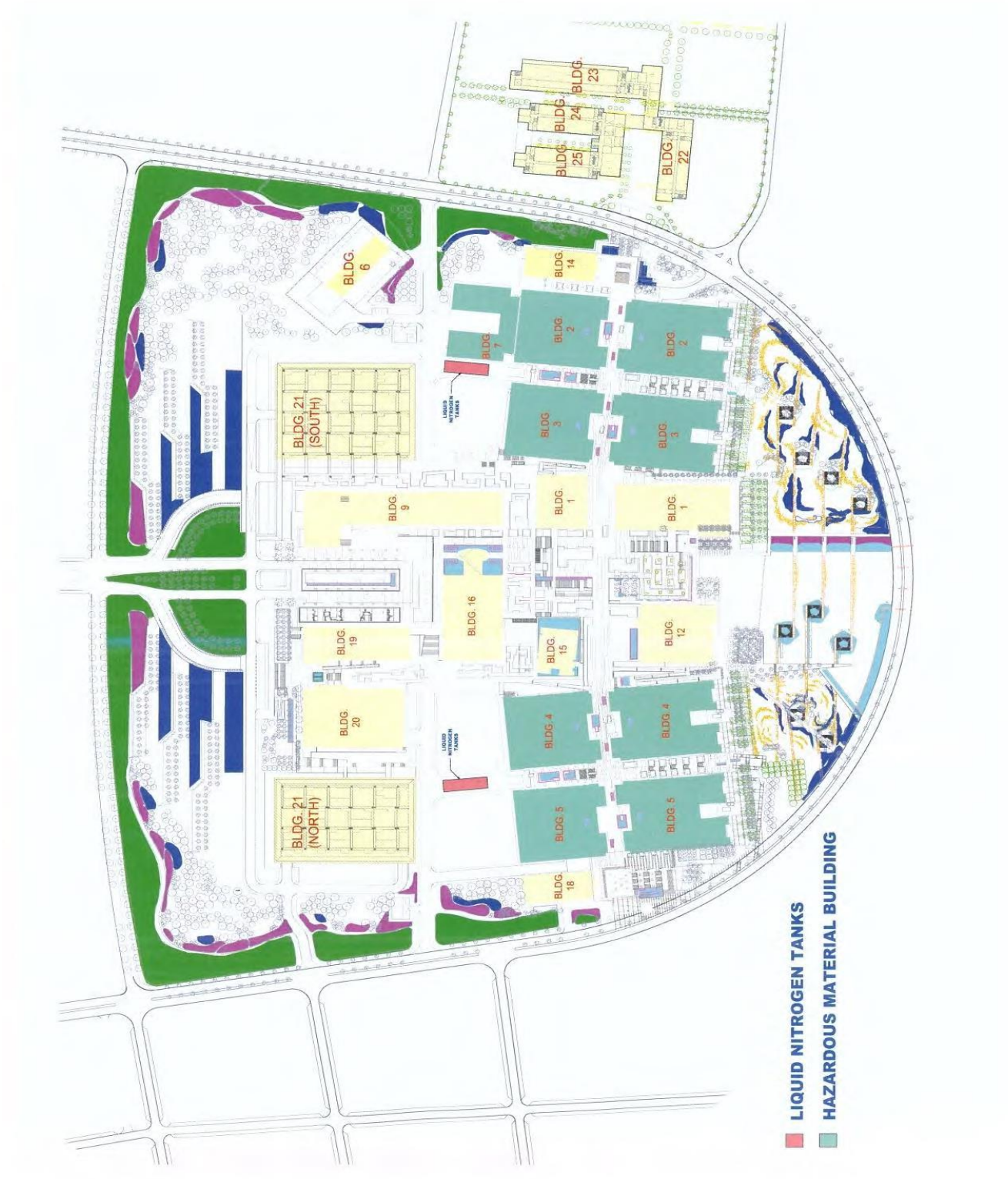


Figure 7 – Hazardous Storage on Campus

14. HAZARDOUS SPILLS

This Plan for the evacuation-based incident scenario of chemical spills provides guidance to all personnel i.e., 1st person, 911 command & control dispatcher, On-Scene Commander, emergency response teams and the Incident Commander on the actions to be implemented should this incident occur.

FIRST PERSON

Minor Spill:

Note: A minor spill involves small quantities of a hazardous material (less than 0.5 M^2 in area), does not pose a hazard to personnel, and it can be safely cleaned up by the person who caused the spill.

- Alert people in the area.
- If someone has been splashed with chemicals, immediately flush the affected area with water for at least 15 minutes. Call 911 to obtain medical attention.
- If you are confident in cleaning up a spill:
  - Turn off remotely all heat/ignition sources if flammable vapor is involved.
  - Wear appropriate personal protective equipment (safety goggles, gloves, and a long-sleeved lab coat) during cleanup.
  - Confine the spill to a small area. Use a commercial kit or absorbent material from your spill kit to absorb spilled materials.
  - Place the saturated absorbent in a plastic bag, label it and include it in the next hazardous waste collection.
- If you are not confident in cleaning up a spill, request assistance from the Lab Supervisor, PI or Lab Manager.

Major spill:

Note: A major spill involves large quantities of a hazardous material (greater than 0.5 M^2 in area), does pose a hazard to personnel, and it can only be safely cleaned up by trained emergency services personnel.

- Evacuate the area immediately. Leave any contaminated clothing and close the door.
- Activate local warning system to prevent others from entering the room (where applicable).
- Active any local Shut Off Valves where applicable.

- Call 911 and report the spill providing details i.e., what, where, how much, any medical assistance required.
- Where possible, notify the Lab Supervisor/PI/Lab Manager.

911 COMMAND & CONTROL DISPATCHER

- Obtain all crucial information and complete the Incident Report Form.
- Upon notification, call out HAZMAT team (fire and medical services), Security, HSE Manager and Labe Safety Team.

ON-SCENE COMMANDER

- Immediately proceed to the incident scene and assess the situation.
- Ensure personnel have evacuated the area.
- Allow HAZMAT team to respond to the spill and provide medical assistance where required.
- Receive status updates from emergency response teams.
- Liaise with HSE Lab Safety Team.
- Notify the Incident Commander. Provide incident brief and response actions.

INCIDENT TERMINATION:

- Convene the Damage Assessment Team to conduct a Preliminary Damage Assessment.
- In conjunction with HSE Manager, Lab Safety Team and HAZMAT team decide if it is safe for personnel to return to the area.
- Ensure incident reporting to the relevant authorities.
- Conduct a formal incident investigation.
- Provide the Incident Commander with a report on the above.

HAZMAT (FIRE & MEDICAL) & SECURITY TEAM:

- Upon notification by the 911 dispatcher, proceed to the incident scene.
- Implement actions/procedures as per the Emergency Management Plan.
- Fire Team:
  - Ascertain the nature, extent and cause of spillage.
  - Assess the situation in terms of life and safety issues i.e., identify the associated hazards and symptoms.

  - Determine how the spill may be neutralized.
  - Proceed with spill response actions i.e., containment and cleanup activities.
- Medical team
  - Provide medical assistance as required.
- Implement actions/procedures as per the Security Guidelines.
- Security team:
  - Cordon off area and prohibit un-authorized entry.
- Provide updates to the On-scene Commander on the current status of the situation.

INCIDENT COMMANDER

- Receive incident report from the On-Scene Commander.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.

INCIDENT TERMINATION:

- Consult with Emergency Services Commanding Officer (i.e., On-Scene Commander) regarding the decision to return personnel back to the area.
- Receive and review Preliminary Damage Assessment Report.
- Commission an investigation and ensure all evidence is preserved.
- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

CRISIS MANAGEMENT TEAM

- Crisis Management Team Leader will:
- Make a decision regarding a campus-wide evacuation.
- Coordinate and request assistance from the Emergency Operations Coordination Center Coordination Group.
- Notify and request the Incident Commander to coordinate the campus-wide evacuation.
- Coordinate and request external assistance (e.g., National Guard, Coast Guard, Civil Defense and Red Crescent etc.)

15. EARTHQUAKES

This Plan provides guidance to personnel faced with an earthquake scenario. While severe earthquakes are very rare, in Saudi Arabia and this region is classed as a very low risk area, less severe earthquakes can occur and interrupt your normal living patterns and cause substantial injury.

During an earthquake, you may hear a roaring or rumbling sound that gradually grows louder. You may feel a rolling sensation that starts out gently and, within a second or two, grows violent. OR . . .

You may first be jarred by a violent jolt. A second or two later, you may feel shaking and find it difficult to stand up or move from one room to another.

The real key to surviving an earthquake and reducing your risk of injury lies in planning, preparing, and practicing what you and your family will do if it happens.

PRACTICE DRILLS

By planning and practicing what to do if an earthquake strikes, you and your family can learn to react correctly and automatically when the shaking begins. During an earthquake, most deaths and injuries are caused by collapsing building materials and heavy falling objects, such as bookcases, cabinets, and heating units. Learn the safe spots in each room of your workplace / home. At home if you have children, get the entire family to practice going to these locations. Participating in an earthquake drill will everyone understand what to do in the case of an earthquake. KAUST Schools should also make sure that all students also understand the school's emergency procedures for disasters. This will help you coordinate where, when, and how to reunite with children after an earthquake.

DURING EARTHQUAKE / DRILL:

- **DROP, COVER and Hold ON**

- **DROP down onto your hands and knees** before the earthquake could knock you down. This position protects you from falling but still allows you to move if necessary.
- **COVER** your head and neck (and your entire body if possible) under the shelter of a sturdy table or desk. If there is no shelter nearby, get down near an interior wall or next to low-lying furniture that won't fall on you, and cover your head and neck with your arms and hands. Try to stay clear of windows or glass that could shatter or objects that could fall on you.
- **Hold On** in your shelter and cover your head and neck until the shaking stops. Be prepared to move with your shelter if the shaking shifts it around.
- Wait in your safe place until the shaking stops, then check to see if you are hurt. You will be better able to help others if you take care of yourself first and then check on the people around you. Move carefully and watch out for things that have fallen or broken, creating hazards. Be ready for aftershocks.
- Be on the lookout for fires. Fire is the most common earthquake-related hazard, due to broken gas lines, damaged electrical lines or appliances, and previously contained fires or sparks being released.
- After the quake do not rush outside, many people get injured after the quake while leaving the building.
- If you must leave a building after the shaking stops, use the stairs, not the elevator, and look for falling debris. Earthquakes can cause fire alarms and fire sprinklers to go off. You will not be able to rule out whether there is a real threat of fire, and the elevators may have been compromised. Always use the stairs.

- If you're outside in an earthquake, stay outside. Move away from buildings, trees, streetlights and overhead lines. Crouch down and cover your head. Many injuries occur within ten feet of the entrance to buildings. Bricks, roofing and other materials can fall from buildings, injuring persons nearby. Trees, streetlights and overhead lines may also fall, causing damage or injury.
- If you are in a vehicle:
    - Pull over and stop.
    - Remain clear of overpasses, tall buildings, structures, and trees.
    - Make certain your seat belt is fastened.
    - Stay in your vehicle, as it will provide some protection from falling and flying debris.

Evacuation Plans

If an earthquake occurs, you may need to evacuate a damaged area afterward. By planning and practicing for evacuation, you will be better prepared to respond appropriately and efficiently to signs of danger or to directions by authorities.

- Take time with your colleagues / family to discuss an evacuation plan. At work follow the Building Evacuation Plans as laid out, but be prepared to have a secondary route as your primary one may be blocked by falling debris etc. Sketch a floor plan of your home; walk through each room and discuss evacuation details.
- Plan a second way to exit from each room or area, if possible. If you need special equipment, such as an evacuation chair, mark where it is located.
- Mark where your emergency food, water, first aid kits, and fire extinguishers are located.
- Mark where the utility switches or valves are located so that they can be turned off, if possible.
- Indicate the location of your safe emergency outdoor Assembly Point (Away from buildings and other possible hazards).

Establish Priorities

Each household should take some preventative time to write an emergency priority list, long before an earthquake ever strikes, including:

- Important items to be hand-carried by you.
- Other items, in order of importance to you and your family
- Items to be removed by car or truck if one is available.
- Things to do if time permits, such as locking doors and windows, turning off the utilities, etc.

Write Down Important Information

Make a list of important information and put it in a secure location. Include on your list:

- Important telephone numbers, such as emergency services and medical centers
- The names and telephone numbers of vulnerable neighbors
- Important medical information, such as allergies, regular medications, etc.
- The vehicle identification number, year, model, and license number of your vehicles.
- Your bank's telephone number, account types, and numbers
- Radio and television broadcast stations to tune to for emergency broadcast information.

Gather Emergency Supplies

Stock up on that can be used after an earthquake. These supplies should include a first aid kit, survival kits for the home, automobile, and workplace, and emergency water and food. Store enough supplies to last at least 3 days. ***See Emergency Supply Checklists on Page 104.***

http://www.fema.gov/media-library-data/1390846764394-dc08e309debe561d866b05ac84daf1ee/checklist_2014.pdf

Note: It is recommended each household gather and store Important Documents in a waterproof and if possible, a Fire-Proof container.

- Passports / National ID Cards / Birth certificates
- Ownership certificates (automobiles, boats, etc.)
- Social Security cards
- Insurance policies
- Wills
- Household inventory, including list of contents, photographs of contents of every room, photographs of items of high value, such as jewelry, paintings, etc.,

RESPONSE / RECOVERY

In the aftermath of an earthquake, workers may be involved in a variety of response and recovery operations. The following are general guidelines that may be applicable to workers involved in assessing and/or cleaning up the damage to their worksite.

Collapsed Structures

Collapsed structures are a common result of earthquakes. Rescue workers, engineers and emergency responders may have to enter collapsed structures to perform search and rescue activities, and all possible safety and health precautions should be taken to ensure they can perform their duties safely.

What is a collapsed structure?

When internal load-bearing structural elements fail, a building will collapse into itself, and exterior walls are pulled into the falling structure. This scenario may be caused by construction activity, an earthquake or fire and may result in a dense debris field with a small footprint. Alternatively, if the structural failure is caused by an explosion or natural forces such as weather, the building may collapse in an outward direction resulting in a less dense and scattered debris field.

Who enters a collapsed structure?

Following a catastrophic failure of a structure, rescue workers and emergency responders may be required to enter the collapsed structure. Emergency responders include Firefighters, Security officers, Emergency Medical Technicians, construction workers and government representatives. Emergency responders may be responsible for assisting survivors, extinguishing fires, shutting off utilities, assessing structural instabilities, shoring-up safe paths into the structure and assessment of other hazards such as airborne contaminants. Rescue workers such as Urban Search and Rescue Teams focus on finding survivors and later removing fatalities from collapsed structures.

Potential Hazards

Response and recovery work in earthquake-impacted areas presents safety and health hazards that should be properly identified, evaluated, and controlled in a systematic manner to reduce or eliminate occupational safety and health risks to response and recovery workers. The following hazards should be considered in order to protect rescue workers and emergency responders when preparing to enter a collapsed structure:

- Water system breaks that may flood basement areas.
- Exposure to pathogens from sanitary sewer system breaks
- Exposed and energized electrical wiring.
- Exposure to airborne smoke and dust (asbestos, silica, etc.)
- Exposure to bloodborne pathogens

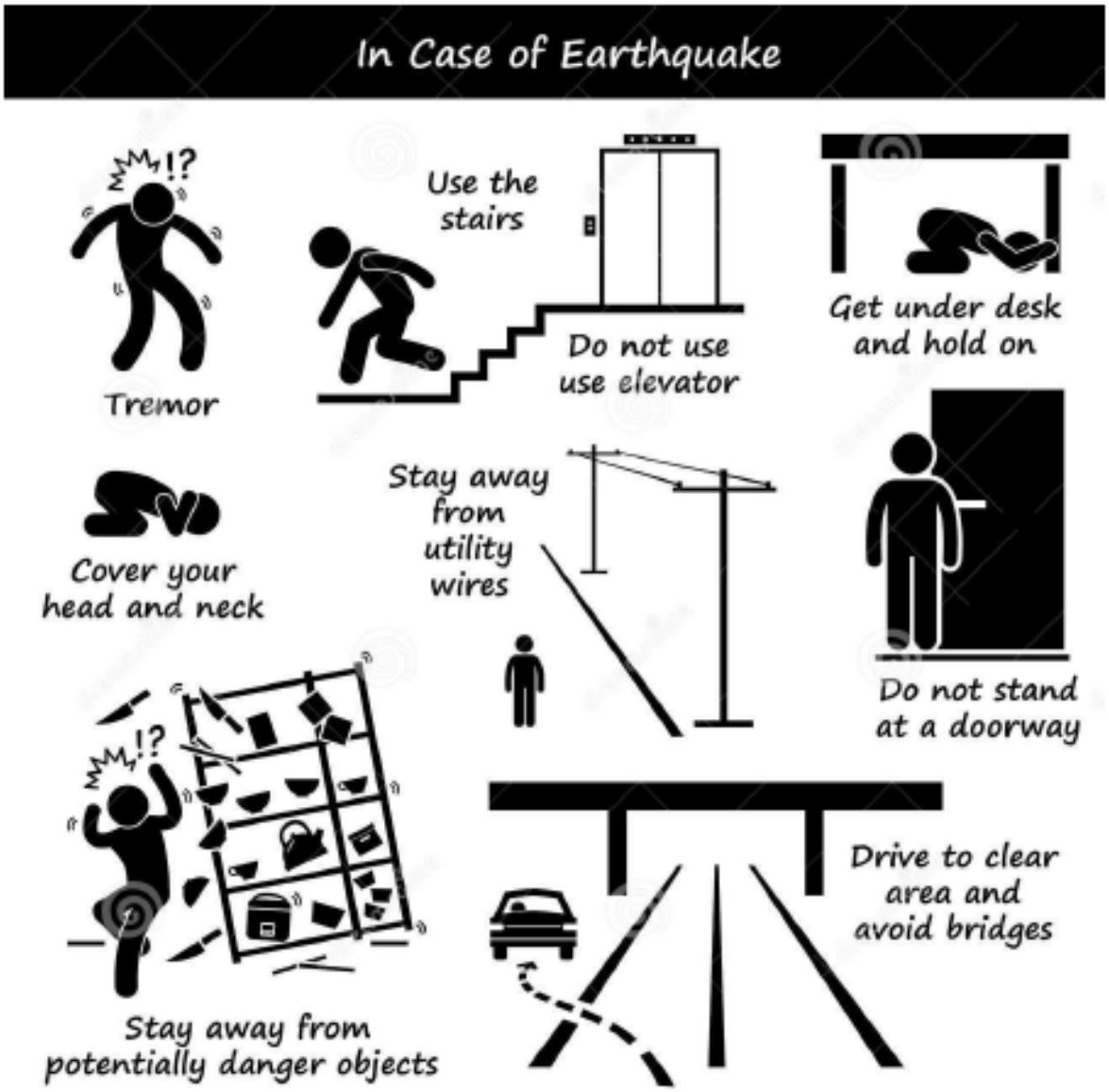
- Exposure to hazardous materials (ammonia, battery acid, leaking fuel, etc.)
- Natural gas leaks creating flammable and toxic environments.
- Structural instability
- Insufficient oxygen
- Confined spaces
- Slip, trip or fall hazards from holes, protruding rebar, etc.
- Struck-by hazards from falling objects.
- Fire
- Struck by heavy equipment such as cranes or excavators.
- Sharp objects such as glass and debris
- Secondary collapse from aftershock, vibration and explosions
- Unfamiliar surroundings
- Adverse weather conditions
- Noise from equipment (generators/heavy machines)

General Precautions

- Only trained personnel should be involved in search and rescue or demolition and cleanup operations.
- Continue to monitor your local radio or television stations for emergency information.
- Be aware of possible structural, electrical, or gas-leak hazards.
- If such hazards are identified, report them to the proper authorities and/or F&C.
- Do not touch downed overhead lines or objects in contact with downed power lines.
- Wear proper protective clothing when walking on or near debris, including boots and gloves.
- Be careful around sharp objects, including nails and broken glass.
- Use the proper safety precautions when operating generators, chainsaws, or other power tools.
- Take steps to prevent cold injuries or heat illnesses and dehydration.
- Avoid contact with wild or stray animals.

Aftershocks

Aftershocks are smaller earthquakes that follow the main shock and can cause further damage to weakened buildings. Aftershocks can occur in the first hours, days, weeks, or even months after the quake. Be aware that some earthquakes are actually foreshocks, and a larger earthquake might occur.


In Case of Earthquake
Tremor
Use the stairs
Do not use use elevator
Get under desk and hold on
Cover your head and neck
Stay away from utility wires
Do not stand at a doorway
Stay away from potentially danger objects
Drive to clear area and avoid bridges

16. MEDICAL EMERGENCIES

This Plan, particularly focused on people, provides guidance to personnel faced with a medical emergency i.e., to the 1st person, 911 command & control dispatcher, medical personnel respondents, On-Scene Commander, Incident Commander and other relevant management on the actions to be implemented should a medical emergency arise.

This plan focuses on two main scenarios:

1. General Medical or Trauma Emergencies (Single and Multiple Casualties)
2. Pandemic Events

16.1 GENERAL MEDICAL EMERGENCIES

FIRST PERSON

- Should a medical emergency arise, remain calm in order to handle the situation in the most appropriate manner.
- Call 911 immediately.
    - Provide your location, the age, gender, and condition (conscious?) of the person requiring medical attention.
- Note: Do not move the victim before treatment, unless it is absolutely essential, in order to avoid further injury!!!
- Do not give a victim anything to eat or drink, even if he/she asks for something – it might fatally complicate an unsuspected internal injury. At most, moisten the lips with a cloth that has been dipped in water.
- Cover the victim lightly with a blanket or coat and try to persuade anyone who may be wandering about in a state of shock to lie down.
- Carry out any Pre-Arrival Instructions given by the 911 Dispatcher, including initiating Bystander CPR.
- Wait with the person until trained medical personnel arrive.

911 COMMAND & CONTROL DISPATCHER

- Upon receiving the call, obtain all crucial information and complete the Incident Report Form.
- Call out medical respondents.
- Give any Pre-Arrival Instructions in-line with the APCO Protocols.
- Stay on the line with the caller until Emergency Assistance arrives at scene.

KAUST HEALTH MEDICAL RESPONDENTS

- Receive incident notification and proceed immediately to the incident scene.
- Clear persons not assisting with the medical emergency from the incident area and take precautionary measures to avoid further incidents/injuries.
- Administer first aid to the victim(s).
- In the event that injured person(s) must be moved to a safer place, coordinate the movement ensuring that the person(s) is correctly positioned and adequately supported (i.e., in a flat position supporting the neck/spine/pelvis).
- Carry out all pre-hospital medical interventions as per protocols.
- Provide the On-Scene Commander with a status update.

ON-SCENE COMMANDER

- Receive incident notification and proceed immediately to the incident scene.
- In consultation with medical respondents, determine the extent and severity of injury/injuries.
- Consider Helicopter evacuation of patient depending on nature.
- In the event of mass casualty, and where required, request for external medical assistance.
- Inform the Incident Commander of the situation.

Incident Termination:

- Convene the Damage Assessment Team to conduct a Preliminary Damage Assessment.
- Conduct a formal incident investigation.
- Provide the Incident Commander with a report on the above.

INCIDENT COMMANDER

- Receive incident report from the On-Scene Commander.
- Evaluate response actions and take corrective action/implement further risk mitigation strategies where necessary.
- Make arrangements for additional resources required for incident management, including Helicopter transit of patient/s.
- Notify and inform the Crisis Management Team Leader of the situation, providing recommendations on Crisis management Team activation.
- Notify Human Resources Manager and the Registrar where the event involved staff and students respectively.

Incident Termination:

- In consultation with the Emergency Services Commanding Officer (i.e., On-Scene Commander) make a decision to return personnel to building.
- Receive and review Preliminary Damage Assessment Report.
- Commission an investigation and ensure all evidence is preserved.
- Lessons Learnt: Ensure that the Emergency Response Plan and procedures are reviewed and amended where necessary.

HUMAN RESOURCES MANAGER / REGISTRAR

- Note: Depending on the nature and scope of the incident, the Executive VP, the HR VP and the Dean of Academic Affairs initiate next of kin notification as necessary.
- Provide next of kin information to relevant Senior Management
    - HR Manager to provide staff next of kin contact details.
    - Registrar to provide student next of kin contact details.
- In conjunction with the On-Scene Commander, assess the situation in terms of employee well-being aspects e.g., if trauma counseling is required. Provide recommendations to Senior Management.

16.2 AUTOMATIC EXTERNAL DEFIBRILLATORS (AEDs)

If in the event there is a medical emergency involving a person who's respiratory or circulatory system has ceased or is critically decreasing somebody should immediately be dispatched to retrieve an Automatic External Defibrillator (AED) in case, it is required before 911 help arrives. There are a number of AEDs located around KAUST (See ***Figure 8*** for locations):

- There are 5 officially located at points around the Campus:
  1. Building 13, Campus Diner in the main lobby area near to the ATM machine
  2. Building 4, Level 0, outside of the entrance to the Engineering Workshop
  3. Building 16, Level 2, corridor to the left-hand side of the Coffee Bean Cafe
  4. Building 14, in the main lobby area to the left
  5. Building 24, Research and Innovation Park Cluster in main lobby area
  6. Central Services Operations Building, Ground Floor, Lobby Area
- There are also AEDs at each Recreation Centre, KAUST Schools, Safaa Stadium, Safaa Golf Course and at Coastline Marine services.

Figure 8 – Campus AED Locations

16.3 PANDEMIC EVENTS

KAUST must prepare itself and have plans in place for occurrences of Pandemic Events, whether they internally incubated or externally introduced. This plan gives guidance to all KAUST community and management as to their own and coordinated responsibilities to mitigate against the effects of a pandemic and recovery to normal operations as soon as possible.

KAUST COMMUNITY

- Be alert to all possible outbreaks or sources of contamination, especially when travelling and returning back to KAUST.
- Take all reasonable precautions to avoid infection.
- Be aware of any signs and symptoms which may alert to possible infection.
- If you have any doubt over your signs and symptoms do not interact with the community, confine yourself to your home. Similarly, if you have any concerns over signs and symptoms with children do not send them to school.
- Report any concerns to KAUST Health as soon as possible.
- Do not present to KAUST Health Clinic, call them and request a house call stating your concerns of possible infection.
- During a confirmed pandemic obey all instructions, monitor all information releases:
    - Avoid all community interaction if instructed.
    - Remain at home if instructed.
    - Do not report for work, college, or school if instructed.
    - Use all sanitary antibacterial, antiviral and disinfection materials provided.
    - Wear any face masks provided.

KAUST HEALTH

- Continually monitor all World Health Organization, Saudi Medical Council and other external health information agencies with regards to possible viruses being spread regionally, nationally and internationally.
- Ensure adequate stocks of all generic antiviral and antibacterial medications, or other such intervention materials at all times.
- During high-alert periods, ensure adequate stocks of specific medications recommended as required for effective treatment of announced strains.
- Ensure adequate stocks of Infection Control PPE for all treating staff, including Paramedics.

- Ensure availability of plans to implement assigned isolation units to treat infection confirmed patients, including the nomination of a dedicated Ambulance and other transport.
- During confirmed pandemic give notification of suspension of all other outpatient, dental, physiotherapy, obstetrics, other specialist clinics, all non-emergency related interventions and pharmacy facilities at KAUST Health. Put in place alternate arrangements for patient interactions and regularly give community updates.
- Undertake decontamination drills with KAUST Fire and Rescue Department, to include the wearing of Self-Contained Breathing Apparatus equipment for key personnel.
- Implement KAUST Health Disaster Plan if Pandemic is confirmed, initiating all staffing arrangements, including non-rostering of leave for all personnel and the nomination of dedicated roles and responsibilities throughout the duration of the crisis.
- Liaise with all external medical facilities to support treatment of KAUST patients.
- Liaise with Saudi Medical Council and all other external sources of information to receive updated steps to be taken.
- Work with and advise KAUST Management prior to an event and with EOC Members during an event as to the best course of actions to be taken in-line with public health and safety.
- ***Appendix 04 in Part D*** lists the KAUST Health Medical Emergency contact details.

KAUST MANAGEMENT

- Pay heed to any possible pandemic related information and advice coming from KAUST Health and other external sources.
- Have in place contingency plans to continue core business operations during periods of staff depletion:
    - Suspend all non-essential operations.
    - Reassign personnel to key mission critical tasks.
    - Put in place arrangements for staff to be able to work from home.
    - Cancel all rostered annual leave.
    - Increase utilization of PTSA scheme to fill depleted posts with required experience.
    - Make arrangements for increased childcare facilities where possible.
- When advised, give instructions to all personnel to stay home from work and work remotely where possible.
- Continually monitor all relevant information sources

- Set up communication channels through Government Affairs with any personnel Out of Kingdom regarding re-entry procedures.
- Ensure infection control measures are implemented at all buildings and facilities.
- Suspend, or strictly monitor all supply chain activity if advised.
- Suspend, or strictly monitor all service provider / contractor activity if advised.
- Assist KAUST Health and Emergency Services with all requests.
- Follow any advice or instructions regarding repatriation of personnel if deemed appropriate during a prolonged and escalated crisis.

INCIDENT COMMANDER

- Stay informed of any escalation advice coming from KAUST Health or external sources regarding possible pandemic.
- Make the decision to activate the EOC, or Virtual EOC if deemed a safer option.
- Active the EMP and BCP if pandemic is imminent.
- Liaise with all instructions, advice and requests from KAUST Health and external medical sources.
- Give strategic support to KAUST Health and all Emergency Services.
- Make provision for any temporary medical facilities, medications, personnel or equipment required.
- Liaise with all external Emergency Services and volunteer groups as required.
- Consider the use of the National Guard medical capabilities.
- Oversee and direct all personnel contingency plans to ensure continuity of core business operations.
- Ensure the implementation and adherence of all Infection Control Measures at all sites throughout the Campus and community.
- Give instructions to close all non-essential facilities, such as recreation centers, golf course, stadium, beach, non-essential retail units, Mosques, libraries, schools, non-essential support buildings and service provisions.
- Inform Crisis Management Team Leader to consider activating Crisis Management Center
- If pandemic escalates consider recommending closing the University and all community services, including the main Diner.
- Ensure an effective flow of relative information to all KAUST personnel, students and community.

- Give regular updates to the Crisis Management Team.

CRISIS MANAGEMENT TEAM

- Active the Crisis Management Center when required.
- Make a decision to close all University operations and communicate.
- Make a decision regarding a university-wide evacuation if deemed necessary.
- Coordinate and request assistance from the Emergency Operations Coordination Center Coordination Group.
- Coordinate and request external assistance (e.g., Saudi Medical Council, National Guard, Coast Guard, Civil Defense and Red Crescent etc.).
- Put in place any financial support arrangement required for additional services, facilities, personnel and medications etc.
- Facilitate any regional or national evacuation requests.
- Deal with all media and public related communications.
- Liaise with BCM team regarding recovery and minimizing reputation damage.

17. DECEASED PERSON(S) - RESPONSE GUIDE

Overview

The death within the KAUST community is a serious matter which might impact family, close friends, peers, students, and staff. In responding to the natural or work-related death, the University should be supportive and sensitive to:

- The family and relatives of the deceased and persons primarily concerned with the death.
- Cultural and religious beliefs of the deceased and their next of kin.
- Immediate needs of the bereaved.

This guideline has been developed to provide guidance to the following:

- Person discovering the deceased person(s)
- KAUST 911 Command & Control dispatcher
- Emergency response teams
- On-Scene Commander (lead security representative)
- Incident Commander
- UEC
- Chief Human Resources Officer
- Vice Provost for Faculty and Academic Affairs
- Chief Communications Officer
- Vice President Government Affairs
- Counselling Services
- Accommodation Services Manager
- Other stakeholders supporting the actions to be taken on discovery of a deceased person(s).

This guideline is only applicable for those found deceased within the physical boundaries of KAUST. A different procedure may be followed for deceased community outside the physical boundaries of KAUST.

The following are the four (4) stages in the response to a death of a KAUST community member:

1. Discovery of the death
2. Escalation and immediate response
3. Coordination with stakeholders and support of impacted community
4. Repatriation of the body and funeral

Roles and Responsibilities

Stage 1: Discovery of the Death

PERSON DISCOVERING THE DECEASED

- Any fatality must be reported to KAUST 911 immediately.
- If fatality is clear, do not touch, alter the positioning of the deceased person, or touch/move anything in the near vicinity of the deceased person. (Fatality may not be immediately known and in such case, life saving measures should take place.)
- Instruct any other persons not to interfere with the deceased person or the surroundings of the deceased person.
- Remain clear of any hazards.

Stage 2: Escalation & Immediate Response

911 COMMAND & CONTROL DISPATCHER

- Mobilize KAUST Security and KAUST Health paramedics to proceed to the incident location.
- Mobilize the KAUST Fire Department in case of assistance needed with recovery of the deceased person.
- Notify all the necessary stakeholders as per the KAUST 911 CCC Incident Notification Matrix, including:
    - Chief Human Resources Officer (CHRO) for staff or staff dependents/guests' deaths
    - Vice Provost for Faculty and Academic Affairs for student or student dependents/guest deaths
    - Vice President Government Affairs
    - Deputy President Government Affairs
    - Director, HSE
    - Department Manager for deaths of contractors or service providers under their authority. The Department Manager shall follow an approved written procedure which is aligned with the requirements of this procedure concerning deceased persons under their authority.

SECURITY TEAM

- Expedite mobilization to the incident scene.
- Implement actions/procedures as per the security protocols.
- Provide status reports to the On-Scene Commander.

- Set up a cordon and prevent unauthorized persons from entering the incident scene, initiate the investigation, including attempts to identify the casualties and/or deceased without touching or moving the deceased person.
- Consult with Government Affairs in dealing with the police and local authorities to facilitate visits by the police/local authorities to conduct a forensic investigation at the scene and with the deceased person before transferring the body to Jeddah.

MEDICAL TEAM

- Expedite mobilization to the incident scene.
- Implement actions/procedures as per the security medical protocols.
- Provide status reports to the On-Scene Commander.
- Ensure KAUST Health is notified to have handling arrangements in place for the deceased person(s) remains if this is required.
- Remain onsite until the deceased person is to be moved and government authorities arrive to transfer the deceased person.
- Prepare a medical report for submission to local authorities if required.

ON-SCENE COMMANDER

- Expediate mobilization to the incident scene.
- Establish the Incident Command Post to coordinate the on-scene response.
- Ensure the incident scene is protected and no evidence is tampered with.
- Obtain updates from the Principal Emergency Services Leads attending to the scene.
- Implement actions/procedures as per the Security Guidelines.
- Consult with Government Affairs for notification and co-ordination with governmental authorities.

Stage 3: Coordination with stakeholders and ongoing support

INCIDENT COMMANDER

- Notify the EOT and the UEC of the situation and make recommendations regarding activation of the EOT or if necessary, the KAUST Crisis Center (e.g., in the event of multiple fatalities).
- Confirm notification of the necessary stakeholders to provide support.
- Ensure University Investigation Services have been notified and a full investigation is underway.
- Initiate deceased person(s) identification arrangements.
- Make any necessary arrangements for additional temporary facilities if required to manage deceased persons remains.
- Ensure University Insurance agents are notified.

UEC

- Decide regarding KAUST Crisis Center activation.
- Chair the KAUST Crisis Center if activated.
- Communicate strategic level decisions and provide guidance to the Emergency Operations Team to execute coordination of the response and mobilization of the necessary resources.

HUMAN RESOURCES

The Chief Human Resources Officer or designee will oversee and support the actions related to the death of a KAUST staff or family member and include the following:

- Consult with and update members of the Emergency Operations Team and Senior Leadership Team (SLT) as deemed necessary and include:
  - KAUST President
  - Chief Administration Officer
  - Vice-President Government Affairs
  - Chief Communications Officer
- Initiate next of kin notification and express condolences on behalf of the University.
- Inform housemates if the staff member lived in shared accommodation.
- Initiate counselling e.g., HR Wellbeing platform, KAUST Health, Student Counselling Services and support, as necessary.
- Notify the Accommodation Services Manager to support, as necessary.
- Represent (or ensure representation of) the University at the funeral or memorial service if in the Kingdom of Saudi Arabia.

Upon verification that the next of kin has been informed of the death, ensure that all the necessary steps are taken to stop unnecessary University correspondence, services and deductions for services provided by the various university offices to the deceased, including:

- Notify the HR data custodian to amend the university's database to prevent dissemination of correspondence related to university invitations e.g., reunions etc.
- Notify the deceased colleague's manager.
- Ensure that the deceased colleague's name is removed from any staff listings or literature (if appropriate and possible) and remove information from the KAUST website, as necessary.
- Notify IT to deactivate the necessary accounts.
- HR to follow their own process for separations and benefits distribution at the right time.

PROVOST

The Vice Provost for Faculty and Academic Affairs or designee will oversee and support the actions related to the death of a KAUST student or family member and include the following:

- Consult with and update members of the Emergency Operations Team and Senior Leadership Team (SLT) as deemed necessary and include:
  - KAUST President
  - Chief Administration Officer
  - Vice-President Government Affairs
  - Chief Communications Officer
  - Chief Human Resource Officer
- Initiate next of kin notification for non-Saudi students and express condolences on behalf of the University.
- Inform housemates if the deceased student lived in shared accommodation.
- Notify Counselling Services e.g., HR Wellbeing platform, KAUST Health, Student Counselling Services of the death to initiate counselling and together with the responsible executive, support as necessary the relevant teams and colleagues.
- Notify the Accommodation Services Manager to support, as necessary.
- Represent (or ensure representation of) the University at the funeral or memorial service if in the Kingdom of Saudi Arabia.

Upon verification that the next of kin has been informed of the death, ensure that all the necessary steps are taken to stop unnecessary University correspondence, services and deductions for services provided by the various university offices to the deceased, including:

- Notify the Alumni Office to amend their database to prevent dissemination of correspondence related to reunions, Gala Banquets etc.
- Notify the Finance Manager to stop the necessary payments and deductions.
- Notify the deceased student's PI/Academic Advisor.
- Notify the Registrar to update the Student Records appropriately.
- Ensure that the deceased student's name is removed from any graduation literature or staff literature (if appropriate and possible).
- Notify IT to deactivate accounts and remove information from the KAUST website, as necessary.

In case of the death of a visiting student or academic staff, the Vice Provost for Faculty and Academic Affairs or designee shall as soon as practical contact and inform the deceased student's or academic staff's institution of origin and convey condolences on behalf of KAUST and offer the support appropriate in the situation.

GLOBAL BRANDING & COMMUNICATIONS

Issuing/publication of notices to the KAUST community pertaining to the deceased person(s)' death, needs to be made in a timely and appropriate fashion. It would be important in the case of a death of a community member, whilst living away from their family, that the deceased person(s) next of kin has been informed of the death before any University notice is issued to the KAUST community.

The Chief Communications Officer, will be responsible for:

- Preparing a notice and obtaining approval for distribution to the appropriate target audiences, if appropriate to do so, via the applicable communication platforms.
- Obtaining consent from the deceased persons next of kin/relatives for a communication to be issued.
- Issuing community facing notices subject to the deceased person(s)' next of kin being notified of the death.
- Inform those potentially impacted of the counselling resources available. (Student Counseling Services, KAUST Health, TKS student counselors, and Family and Child Support Center.)
- Dealing with queries from the KAUST community or other sources, arising from the community member's death.
- Monitoring social media for mentions of the death and potential KAUST reputational damage.

HOUSING

If the deceased is a resident within KAUST the Housing Services Office will:

- Ensure that if the death occurred within a KAUST residence, the residence is off limits until the police have completed the investigation.
- Provide access to the residence to family members to collect personal belongings; or pack and ensure belongings are returned to the next of kin, after the police gathered evidence/completed the investigation.
- Alternative housing needs to be made available to the family of the deceased or those living in the residence, since the resident(s) might not be comfortable to remain in the same accommodation where an individual passed away.

COUNSELLING SERVICES

- The role of Counselling Services (Student Counseling Services, KAUST Health, TKS student counselors, and Family and Child Support Center) is to support students and/or staff affected by the death and staff members who need to break the news to family or roommates.
- Counselling will be made available as soon as practical, but those impacted may not choose to access counselling in the immediate aftermath of a death and may prefer to receive counselling at a later stage or join a support group.
- Inform those potentially impacted of the counselling resources available.
- Counselling should be provided if requested at a later stage.

Stage 4: Repatriation of the body and funeral

GOVERNMENT AFFAIRS

The Vice President, Government Affairs or designee is responsible for:

- Contacting the relevant Embassy and notification of the death.
- Ensuring the family of the deceased are appropriately supported as it pertains to government related processes and obtaining of the necessary documentation e.g., death certificate etc.
- Making appropriate arrangements for the repatriation of the deceased's remains.
- Initiate next of kin notification and express condolences on behalf of the University in cases involving Saudi staff and/or students.

CHIEF COMMUNICATIONS OFFICER

Issuing/publication of notices to the KAUST community pertaining to the deceased's death, needs to be made in a timely and appropriate fashion. It would be important in the case of a death of a community member, whilst living away from their family, that the deceased's next of kin has been informed of the death before any University notice is issued to the KAUST community.

The Chief Communications Officer, will be responsible for:

- Preparing a notice and obtaining approval for distribution to the appropriate target audiences via the applicable communication platforms.
- Issuing community facing notices subject to the deceased's next of kin being notified of the death.
- Dealing with queries from the KAUST community or other sources, arising from the community member's death.

- Monitoring social media for mentions of the death and potential KAUST reputational damage.

HOUSING SERVICES MANAGER

If the deceased is a resident within KAUST the Housing Services Office will:

- Ensure that if the death occurred at the deceased's residence, the residence is off limits until the police have completed the investigation.
- Provide access to the residence to family members to collect personal belongings; or pack and ensure belongings are returned to next of kin, after the police gathered evidence/completed the investigation.
- Alternative housing needs to be made available to the family of the deceased or roommates, if the death occurred at the deceased's residence, since the family or roommates might not be comfortable to remain in the same accommodation where a family member or roommate passed away.

COUNSELLING SERVICE

- The role of the Counselling Service is to support students and/or staff affected by the death and staff members who need to break the news to family or roommates.
- Counselling will be made available immediately, but those impacted may not choose to access counselling in the immediate aftermath of a death and may prefer the support of a group or friendship.
- Counselling Services need to follow-up with the next of kin or roommates residing at KAUST after a period of time to check on their wellbeing and if they need counselling. If counselling is needed at a later stage, it needs to be made available.

Stage 4: Repatriation of the body and funeral

VICE PRESIDENT GOVERNMENT AFFAIRS

The Vice President, Government Affairs or designee is responsible for:

- Contacting the relevant Embassy and notification of the death.
- Ensuring the family of the deceased are appropriately supported as it pertains to government related processes and obtaining of the necessary documentation e.g., death certificate etc.
- Making appropriate arrangements for the repatriation of the deceased.
- Attending or assigning a designee to attend the funeral if it is in Kingdom or sharing a note of condolences on behalf of KAUST which can be shared at the funeral if it is outside the Kingdom.

18. MARINE EMERGENCIES

This Plan has been developed to provide guidance to all personnel i.e., to the 1st person, 911 Dispatcher, The Vessel Master/Captain/Coxswain, Principal Emergency Services, Marine Operations Centre, On-Scene Commander, the Incident Commander and the UEC on the actions to be taken in the event of Marine Emergencies, either on or offshore. This plan gives guidance on two main marine related scenarios:

1. General Marine Emergencies and Accidents
2. Marine Pollution Incidents

These guidelines are used in conjunction with and refer to KAUST Marine Research Safety Manuals, KAUST Dive Safety Manual and Coastline Marine Emergency Response Plans.

18.1 GENERAL MARINE EMERGENCIES & ACCIDENTS

PERSON DISCOVERING THE EMERGENCY (at sea)

- Sound the alert.
- Notify the vessel's Master/Captain/Coxswain immediately.
- If a fire - Use any fire extinguishing media if safe to do so.
- If an accident or medical incident - Render any medical first aid required.
- If a dive related incident - Activate Dive Safety Protocols and have equipment ready.
- Deploy and flotation and life-saving devices if overboard, if required.

VESSEL MASTER / CAPTAIN / COXSWAIN

- Follow the Marine/Diving Incident Emergency Escalation Flow Chart to escalate.
- Use Marine VHF Radio/Satellite Phone if offshore, or Landline/Mobile Phone/Bravo if onshore, to place appropriate distress call to Coast Guard, Marine Operations Center, KAUST 911 Dispatch, any other vessels in the area, or any other Agency Call Center depending on location.
- Give Vessel Name, contact number, exact location (GPS Coordinates), nature and cause of incident (e.g., water immersion, vessel fire, traumatic injury, collision, stranded vessel, fuel discharge, etc.), number of casualties, types on injuries, number of persons aboard, resources onboard and resources required.
- Ensure communications are maintained.
- Instruct all crew to Emergency Stations.
- Issue all crew/passengers with Life Jackets / Floatation Devices.

- Turn the vessel around if alerted to Man Overboard.
- Stop the vessel if appropriate.
- Set anchor if appropriate.
- Set off flare if appropriate.
- Deploy Tender Vessel if appropriate.
- Deploy Life Rafts if appropriate.

KAUST 911 COMMAND & CONTROL DISPATCHER

- Follow the Marine/Diving Incident Emergency Escalation Flow Chart to escalate.
- Call out Emergency Services to proceed to the incident area if onshore.
- Notification of Marine Operations Center.
- Notification of the Coast Guard if offshore and appropriate.
- Maintain link with Marine Operations Control Center.
- Maintain communications link with vessel, establish backup contacts numbers.
- Inform KAUST Health of nature of incident if medical assistance is required.
- Request mobilization of Helicopter Rescue if appropriate.
- Request mobilization of KAUST Fire & Rescue Craft or any other rescue craft if appropriate for assistance to extract casualties from the vessel.
- Give appropriate Pre-Arrival Instructions.
- Establish preferred Emergency Services Rendezvous Point / Dock.
    a. KAUST North Marina
    b. KAUST South Marina
    c. Dive Center
    d. Thuwal Coast Guard Station
    e. CMOR Marine Research Docks, Building 27 (For all Research Vessels)
    (See ***Figure 21, 22 & 23*** for Vessel Marina Docking Locations)
        - Zone 1 – Junction of Transformation Boulevard & Island St. (Map P.37)
        - Zone 2 - Junction of Transformation Boulevard & Hamour St. (Map P.37)
        - Zone 3 - Junction of Transformation Boulevard & Pearl St. (Map P.46)
        - Zone 4 - Junction of Transformation Boulevard & Hareed St. (Map P.46)
        - (See ***Figure 20*** for North Beach Emergency Services RVPs)

MARINE OPERATIONS CENTER

- Monitor all Marine warning and notification systems.
    - Marine VHF Channels
    - Sonar Equipment
    - Radar
    - Coast Guard Communications

- Establish and maintain communication links with the vessel, 911 Dispatch, The Coast Guard, and the EOC.
- Issue warnings and any alternative headings to all area traffic.
- Monitor all weather forecasts for the area.
- Liaise with all Emergency Services.
- Assist in mobilizing any rescue craft.
- Assist in shore readiness to receive docking craft.
- Ensure any docking area is well illuminated at night.
- Make any necessary arrangements for Helicopter RVP and liaison.
- Make any necessary arrangements for refueling vessels.
- Make any necessary arrangements for alternative harboring requirements.
- Give regular updates to the UIC / EOC.

EMERGENCY SERVICES COMMANDERS

- Proceed to the incident scene or nominated Rendezvous Point immediately, if onshore.
- Perform any land-based rescues.
- Give prehospital medical intervention.
- Implement actions/procedures as per the PES Emergency Response Plans.
- Implement actions/procedures as per the Security Guidelines.
- Set up cordons and restrict any access to the site.
- Prepare helicopter landing site and Rendezvous Point if required.
- Terminate any beach activities as necessary.

HSE DESIGNATED SAFETY OFFICER

- Upon notification by the 911 dispatcher, proceed to the incident scene, if onshore.
- Assess the situation in terms of health risks to area occupants.
- Implement additional actions/procedures as per the DSO Guide.
- Liaise with the On-Scene Commander.
- Give regular updates to the EOC.

INCIDENT COMMANDER

- Liaise with On-Scene Command, 911 Dispatch, Marine Operations, or Coast Guard to establish the exact nature of the emergency.
- Request Security and Marine Operations personnel to obtain as much Sonar and Radar information as is available to them.
- Establish the number of casualties and what additional resources may be required.
- Make any necessary communications with any external agencies required, e.g. The Coast Guard.

- Make any necessary arrangements for Helicopter requirements – Coast Guard, Medical, Military, or private in conjunction with Government Affairs.
- Establish if there is a significant fuel discharge, giving concern to environmental issues.
- Request regular weather forecast updates for possible effects on the incident.
- Notify the EUC of the situation and make recommendations regarding activation of the KAUST Crisis Center (e.g., in the event of a major emergency).

UNIVERSITY EXECUTIVE COMMITTEE CHAIR

- Make a decision regarding KAUST Crisis Center activation.
- Request Emergency Operations Team (EOT) support with incident coordination.
- Obtain inventory of all personnel onboard the vessel and have in place arrangements to notify next of kin if necessary.
- Make any necessary external arrangements with external agencies which may be required or should be notified.
- Make any financial arrangements for additional equipment required, such as helicopters etc.
- Make any external arrangements required with alternative ports of entry for harboring and shelter.
- Manage all communications with the media and the public regarding the incident.
- Initiate BCM arrangements where appropriate.

18.2 MARINE POLLUTION INCIDENTS

PERSON DISCOVERING THE EMERGENCY

- Sound the alert and notify the vessel's Master/Captain/Coxswain immediately if offshore, or 911 if discovered onshore.
- Give as much information as possible regarding the pollutant, e.g., Spill, how large, probable substance, probable cause, are there any wildlife signs, i.e., dead birds, or fish kills washed ashore?
- Stay away from pollutant and raise alarm to other persons in vicinity.

VESSEL MASTER / CAPTAIN / COXSWAIN

- Use Marine VHF Radio/Satellite phone if offshore, or Landline/Mobile Phone/Bravo Radio if onshore, to place appropriate distress call to Coast Guard, KAUST 911 Dispatch, any other vessels in the area, or any other Emergency Agency Call Center depending on location.

- Give Vessel Name, contact number, exact location (GPS Coordinates), nature of incident (e.g., type of pollution, fuel discharge, spill etc.), approximate size of spill, number of persons aboard, resources onboard and resources required.
- Ensure communications are maintained.
- Instruct all crew to Emergency Stations.
- Issue all crew/passengers with Life Jackets / Floatation Devices.
- Stop the vessel if appropriate.
- Set anchor if appropriate.
- Deploy any environmental spill booms if appropriate.
- Attempt to stop leak/spill if safe to do so.
- Instruct any other location traffic to avoid that chart area,
- Monitor size of spill and report on any updates.
- Report on any wildlife telltales, e.g., fish kills etc.

KAUST 911 COMMAND & CONTROL DISPATCHER

- Call out Emergency Services to proceed to the incident area if onshore.
- Notification of Marine Operations Center
- Notification of the Coast Guard if offshore and appropriate.
- Maintain link with Marine Operations Control Center.
- Maintain communications link with vessel, establish backup contacts numbers.
- Inform HSE Department.
- Mobilization of Helicopter Resource if appropriate and in conjunction with Government Affairs and the EOC.

MARINE OPERATIONS CENTER

- Monitor all Marine warning and notification systems.
    - Marine VHF Channels
    - Sonar Equipment
    - Radar
    - Coast Guard Communications
- Establish communication links with the vessel, 911 Dispatch, The Coast Guard, and EOC.
- Issue warnings and any alternative headings to all area traffic.
- Monitor all weather forecasts for the area.
- Liaise with all Principal Emergency Services.
- Assist in mobilizing any assisting craft.
- Assist in shore readiness to receive docking craft.
- Ensure any docking area is well illuminated at night.
- Make any necessary arrangements for the availability of any environmental spill containment booms etc.
- Make a request to KAUST 911 CCC for Helicopter assistance if necessary.

- Make any necessary arrangements for refueling vessels.
- Make any necessary arrangements for alternative harboring requirements.
- Give regular updates to the EOC.

EMERGENCY SERVICES COMMANDERS

- Proceed to the incident scene immediately, if onshore.
- Implement actions/procedures as per the PES Emergency Response Plans.
- Implement actions/procedures as per the Security Guidelines.
- Set up cordons and restrict any access to the site.
- Terminate beach activities as necessary.
- Instruct Marine Operations to order any KAUST vessels to come ashore avoiding the spill area, reporting to another harbor if necessary.
- Deploy any environmental boom protection equipment if available.
- Consider the use of Inflatable Fire Hose as an impromptu environmental boom.
- Establish what additional resources may be required.
- Give regular updates to the On-Scene Commander.

HSE DESIGNATED SAFETY OFFICER

- Upon notification by the 911 dispatcher, proceed to the incident scene, if onshore.
- Assess the situation of terms of health risks to area occupants.
- Implement additional actions/procedures as per the DSO Guide.
- Liaise with the On-Scene Commander.
- Mobilize and liaise with Environmental Protection Manager.
- Give regular updates to the EOC.

ENVIRONMENTAL PROTECTION MANAGER

- Upon notification by the 911 dispatcher, proceed to the incident scene.
- Assess the situation of terms of contamination risks to area occupants and the environment.
- Take any water quality or beach contaminants samples possible for examination.
- Make use of any Drift Prediction software to establish the likely areas affected.
- Implement additional actions/procedures as per the Environmental Emergency Response Plan and guidelines.

- Liaise with Government Affairs to make the necessary contact with external agencies, National Environment Agency – Presidency of Meteorology and Environment, The Coast Guard, Adjacent Facilities which may be a source, or also being affected and all other relevant agencies.
- Liaise with the On-Scene Commander and provide updates.
- Continue to take any necessary samples and pictures as evidence.
- Give regular updates to the EOC.

INCIDENT COMMANDER

- Liaise with On-Scene Command, 911 Dispatch, Marine Operations, or Coast Guard to establish the exact nature of the emergency.
- Request the Marine Operations Center to obtain as much Sonar and Radar information as is available to them.
- Establish the nature of pollution and what additional resources may be required.
- Make any necessary communications with any external agencies required, e.g. the Coast Guard.
- Make any necessary arrangements for the provision of additional resources e.g., spill booms etc.
- Establish the source of the pollution and liaise with any adjacent sites if they are the cause or are being affected by any environmental issues.
- Request regular weather forecast updates for possible effects on the incident.
- Make decisions re the closing down of shoreline facilities and activities.
- Ensure KAUST Harbor and Beach entrances are protected as far as reasonably practicable - Issue instruction to deploy environmental boom across mouth of Harbor to prevent either entering or exiting the Harbor confines.
- Notify the UEC of the situation and make recommendations regarding activation of the KAUST Crisis Center (e.g., in the event of a major emergency).

UNIVERSITY EXECUTIVE COMMITTEE CHAIR

- Make a decision regarding the KAUST Crisis Center activation.
- Request Emergency Operations Team (EOT) support with incident coordination.
- Obtain inventory of all personnel onboard the vessel and have in place arrangements to notify next of kin if necessary.
- Make any necessary external arrangements with external agencies which may be required or should be notified.
- Make any financial arrangements for additional equipment required, such as environmental booms, spill kits, skimming equipment, helicopters etc.

- Make any external arrangements required with alternative ports of entry for harboring and shelter.
- Establish the projected effected area as far as reasonably practicable.
- Manage all communications with the media and the public regarding the incident.
- Initiate BCM arrangements where appropriate.

Figure 9 – North Beach Emergency Service RVPs

Figure 10 – Marina Docking Locations

Figure 11 – North Marina Main RVP

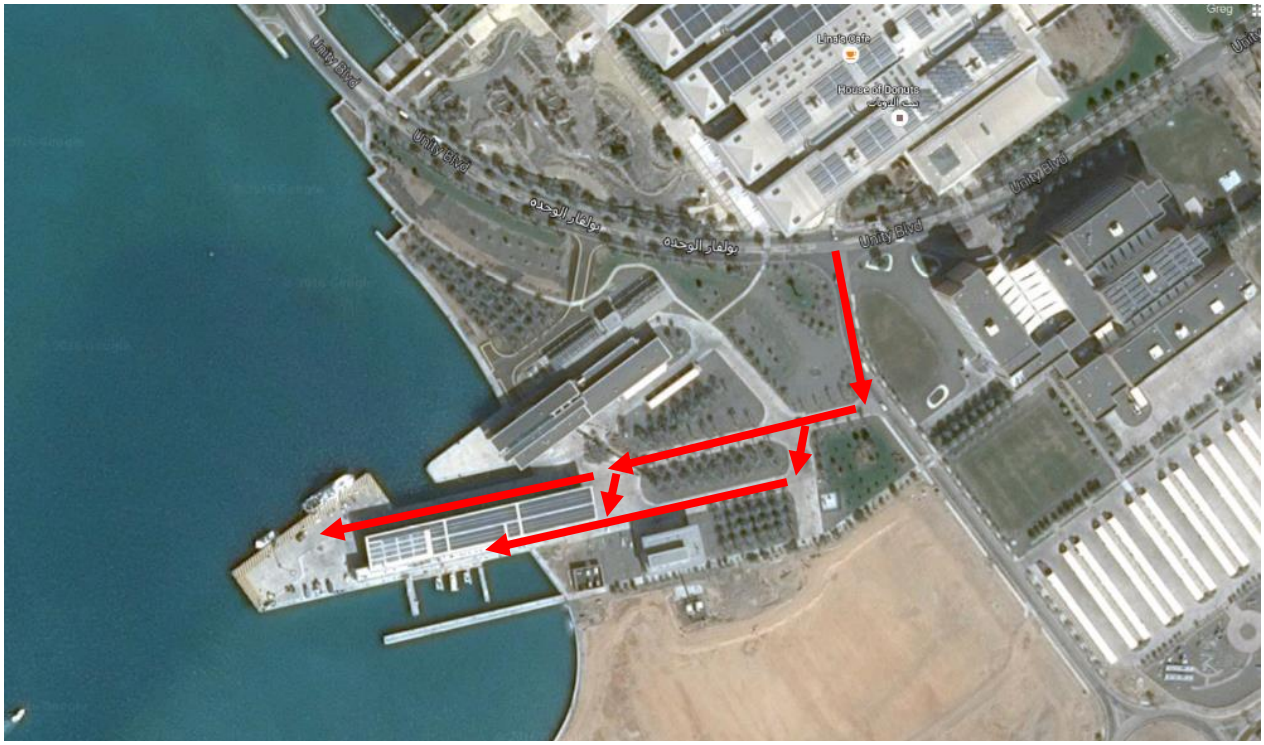


Figure 12 – CMOR Marine Research Main RVP

19. HELICOPTER EVACUATIONS / EMERGENCY AIRLIFTS

This Plan has been developed to provide guidance to all personnel i.e., to the 911 Dispatcher, Emergency Services, Marine Operations Centre, On-Scene Commander and the Incident Commander on the actions to be taken in the event of an emergency evacuation or airlift being required by a helicopter.

The plan mainly focuses on Emergency Services actions after the decision has been made to request mobilization of a helicopter resource, e.g., a medical emergency.

REQUESTING A HELICOPTER RESOURCE

- Carefully consider the real requirement or necessity for a helicopter resource:
  - Helicopters are a scarce resource and should only be requested when really needed as you may be depriving one from another higher priority.
  - Helicopters by their very nature involve hazards which must be borne in mind when requesting one:
    - Are you adding danger to the site?
    - Are you unnecessarily putting the crew in danger?
- Consider the weather:
  - Is it compatible with safe operations?
- Consider the location:
  - Is it level?
  - Is it free of loose debris?
  - Is there lighting?
  - Do the location preparations, distance and time to get there negate the advantage of a helicopter intervention?
- Consider the patient status.
- Can you justify the inherent risk and cost versus requirement?

EXAMPLES OF JUSTIFIABLE HELICOPTER REQUESTS:

- Medical emergencies:
  - Time critical responses.
  - Severe trauma cases.
  - Spinal injuries where travel by road will exacerbate the injuries.
  - When a long-distance transfer is required to a particular facility.
  - Diving / Marine Injuries (e.g., The Bends)

- When a physician or medical facility gives specific requirements.
- Access to remote or distant locations.
- Where a winching rescue is required.
- To assist with rapid evacuation of personnel.
- To get an aerial perspective on a situation (Can also use Quadcopters or Drones)
- To deliver or transport critical equipment effectively.
- To efficiently transport critical key personnel and relevant expert intervention.

AVAILABLE HELICOPTER RESOURCES:

- The National Guard
- The Coast Guard
- The Navy
- The Police
- The Red Crescent
- Private Resources

Note: Service Level Agreements and arrangements must be in place, through the appropriate KAUST channels, with the relevant bodies to have in place measures for an efficient request and deployment mechanism –

ALL REQUESTS MUST BE MADE THROUGH 911 COMMAND & CONTROL CENTER

PREPARING A LANDING ZONE

- Choose a suitable site – KAUST has a predetermined site at the rear of KAUST Health.
- As level as possible.
- Create a Safety Circle of at least 35 meters.
- Ensure a Wind direction indicator.
- Secure / Remove loose articles.
- Establish communications with the crew if possible (Third Party through 911).
- Ensure adequate lighting at night.
- Ensure Fire Cover is in place by the Fire and Rescue Department.

APPROACHING THE HELICOPTER

- Wait outside the “Safety Circle”.
- Approach only when indicated.
- Preferably from 12 to 3 o’clock.
- Ensure all clothing / bags are secure.
- Keep head low (blade sail).
- Enter one at a time.

INSIDE THE HELICOPTER

- Obey all directions given by crew.
- Sit down where told.
- Fasten seat belts.
- Be alert for Emergencies Onboard:
  - Always remain on guard.
  - Pay attention to any briefs given.
  - Follow directions of crew.
  - Know location of exits.
  - Emergency landing and ditching procedures. “Brace” position

20. CAMPUS EMERGENCY RESPONSE ROUTES & LOCATIONS

This Plan has been developed to provide guidance to all Emergency Services Personnel, i.e. to 911 Command & Control Center, Fire and Emergency Service, KAUST Security and KAUST Health Emergency Medical Service (EMS) on the optimum routes to be taken to the scene of an emergency, the agreed Rendezvous Points (RVPs) and the most effective Building Entry Points.

CAMPUS EMERGENCY VEHICLE ACCESS ROUTES

Figure 13 below depicts the best vehicular access routes to all Campus buildings, approaching the main buildings from the "Desert Side" (East) or "Seaside" (West) for the closest access depending on the incident location.

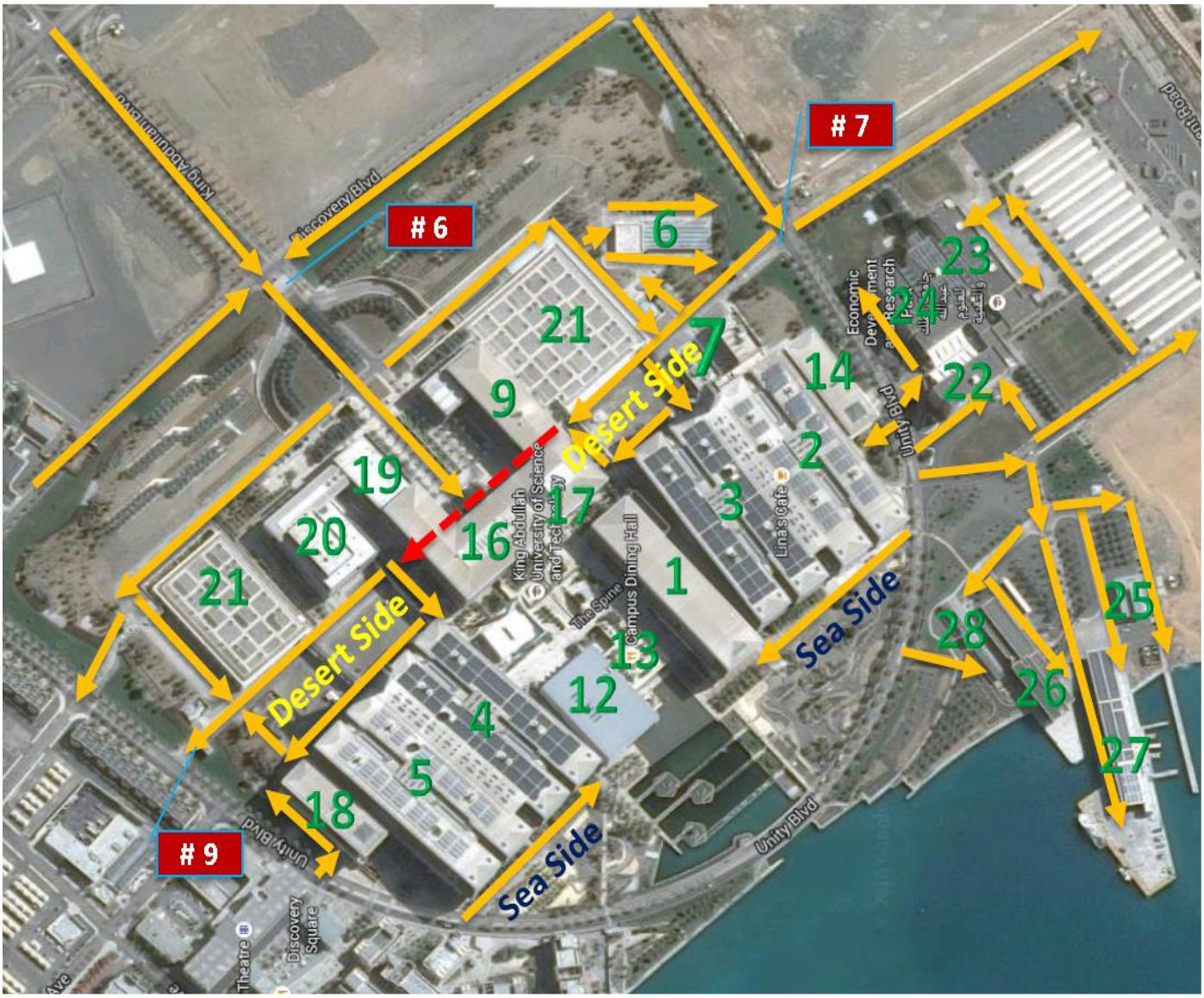


Figure 13 – Campus Emergency Vehicle Access Routes

FIRE STAIRS BUILDING ACCESS & HOSE CABINET LOCATIONS

Figure 14 below depicts the Fire Stairs Building Access Points and the Fire Hose Cabinet locations for the Main Lab Buildings – 2,3,4 & 5. Each of these buildings has 5 Emergency Fire Stairs Access Points on the outer perimeter of the building, indicated by red and white signs – "Stair A, B, C, D, or E". These stairwells give a protected and positive pressure access to a Wet Riser with Fire Hose Cabinets.

Entry Points “A & B” give best elevator access to most of the building.

Entry Points “C” (located centrally, only on the external side of the building) gives access to an “Evacuation Chair”.

Figure 14 – Lab Building Emergency Fire Stairs and Fire Hose Cabinet Locations

EMERGENCY MEDICAL SERVICES (EMS) ACCESS & ELEVATOR LOCATIONS

Figure 15 below depicts the best building access points and EMS Stretcher compatible elevator locations for the Main Campus Buildings. These elevators are capable of fitting a full EMS Stretcher and give best access to most of the buildings. ***Figure 16*** depicts the “Level 0” or Campus basement “Spine” access and egress.

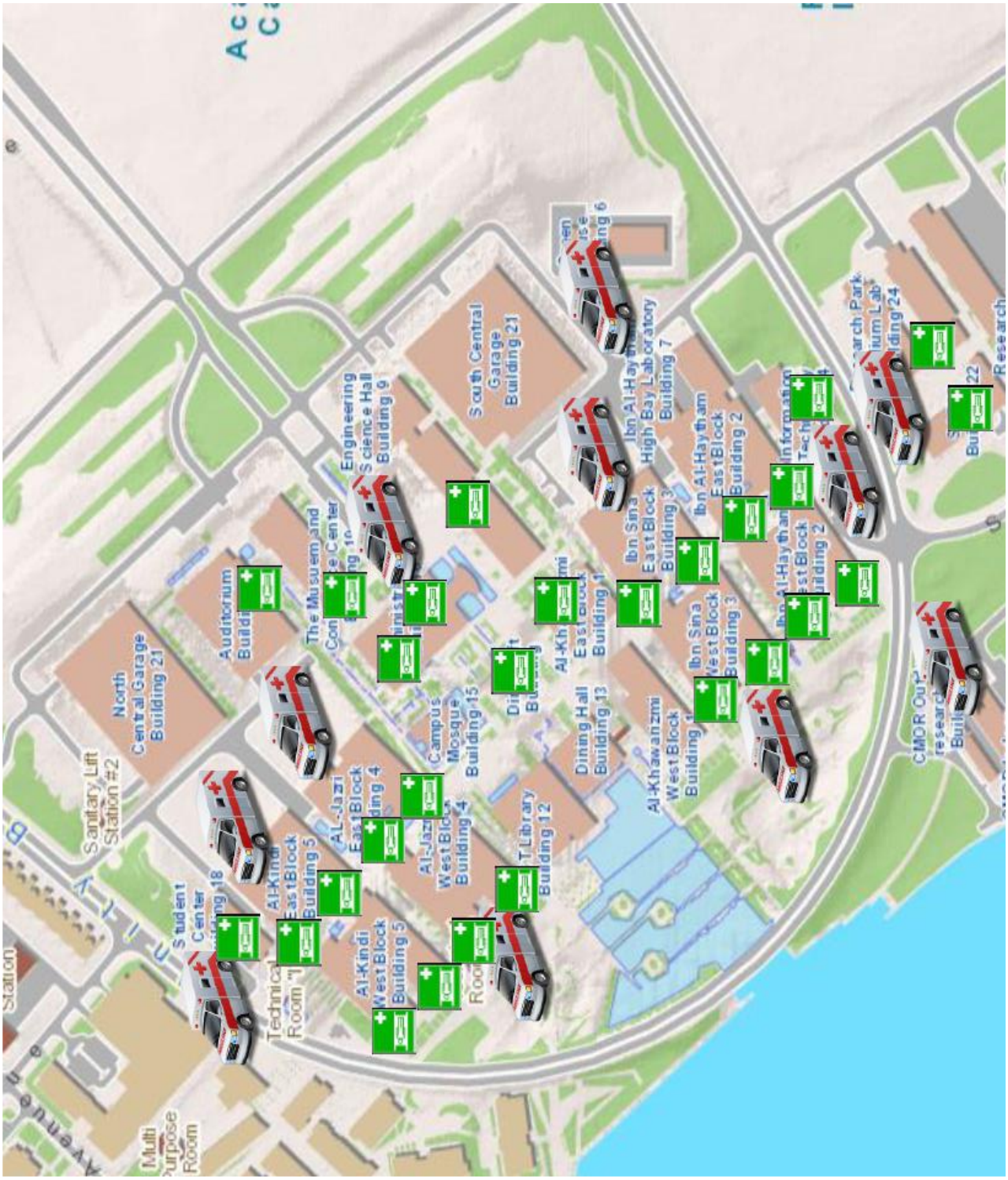


Figure 15 – Campus Building EMS Stretcher Elevator Locations

Figure 16 – Campus "Level 0" or "Spine" Emergency Service Access & Egress

21. GENERIC EMERGENCY SUPPLIES CHECKLIST

KAUST community members should take 3 basic steps to prepare themselves for a major emergency situation; make a family emergency plan, stay informed on updated emergency preparedness information and prepare an Emergency Supply Kit. All KAUST community members should have some basic supplies to last them for at least 3 days during an emergency. ***Table 04*** *on Page 129* below lists the minimum recommended supplies for to sustain individuals, or a family, through a natural, or other disaster events. ***Table 05*** *on Page 130 below* lists some suggested additional items that will be useful during a prolonged emergency situation. These lists are not exclusively limited, and personnel or families should consider their own unique needs and may choose to include more items than those listed. It is recommended that these items are gathered in a single location in sturdy, dust and water-proof boxes. If possible, it is also recommended to store your important documents, such as passports, birth certificates etc. in a fire-proof container or safe.

EMERGENCY SUPPLY CHECKLIST	
Water – At least 3 liters per person, per day, for at least 3 days, for drinking and sanitation	
Food – At least 3 days' supply, per person, of non-perishable foods; with a can-opener if supply contains canned goods.	
Flashlight with extra batteries	
First Aid Kit	
Medications and Glasses – At least a 3-day supply of prescription and general medications and a detailed list of medical history for each family member	
Infant Formula and Diapers – At least 3 days' supply	
Radio – Battery operated with extra batteries, or a hand-cranked operated to listen in to information alerts and instructions	
Whistle – To signal for help.	
Dust Masks, to help filter contaminated air, plastic sheeting and duct tape to shelter-in-place	
Moist wipes, plastic garbage bags and plastic ties for personal sanitation	
Wrench, vice grips, or pliers to turn off utilities and some basic tools; pen knife, inter-changeable screwdriver etc.	
Clothes – One full change of clothes per person, including long sleeve shirts, underwear, socks and a sturdy pair of flat shoes or trainers	
Local Maps and Evacuation Plans with useful contact numbers	

Table 04 – Generic Emergency Supply Checklist

ADDITIONAL EMERGENCY SUPPLY CHECKLIST	
Pet Food and Extra Water for Pets – At least 3 days' supply	
Important Family Documents – Passports, Birth Certificates, Insurance Policies, Bank Account details etc. in a waterproof and if possible, fire-proof container	
Cash, Checks and Change	
Additional Emergency Reference Material – Emergency Plans, Information Leaflets, Useful Websites etc.	
Sleeping Bag or Warm Blanket for each person	
Fire Extinguisher	
Matches in a Water-proof container.	
Feminine Supplies and Personal Hygiene Items	
Mess Kits – Paper plates, paper cups, plastic utensils, paper towels etc.	
Paper and Pencils	
Books, Puzzles, Games and other activities for children	
Bleach and Medicine Dropper – Non-scented bleach, without other cleaning additives can be used as a disinfectant when diluted 9 parts waters to 1 part bleach. Or can be used to treat and sterilize water when diluted 16 drops of bleach to 4 liters of water.	
Additional Charged Power Packs for Mobile Phones, Tablets and Lap-Tops etc.	
Extra Battery Supplies	
Additional Changes of Clothes	
Additional Plastic Sheeting and Duct Tape	

Table 05 – Additional Emergency Supply Checklist