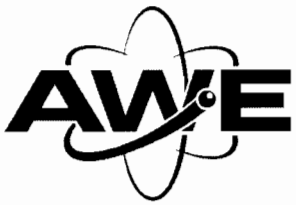
Atomic Weapons Establishment

Aldermaston



STOCKPILE MANAGEMENT
EXPLOSIVES BUSINESS UNIT

EXPLOSIVES TECHNOLOGY FACILITY

EMERGENCY RESPONSE PLAN

VOLUME 2

EMERGENCY RESPONSE ACTIONS

EXPLOSIVES TECHNOLOGY FACILITY

EMERGENCY RESPONSE PLAN

VOLUME 2 - EMERGENCY RESPONSE ACTIONS

Originator: _____ Date: 29/01/09
[redacted] Operations Manager

Reviewed: _____ Date: 10/02/09
[redacted] Deputy Facility Manager

Authorised: _____ Date: 10/02/09
[redacted] Explosives Sites Manager

Document Category

This is a Category A as defined in the Company Quality Manual.

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1 Introduction

1.1 This volume (2) of the Explosives Technology Facility (XTF) Emergency Response Plan (FERP) provides essential information relating to the initial response actions necessary to deal with the consequences of generic and specific emergency scenarios identified in the XTF Safety Case.

1.2 This volume is intended to be readily available to provide quick and easy reference for its users.

1.3 Controlled copies include all 4 volumes which are intended to compliment each other and provide a complete Emergency Response overview.

- Volume 1 – Emergency Arrangements
- Volume 2 – Emergency Response Actions
- Volume 3 – Information for Facility Emergency Responders
- Volume 4 - Supporting Information (Emergency Equipment & Contacts)

2 Essential Information

2.1 For all serious (or potentially serious) incidents, summon help as quickly as possible.

Contact the Emergency Services

- Fire
- Police (Ministry of Defence)
- Medical (if ambulance required)
- Health Physics
- Shift Manager

[redacted]

Alert the Facility Emergency Control Point (ECP)

- Facility Emergency Controller (FEC)
- Facility Work Control Centre (WCC)

[redacted]

2.2 In both cases you will be asked to provide the following information:

- the location and nature of the incident
- if the incident is or has the potential to be serious, declare a **FACILITY EMERGENCY**
- your name
- the number of the telephone you are calling from or can be contacted on
- possible casualties
- hazards at the incident scene

2.3 For less urgent situations, such as something dealt with by local contingency plans, the FEC may be notified by calling the WCC instead.

Dial 26443 or 25054 (0118 98 from private mobile phone)

2.4 There are a number of emergency telephones around the grounds in addition to those within buildings. These are shown on the map in Figure 4-1 on page 9.

3 Evacuation, Sheltering and Muster

3.1 Evacuation & Sheltering

3.1.1 In the event of a Site emergency (criticality, explosion, release to the environment of toxic or radioactive materials), **you should shelter inside the nearest suitable building as quickly as possible**.

3.1.2 Where ventilation systems exist, consideration should be given to shutting down the processes and switching off any systems that will result in air being drawn into the building. This includes all fans, extract as well as intake because extracts will draw air inside from other locations. Any shutdowns should be notified to the ECP immediately.

3.1.3 You should then remain at that location until otherwise instructed by local management or by Public Address announcement.

3.1.4 **The choice of evacuation route and shelter/muster location is influenced by the location and type of work being done in relation to the location and nature of the incident.**

3.1.5 **For this reason, no specific evacuation route or buildings are specified.** However, certain buildings have been designated Emergency Assembly Buildings (EABs) and are always unlocked during normal working hours. They are described in Section 5.1 (page 10) and shown on the map in Figure 4-1 (page 9).

3.1.6 Local instructions will identify if sheltering in a hardened control room is preferable to evacuation.

3.1.7 In an emergency it is acceptable to leave the clearways and evacuate via the grounds using the most direct route possible, or taking advantage of possible protection provided by other buildings.

Caution

3.1.8 **Special attention is necessary under these circumstances**. The grounds are uneven and some routes may be restricted by services (e.g. steam pipes), fences or operational exclusion zones.

Warning

3.1.9 **Exclusion Zones MUST NOT be entered,** even in emergency situations, unless it can be confirmed that the hazardous process within the zone has been made safe, or it is considered that the immediate risk to life/health is greater than the risk posed by the exclusion zone hazard. A map indicating the location of potential operational Exclusion Zones is shown in Figure 4-1 on page 9.

3.2 Sheltering & Muster

3.2.1 General

3.2.1.1 Each of the Facility's operational sections has a nominal roll, which is kept up to date and notified to the WCC for use in the ECP.

3.2.1.2 During a facility or site emergency requiring a muster, each section will report to the ECP the confirmed or expected location of the staff on its nominal roll. They will advise of any personnel that cannot be accounted for and any additional personnel that are sheltering within their section buildings.

3.2.2 Sheltering - Officer In Charge

3.2.2.1 At any sheltering location someone **must** take charge. This will normally be the person with the most XTF Emergency Response competency and then management seniority, which could be a process or maintenance worker.

3.2.2.2 Once under-cover, ensure that all the requirements for Evacuation and Sheltering (Section 3.1, page 6) have been implimented.

3.2.2.3 Conduct a local muster of all personnel sheltering at your location and record their name and normal resident location.

3.2.2.4 Relay the muster information to the co-ordinater of you sectional nominal roll.

3.2.2.5 If it is not possble to pass on the information via your management section, or you are a visitor to XTF, contact the ECP directly on the non-urgent contact telephone number (page 5, paragraph 2.3).

3.2.3 Muster – Section Co-ordinator

3.2.3.1 Someone in the management section shall take charge of co-ordinating the muster for staff that may be at remote locations within the Facility. This will normally be the Sheltering Officer in Charge at the main resident location of section members.

3.2.3.2 Once the muster of the local building is complete, collate it with any reports from other buildings where section members are sheltering. It may be necessary to telephone other locations to acquire this information if expected reports have not been received.

3.2.3.3 Relay the collated muster information to the ECP on the non-urgent contact telephone number (page 5, paragraph 2.3).

3.2.4 **Muster – Normally Occupied Building**

3.2.4.1 Report to the Officer In Charge, confirming your name and normal resident location.

3.2.5 **Muster – Normally Unoccupied building or EAB**

3.2.5.1 Resident Facility/Explosives Area personnel should contact the co-ordinater of their sectional nominal roll confirming name, contact number/location and normal resident location.

3.2.5.2 If it is not possble to pass on the information via you management section, contact the ECP directly.

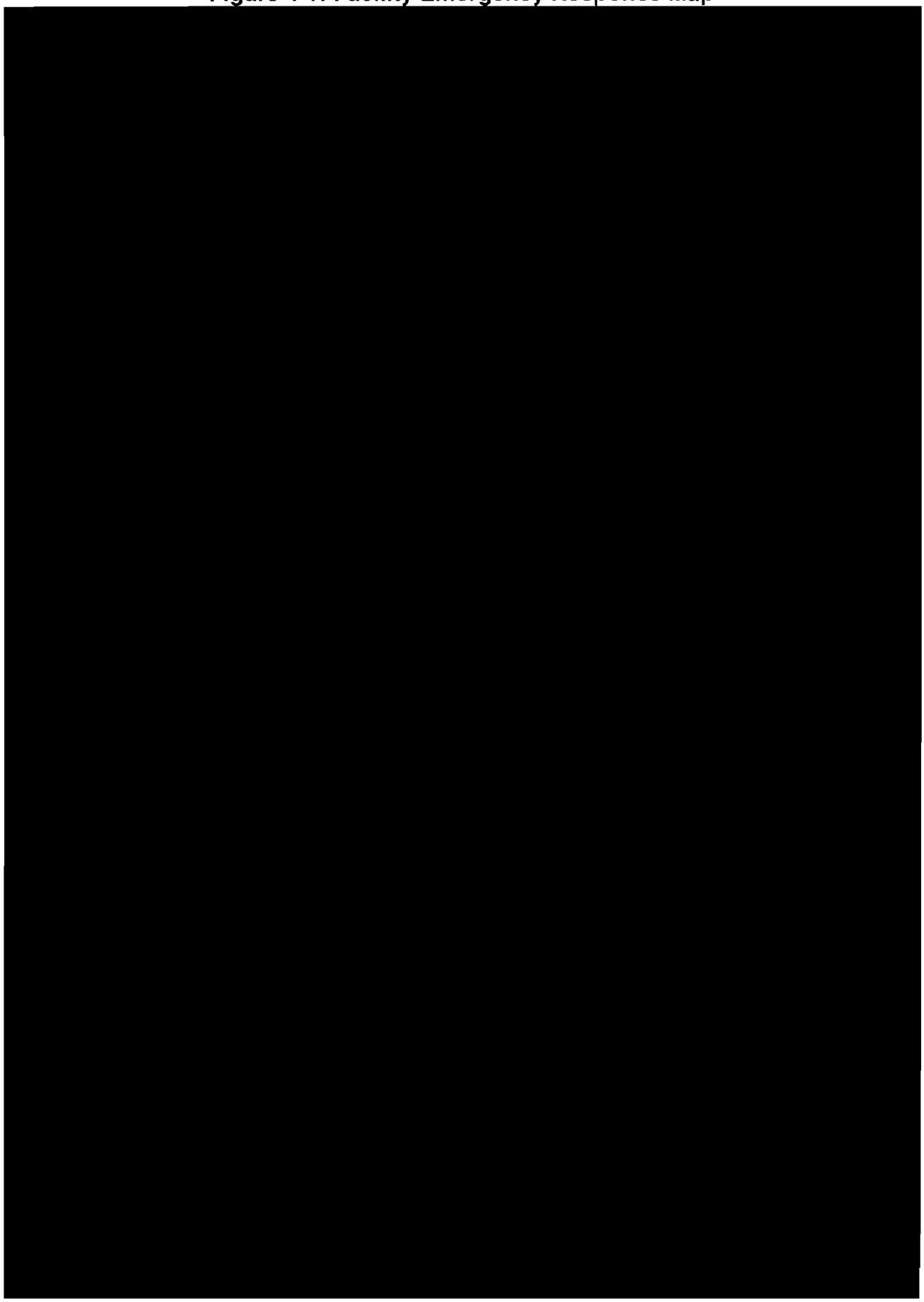
3.2.5.3 Non-resident personnel/visitors should contact the ECP directly, confirming name, contact number/location and normal resident location, on the non-urgent contact telephone number (page 5, paragraph 2.3) or emergency number if engaged.

4 Facility Emergency Response Map

4.1 Emergency response related features within XTF are shown on the map in Figure 4-1 opposite. Features include:

- Designated EABs
- Alternate Muster Points (EAB evacuation)
- Facility ECP
- Emergency Telephones
- Designated Rendezvous Points
- Operational Exclusion Zones

Figure 4-1: Facility Emergency Response Map



5 Emergency Arrangements

5.1 Emergency Assembly Buildings (EABs)

5.1.1 There are a number of emergency situations where the most appropriate course of action is for personnel to immediately take shelter in the nearest building. However, in the XTF Explosives Area it is not always obvious which buildings are unlocked and/or have telephone or radio communications.

5.1.2 EABs are always unlocked during normal working hours and have telephones or radios for communication with the Facility ECP. They are:

- within the main XTF Explosives Area:
  [redacted]
- within the Burning Ground Explosives Area:
  [redacted]
- outside the Explosives Areas:
  [redacted]

5.1.3 Should evacuation from a normally occupied EAB, or other building outside the Explosives Area be necessary the evacuation/muster points are:

- [redacted] (for [redacted])
- [redacted] (for [redacted])
- Hard-standing adjacent to decoy pond (for [redacted])
- [redacted] car park (for [redacted])
- [redacted] foyer (for [redacted])
- [redacted] entrance (for [redacted])
- [redacted] (for [redacted])

5.1.4 A map indicating the location of the EABs and alternate muster points is shown in Figure 4-1 on page 9.

5.1.5 For work during silent hours, specific arrangements must be made for the relevant EABs and/or other appropriate buildings to be unlocked.

5.2 **Designated Emergency Rendezvous Points**

5.2.1 In some situations it may be necessary to go to a predetermined Rendezvous Point (RVP) close to the entrances to the Facility to brief the Emergency Services on the nature of the incident and on any specific hazards involved. They will not move further toward an incident until the FEC has confirmed that it is safe for them to do so.

5.2.2 The RVPs have been chosen to be beyond, and avoid the need to travel within, the licensed Class D distance of explosives buildings to afford protection to responders. They are at:

[redacted] building [redacted] for incidents occurring north of [redacted] (in the vicinity of [redacted]

- building [redacted] (which provides shelter until entry through Gate 5 is agreed) for incidents occurring in the Explosives Machining Section (buildings: [redacted])
- [redacted] (Emergency Service access via [redacted]) for incidents occurring in the Burning Ground
- adjacent to [redacted] (access via [redacted]) for all other incidents

5.2.3 For incidents outside the Explosives Areas, the RVP will be established at a safe location in relation to the incident.

5.2.4 The designated RVPs are shown on the map in Figure 4-1 on page 3.

5.3 **Facility Emergency Control Point (ECP)**

5.3.1 The XTF ECP is located in building [redacted] adjacent to the Facility Work Control Centre (WCC). The ECP provides the Facility Emergency Controller (FEC) and other Facility Emergency Response support staff with immediate access to communications equipment, transport, building information, maps and up to date information about Facility operations and hazardous material inventories.

5.3.2 The ECP is identified on the map Figure 4-1 on page 9.

5.4 **Facility Emergency Controller & Facility Responders**

5.4.1 In an emergency the FEC has delegated authority to act on behalf of the Facility Manager (FM) in the control and management of the incident and the response to it.

5.4.2 Other Facility and operational staff have been trained to provide the FEC with essential support in emergency situations.

5.4.2.1 Actions to be taken by the FEC and support team are described in Volume 3.

5.5 **First Aid**

5.5.1 A team of trained First Aiders is available to help support Site and Facility emergency situations.

5.5.2 In addition to normal First Aid, the majority of XTF First Aiders are specifically trained to deal with ballistic trauma injuries.

5.5.3 Additional support from neighbouring facilities is also available on request.

5.6 **Site Emergency Arrangements**

5.6.1 In a Site Emergency, the Emergency Manager has delegated authority to act on behalf of the AWE Chief Executive.

5.6.2 During a fire emergency, the Chief Fire Officer (or his nominated representative) has responsibility for the designated fire ground. The Emergency Manager retains responsibility for the site as a whole.

5.6.3 In most other situations, the Ministry of Defence Police (MDP) has control.

5.6.4 Details of command and control arrangements are described in Volume 1.

6 Communications

6.1 Useful Telephone Numbers

6.1.1 Site Emergency Control

- Emergency Call [redacted]
- Emergency Call (using private mobile phone) [redacted]
- SCC (only after Site or facility emergency declared) [redacted]
- Site Muster Bureau [redacted]
- Public Address Message Repeat [redacted]
- MDP Control Room [redacted]
- Health Physics Control Room [redacted]
- Shift Control Room [redacted]

6.1.2 Facility Emergency Control

- Emergency Call [redacted]
- Emergency Call (using private mobile phone) [redacted]
- Muster or Non-Urgent Contact [redacted]
- Contact (using private mobile phone) [redacted] extension

6.1.3 **Emergency Assembly Buildings** (map Figure 4-1, page 9)

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted] (Burning Ground)
- [redacted]
- [redacted] (reception)
- [redacted]
- [redacted]

6.1.4 **Emergency Telephones** (map Figure 4-1, page 9)

- North Shift Road between [redacted]
- Magazine Road between [redacted]
- Magazine Road near [redacted]
- Viaduct Way next to [redacted]
- Outside [redacted]
- Outside [redacted]
- Outside [redacted]
- Between [redacted]
- Silchester Way/Viaduct Way junction outside [redacted]
- Viaduct Way/Grim's Way junction next to Gate 29A
- Off Grim's Way behind [redacted]
- Opposite [redacted]
- Silchester Way between [redacted] and [redacted]
- Between [redacted] and [redacted]
- Silchester Way on the wall of [redacted]
- Grim's Way opposite [redacted]
- Between [redacted] and [redacted]

6.1.5 **General**

- Facility Manager/Explosives Sites Manager [redacted]
- Deputy Facility Manager [redacted]
- WCC/FEC (via pager if needed) [redacted]
- Telephone Operator 100

6.1.6 **Fall-Back Telephones**

- [redacted] (lobby)
- [redacted] (foyer)
- [redacted] (corridor, opposite room 30)

[redacted]

6.1.6.1 The Fall-Back telephone facility will provide a limited telephone service in the event of a **total failure** of the AWE(A) telephone exchange.

6.1.6.2 Fall-Back telephones are burgundy/red handsets, identified with green signs and operating instructions.

6.1.6.3 To operate any fall-back telephone, lift the receiver and press the RECALL (R) button to obtain the dial tone, then key in the required telephone number.

6.1.6.4 The AWE(A) Emergency Services can be obtained by dialling:

- MDP
- FIRE
- MEDICAL

[redacted]

6.2 **Mobile Phones and Radios**

6.2.1 The use of mobile phones in an emergency may be limited by the availability of local "cells". There may also be areas where radio reception is limited.

Warning

6.2.2 Mobile telephones and radios pose a threat to sensitive Electro-Explosive Devices (EEDs) and flammable atmospheres in an emergency situation. They must not be used in unauthorised locations.

Caution

6.2.3 Security aspects of information discussed and location of use must be considered when using mobile phones or radios.

7 Responses to Generic Scenarios

7.1 Responses to generic scenarios on the following list are given on the pages identified:

Scenario Response Page

Fire 17
- Hearing a Continuous Fire Alarm in Your Building 17
- Hearing an Intermittent Fire Alarm in Your Building 17
- Hearing a Fire Alarm in Nearby Building 17
- Discovering a Fire – NOT Involving Explosives 17

Fire Involving Hazardous Material 18
- Discovering a Fire Involving Explosives 18
- Discovering a Fire Involving Radioactive or Toxic Material 18

Vehicle Fire 19
- Non-Hazardous Load 19
- Vehicle Carrying Explosives 19

Security Incident (Threat Message) 21
- Threat Received 21
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Security Incident (Suspicious Object) 22
- Finding a Suspicious Object 22
- Receipt of a Suspicious Package 22

Security Incident (Suspect Contents) 23
- Suspicious Package Contents 23
- Suspect Biological, Chemical or Radiological Material 23

Site Emergency 25
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Fire

The conventional hazards from a fire are thermal radiation, smoke, explosion, degradation of structures (load-bearing, shielding and containment), and the possible destruction of instrumentation and control systems.

In addition, fire in a facility may give rise to the release of radioactive or toxic materials, including asbestos, or the formation of especially toxic smoke.

There are few potential sources of fire within XTF Explosives Areas due to the stringent controls on sources of ignition and the control of materials.

Where explosives processes are carried out, electrical systems and tooling has been designed and installed to reduce the risk of fire or explosion caused by electrical discharge.

Fire presents a particular hazard with explosives, precursor materials and explosive devices. The extent of any fire is expected to be limited due to the separation between explosives buildings and the strict control of other flammable/combustible materials.

All personnel working in the Facility must read and comply with these instructions, which must be read in conjunction with any local Fire Action Notice and Instructions (displayed prominently at the building entrance or other suitable locations). They must know the position of and how to operate:

- fire alarm call points or bells
- the nearest telephone
- fire extinguishers
- the fire control point/fire evacuation area
- the nearest emergency exit

All fire equipment must be kept readily available for use and not obstructed or removed.

Alarms are building or area dependant and can range from fully integrated fire detection and alarm systems to hand operated bells.

Most permanently occupied buildings have manually operated fire alarm systems that once operated ring throughout the building and alert the AWE Fire Service. A zoned fire alarm operates similarly external to groups of buildings. In some instances groups of buildings are linked and the alarm signal differentiates between a fire in the building and a fire in adjacent building.

FIRE

Hearing a Continuous Fire Alarm in Your Building

EMERGENCY ACTION

- Stop work immediately
- Make safe plant and materials (if you can and it is safe to do so)
- Close doors and windows behind you
- Go to the fire evacuation assembly point (shown on the building fire action notice)
- Carry out any special instructions given

Hearing an Intermittent Fire Alarm in Your Building

EMERGENCY ACTION

- Make your building safe
- Close doors and windows
- Protect explosives and flammable materials
- Take shelter within the building away from doors and windows
- Remain inside and await further instructions

Hearing a Fire Alarm in Nearby Building

- If already inside, follow emergency actions for an intermittent sounding firing alarm
- Otherwise, take shelter in nearest EAB, or building with intermittent alarm sounding, whilst avoiding any building with a continuously sounding alarm

Discovering a Fire – NOT Involving Explosives

EMERGENCY ACTION

- Shout fire and sound the alarm
- Call the Fire Service [redacted] from a place of safety
- Inform Facility Emergency Control [redacted]
- Fight the fire with the correct extinguisher (only if safe to do so)
- Leave the building by the nearest exit
- Wait at building entrance, other nearby safe location or designated rendezvous point to brief incident responders and await further instructions

FIRE INVOLVING HAZARDOUS MATERIAL

Discovering a Fire Involving Explosives

Warning

An explosion is very likely soon after a fire reaches explosives

EMERGENCY ACTION

- Shout fire and sound the alarm
- Do not attempt to fight the fire
- Leave by the nearest exit
- Evacuate to a place of safety (as per any special instructions)
- Call the Fire Service [redacted] from a safe position, specifying that explosives are involved
- Inform Facility Emergency Control [redacted]
- Wait at a safe location or designated rendezvous point to brief incident responders
- Await further instructions

Discovering a Fire Involving Radioactive or Toxic Material

EMERGENCY ACTION

- Shout fire and sound the alarm
- Do not attempt to fight the fire
- Leave by the nearest exit
- Evacuate to a place of safety not likely to be in the path of any downwind radioactive or toxic dispersal
- Call the Fire Service [redacted] from a safe position, specifying that radioactive or toxic material is involved
- Inform Facility Emergency Control [redacted]
- Stay indoors until authorised to leave
- Close all doors and windows and switch of all ventilation if safe to do so
- Await further instructions

VEHICLE FIRE

Non-Hazardous Load

EMERGENCY ACTION

- Evacuate the vehicle of any occupants
- Ensure that the Fire Service [redacted] and Facility Emergency Control [redacted] are called from a safe position, or
- Send a passenger (if available) to the nearest phone to advise the Fire Service and the Facility Emergency Control Point
- Instruct all other passengers to seek cover and notify the ECP of their whereabouts
- Locate the extinguisher and attempt to fight the fire if safe to do so
- Once fire has been extinguished, stay with vehicle to brief fire service on arrival
- If fire cannot be extinguished retire to cover and notify ECP of situation such that the Fire Service can be briefed

Vehicle Carrying Explosives

EMERGENCY ACTION

- If explosives load is at risk of ignition:
    - evacuate the area to a safe location (considering distance & protective cover)
    - immediately call the Fire Service [redacted] and Facility Emergency Control [redacted]
- If the explosives load is not at immediate risk (e.g. fire confined to a tyre or the cab):
    - locate and collect extinguisher and evacuate vehicle of occupants
    - send a passenger (if available) to the nearest phone to advise the Fire Service and the ECP
    - instruct all other passengers to seek cover and notify ECP of their whereabouts
    - attempt to extinguish fire using the extinguisher
    - if the fire cannot be extinguished, retire to cover and notify ECP of situation such that the Fire Service can be briefed
    - if fire has been extinguished, stay with vehicle to brief Fire Service on arrival

Security Incident

Threats can be physical, usually in the form of suspicious bags, packages, objects, or vehicles. Suspicious items may be found within or adjacent to the Facility, or may be received through the post.

As well as explosives, a threat could be biological, chemical or radiological and may not be recognised until after an object has been handled or opened.

Threats may also be received by telephone, or other communication means such as e-mail, text message, fax or letter. It may be intended to be confusing and inaccurate. It is important that the person receiving the threat extracts the maximum amount of useful information and if possible records the message verbatim. Never treat such a threat as a hoax.

SECURITY INCIDENT (THREAT MESSAGE)

Threat Received

EMERGENCY ACTION

- If a threat is received by telephone, glean as much information as possible from the caller (complete the proforma available on the AWE Portal under "Emergency Information" if possible; see Annex A at the back of this document)
- If possible, attract the attention of a colleague during the call for sooner MDP contact
- Call the MDP [redacted] reporting the nature and location of the threat if known
- Inform Facility Emergency Control [redacted] if the threat does, or could, relate to XTF
- If the threat relates to your building
    - **DO NOT** activate the Fire Alarm
    - evacuate the building, avoiding the potentially hazardous location (if known), warning other building occupants as you do so
    - go, or send someone else, to the appropriate rendezvous point or ECP to brief the MDP on their arrival
- If the threat relates to a different building:
    - go to the ECP or other rendezvous point identified by the MDP/FEC, avoiding the incident building (if known), to brief the MDP on their arrival

Warned of Threat

EMERGENCY ACTION

- Stop work immediately you become aware of a threat
- If the threat is in the building you are in:
    - make safe any hazardous material, plant, equipment and services
    - **IF SAFE TO DO SO** make a quick visual search of your immediate work area and, if readily available, collect personal belongings
    - evacuate the building, avoiding the potentially hazardous location (if known) or as directed by a PA announcement
    - **DO NOT** attempt to lock away documents (classified or not)
    - **DO NOT** close doors
    - report the result of your quick visual search and, if known, the whereabouts of any persons absent from their normal workplace to the ECP
- If the threat is in another building:
    - respond to instructions given by the MDP/FEC or PA messages
    - if the threat is nearby, make safe any hazardous material, plant, equipment and services and keep away from external doors and windows

SECURITY INCIDENT (SUSPICIOUS OBJECT)

Finding a Suspicious Object

EMERGENCY ACTION

- **DO NOT** touch or open the object
- If you consider it safe to do so, make a brief (no longer than 20 seconds) visual inspection. Try to ascertain whether there are any markings that may identify the owner (such as identification label or vehicle parking permit)
- If the owner cannot be readily identified:
    - Restrict access to the immediate area
    - Evacuate the area, but **DO NOT** sound the fire alarm
    - **DO NOT** use mobile telephones or radios within 25m of the object
    - Request MDP assistance [redacted] stating the exact location of the object and give a full description including: size, colour and shape
    - Inform Facility Emergency Control [redacted]
    - Go to the appropriate rendezvous point to brief the MDP on arrival

Receipt of a Suspicious Package

EMERGENCY ACTION

- Immediately place the package on a flat even surface
- Shut windows and doors in the room
- Switch off any air-conditioning (if practical and safe to do so)
- Evacuate to an adjacent unoccupied room away from the hazard (if possible), closing the door of the affected area
- **DO NOT** approach any other building occupants or sound the fire alarm
- **DO NOT** use mobile telephones or radios within 25m of the package
- Request MDP assistance [redacted] from a safe place
- Inform Facility Emergency Control [redacted]

SECURITY INCIDENT (SUSPECT CONTENTS)

Suspicious Package Contents

EMERGENCY ACTION

- **DO NOT** move the package to any other location or touch it further
- Notify MDP immediately [redacted]
- Inform Facility Emergency Control [redacted]
- Shut windows and doors in the room
- Switch off any air conditioning systems (if practical and safe to do so)
- Evacuate to an adjacent unoccupied room away from the hazard (if possible), closing the door of the affected area

Suspect Biological, Chemical or Radiological Material

EMERGENCY ACTION

- Leave the potentially contaminated room and evacuate to an adjacent unoccupied room away from the hazard (if possible), closing the door of the affected area
- Call for help
- Notify MDP immediately [redacted]
- [redacted]Inform Facility Emergency Control [redacted]
- Other employees should close all windows and doors in the rest of the building
- **DO NOT** evacuate the building unless instructed to do so by the MDP/FEC
- Suspected contaminated individuals will be decontaminated by the AWE Fire Service in conjunction with a CBRN trained MDP Officer and treated by medical, with Health Physics support if required
- Home Office guidelines to persons who believe they may have been exposed to Biological/Chemical material are:
    - remain calm
    - do not touch your eyes, nose or any other part of your body
    - keep all persons finding and exposed to the material separate from others and available for medical attention
    - other people should assemble at a safe distance from the incident but not evacuate the building and continue to be guided by the police and the other emergency services

Site Emergency

Personnel on Site may be endangered by a criticality incident or from the release of radioactive or toxic materials.

In either event the Site Undercover Alarm signal will be broadcast instructing all personnel to seek immediate shelter in the nearest suitable building outside of the Immediate Evacuation Zone, to close all external doors and windows, and to remain at that location until instructed otherwise.

A security incident may also result in Site being placed under cover.

Putting the Site under cover gives managerial control and clears the way for the Emergency Services.

A fire involving explosives or RA material, or an explosion, within the Facility is likely to result in the Site being placed undercover.

Structural Collapse

There are a number of potential causes of either a full or partial structural collapse of a building or maintenance scaffolding. The collapse may be effectively spontaneous, due, for example, to an explosion or the degradation of structural materials.

Alternatively, the collapse may have an external cause such as: extreme weather, seismic activity, or vehicle or aircraft impact.

Some of these more serious external events may well affect more than one facility or building, and the consequent response at facility level will then form part of the larger Site emergency response effort.

SITE EMERGENCY

EMERGENCY ACTION

- Stay within or go inside the nearest open building
- Be prepared to shelter within your building any persons within the vicinity
- Close all doors and windows
- If shutting down a ventilation system could create an additional hazard, consider sheltering in an alternate nearby building (e.g. an EAB) unless instructed otherwise
- If safe to do so, shut down ventilation systems, including extract which will draw air inside the building from elsewhere
- Obey all Public Address announcements and instructions
- Follow FERP instructions for Sheltering & Muster (page 7)

STRUCTURAL COLLAPSE

EMERGENCY ACTION

- Evacuate the building or area of collapse and move away as quickly as possible
- Warn other building users
- Request the appropriate emergency services [redacted] from the nearest safe location (emphasising any possible explosives, radiation or chemical hazards), if people, hazardous material or services (e.g. steam) have been, or could be injured or endangered
- Inform Facility Emergency Control [redacted] of the nature of the incident
- If appropriate, and safe to do so, restrict access to the collapsed area
- Make safe plant, equipment and services where possible, without entering the affected area
- Go, or send someone else, to the appropriate rendezvous point to brief the emergency services on arrival
- Go to the nearest EAB and conduct a roll call, reporting the results to the ECP

Personal Injury/Illness

It is possible for personnel to fall ill within a facility for reasons not connected with their work. Under these circumstances, not only will they need medical attention for their condition, but, if they are performing some safety critical operation, their sudden incapacity may itself become the cause of a further accident or incident.

Personal injury could result from a number of hazards including: exposure to toxic materials/chemicals, manual handling and lifting operations, exposure to diesel fumes, fire, electrocution, working at height, vehicle movements, slips, trips and falls etc.

Appropriate Personal Protective Equipment (PPE) together with the appropriate general safety and local safety rules are designed to mitigate these hazards. All operators and maintenance staff must wear PPE as instructed.

PERSONAL INJURY/ILLNESS

EMERGENCY ACTION

- Make safe, as necessary, any plant, services and equipment
- Shout for assistance of a trained First Aider
- **DO NOT** attempt to move any seriously injured persons, unless the situation is immediately life threatening, without the help of trained medical staff
- Request Medical assistance [redacted]
- Open main doors, if necessary, to allow ambulance access
- Inform Facility Emergency Control [redacted] of the nature of the incident
- Go or send someone else, to the agreed rendezvous point to brief the emergency services on arrival

Electric Shock

Areas of the Explosive Technology Facility house high voltage electrical equipment and standard mains voltage equipment is widely used in processes and building services. Residual current device protection is installed and regularly tested, but there is still a risk of electrocution during the setting up, maintenance and diagnostic testing of this equipment.

In addition to trained First Aiders, Authorised or Nominated Persons (Electrical) (AP(E) or NP(E)) are trained in resuscitation techniques and may be of assistance.

ELECTRIC SHOCK

EMERGENCY ACTION

- On finding a person who has suffered an electric shock
  - Shout for help and if possible instruct someone to summon medical [redacted] and first aid (either locally or via [redacted] assistance and then return to assist
  - check for any danger to yourself before acting (e.g. a conducting floor)
  - **DO NOT** touch the casualty until the electric supply has been turned off
  - isolate the electrical supply and if necessary discharge potentially live circuits
  - **DO NOT** attempt electrical discharge or grounding in explosives work rooms if explosives are present
- If the supply cannot be easily isolated and the casualty remains connected to the source of electricity
  - Low Voltage (i.e. 50V to 1000V AC, or 120V to 1500V DC)
    - use insulating material (e.g. electrical grade rubber gloves or a dry stick) as wood) to free the casualty from the supply
    - alternatively, the casualty may be pulled clear by loose clothing
    - on no account should exposed parts of the casualty's body be touched prior to disconnection of, or from, the electrical supply
  - High Voltage (i.e. more than 1000V AC or 1500V DC)
    - **DO NOT** attempt a rescue until isolation and discharge is assured
    - remain at a safe distance
- When safe to do so, check for signs of consciousness, respiration and/or pulse
- If the casualty is conscious, or unconscious but breathing normally, place them in the recovery position keeping their airway open
- Call for medical assistance [redacted] if it has not already been confirmed as on its way
- If the casualty is not breathing, begin resuscitation techniques and continue until the casualty starts breathing or medical assistance takes over
- Inform Facility Emergency Control [redacted] if not already contacted

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8 Responses to Specific Scenarios

8.1 Responses to specific scenarios on the following list are given on the pages identified:

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Thunder Storm and Adverse Weather Conditions

Thunder Storms are the result of an enormous build up and discharge of static electricity within the atmosphere. A build up of static electricity may occur in advance of other manifestations storm conditions.

Buildings where explosives are processed are offered some protection by Lightning Protection Systems (LPS) which provide a safe pathway to earth for the electrical energy in the event of a lightning strike. However, there may be secondary effects associated with increased voltage potential of the system relative to earth and it is necessary to stop some operations and even evacuate some areas when a storm is present of forecast as imminent.

Anything electrically bonded to the LPS, via equipotential bonding or building earth (e.g. conducting floors, firing chamber plating, large jigs and fixtures, cranes, trials assemblies, etc.) will also rise in voltage with the possibility of an electric shock. Side-flash to nearby unconnected metal objects creates an additional to people directly or by ignition of nearby exposed flammable or explosive materials. Radio-frequency interference caused by a lightning strike (direct or nearby) is also a threat to sensitive electro-explosive devices. Physical effects on the building structure can also pose a risk to people and hazardous materials.

Certain buildings with frangible roofs may be susceptible to collapse due to high winds or snow loading. High winds can also make working at height dangerous and leave the access equipment (scaffold, ladder, etc.) vulnerable to collapse or damage. Lifting operations can similarly be affected.

Advance warning from the Met Office Exeter Weather Centre is given when conditions are forecast which may give rise to thunderstorms or other adverse weather conditions. This is broadcasted via the Site Public Address system.

THUNDERSTORMS AND ADVERSE WEATHER

Thunderstorm or Warning

ACTION

- If a storm becomes evident overhead or nearby
  - stop work with explosives and flammable materials immediately
  - only make safe those materials and equipment that can be done quickly in a safe manner
  - evacuate any rooms with conducting floors, metal lining or earth bonding tape (whether items are connected to it or not)
  - alert Facility Emergency Control (non-urgent contact or [redacted]) if the storm is not immediately overhead, but thunder or lightning has been noticed nearby
- If a lightning risk 1 (very high) warning is given
  - shut down and make safe operations with explosives and flammable materials as soon as safety permits, with the minimum of people necessary to do so
  - park overhead cranes to one side with the hook as far away from explosives and flammable materials as possible
  - make safe operations and evacuate any rooms with conducting floors, metal lining or earth bonding tape (whether items are connected to it or not)
- If a lighting risk 2 (high) warning is given
  - **DO NOT** start new operations that cannot be quickly and safely shut down if the risk increases or a storm develops later
  - if the risk is forecast to increase later, stay aware of weather conditions outside or consider shutting down operations that cannot be stopped quickly

Ice/Snow

ACTION

- **DO NOT** move or transport explosives until the FEC has given permission
- **DO NOT** make unnecessary foot, bicycle or vehicle journeys on untreated surfaces

High Winds

ACTION

- **DO NOT** work at height or conduct lifting operations outside if high winds are expected or evident until the FEC has given permission
- Stop external work at height or lifting operations if wind speeds or gusts increase unexpectedly and notify the WCC [redacted]

Explosion

The risk of an explosive incident external to any building within the Facility is low. The transport and handling of explosives is conducted with care and precision, explosive movements are only permitted when following pre-arranged routes and schedules.

All buildings containing explosives are designed and licensed for this purpose. Explosive quantities are sometimes limited as a unitised risk, which means that explosion of the specified amount will not cause effects sufficient to detonate other explosives in a nearby room or protected area.

Where explosives and flammable material processes are carried out, electrical systems and tooling has been designed and installed to reduce the risk of ignition and explosion. The safe method of operating with these materials is defined in Operating Instructions, supported by comprehensive reviews to control the risks.

When it is known or suspected that radioactive material or beryllium is involved the prime consideration is still protection of personnel from the initial effects of the explosion. However, if it is possible given the circumstances at the time, any personnel who are located downwind of the radioactive or toxic aerosol should retire to the nearest upwind EAB and advise Facility Emergency Control of the situation.

An explosion in a process building may also create an asbestos hazard; both airborne and amongst debris. This should also be considered in relation to wind direction and evacuation route/destination.

EXPLOSION

Warning

There is always a possibility that an initial explosion may be followed by another

EMERGENCY ACTION

- Take cover (wherever it appears appropriate)
- If possible, from a place of safety
    - notify the Emergency Services [redacted] and declare a "Facility Emergency", providing details of the location and nature of the incident (including, if known: quantity of explosives involved, status of other nearby explosives or other hazardous materials)
    - inform Facility Emergency Control [redacted] giving the same information
- Await the arrival of the emergency services, or instructions from the FEC or the Public Address system

Radioactive Material, Beryllium or Asbestos

- If any of these materials could be involved
    - try and take cover at a location which affords shelter and some amount of protection against the ingress of these materials, or
    - when safe to do so, evacuate to a place of safety upwind of the dispersal

Damaged or Endangered Explosives

The possibility that explosives may become damaged or endangered during transportation, processing or testing cannot be overlooked.

Where damage is an expected outcome of a test (e.g. material property, threshold, hazard testing, etc.), specific local arrangements are included in the relevant operating instructions. These emergency arrangements do not apply to such routine expected occurrences.

If a spill of explosive powder is a recognised possibility as part of routine processing (e.g. loss of powder from a spatula on to a bench), local contingency arrangements may also be implemented within the carefully defined scope of applicability.

Recovery activities will be highly dependent upon the nature of the incident, and will be determined by the FEC, in liaison with technical advisors and/or the Facility Manager, following suitable risk assessment.

DAMAGED OR ENDANGERED EXPLOSIVES

Spilled, Damaged or Endangered (Processing or Testing)

EMERGENCY ACTION

- **DO NOT** attempt to pick up or move the explosive
- Stop work
- Turn off any associated equipment being used and isolate services to it
- If outside the scope of written authorised contingency arrangements
    - evacuate the building or room and lock it
    - if appropriate and possible, set up barriers on the approach roads to the building
    - go to a safe location
    - inform Facility Emergency Control [redacted]
    - await further instructions
- If the quantity of explosives and location of spill is within the scope of written authorised contingency arrangements
    - notify your supervisor
    - implement the contingency plan to safely clean up the spill
    - **DO NOT** restart work until it has been established that the cause was not something other than routine (e.g. broken tooling)

Damaged or Endangered (Transport)

EMERGENCY ACTION

- Stop the vehicle in a safe area if possible and apply handbrake
- Switch off engine/motor
- Switch on hazard warning lights (if fitted) and display warning triangle
- **DO NOT** attempt to move the explosives
- Notify Facility Emergency Control [redacted]
- Close off the site of incident
- Warn other traffic
- Warn people in the open to take cover
- Retire to cover and await further instructions

Damaged Radioactive Material Container

Radioactive material containers used within, entering or transiting the Facility could be damaged. Damage to outer containments may be readily apparent, however, damage to inner containments may be less apparent.

Damage can be as a result of mishandling, faulty packaging or a traffic accident.

Every effort should be made to assure that no leakage has occurred and that risks to staff and the environment are minimised. The area may need to be cordoned off and Health Physics support may be required.

RA, Beryllium or [redacted] Contamination

Various configurations of test specimens are assembled within the Facility, some of which contain hazardous materials including: radioactive, beryllium and [redacted]

Damage to assemblies caused by mechanical or manual handling failures could lead to localised contamination.

DAMAGED RADIOACTIVE MATERIAL CONTAINER

EMERGENCY ACTION

- Evacuate the immediate area, closing any doors behind you if inside
- Seek cover at an upwind location if outside
- Close all doors and windows, and isolate ventilation systems if appropriate
- Request Health Physics support [redacted]
- Inform Facility Emergency Control [redacted] who will arrange for the incident area to be isolated if necessary
- Brief Health Physics Team on arrival

Warning

Damage to a radioactive material container may be the result of another triggering incident. If so, the consequences of this initial incident must also be dealt with. In all cases, meeting the clinical needs of any casualties must be balanced against minimising any exposure to radioactive materials.

RA, BERYLLIUM OR [redacted] CONTAMINATION

EMERGENCY ACTION

- Notify Facility Emergency Control [redacted] immediately, advising of the nature of the incident and material involved
- Evacuate the area around the contamination and create an exclusion zone around it
- If any person has been contaminated with [redacted]
    - request medical assistance [redacted] immediately
    - if there is a considerable amount of [redacted] on the skin, as much as possible should be removed using a dry cloth or tissue
    - if there are [redacted] in their eye(s), immediately flood the eye(s) with copious amounts of water for a minimum of 15 minutes
- If any person is suspected as being contaminated by radioactive material or beryllium
    - request Health Physics assistance [redacted] immediately
    - do not touch your mouth, nose or any other part of your body
    - limit movements to minimise potential for spread of contamination
- Await further instructions and arrival of any emergency services or Health Physics

Chemical Spill

A number of substances are used within the Facility, which must comply with the Company Controlled, Restricted and Prohibited substances list, appear on the facility COMAH inventory if applicable, and assessed for use in accordance with Control of Substances Hazardous to Health Regulations.

Safety Data sheets and special handling instructions will be available in all Local Document Control Centres and the Emergency Control Point.

Local procedures/plans are in place to specify the appropriate clean-up action to take in the event of a spillage. These should also be identified on any Permit-to-Work, Work Authorisation Form, Operating Instruction and/or within a local Method Statement.

If a spill or leak occurs, or is discovered, and is within the scope of local contingency plans, it should be dealt with accordingly. There should be no delay in instigating the emergency procedures.

If there is any uncertainty about the significance of any incident it must be treated as serious. The individual discovering the incident, or their supervisor, must inform the ECP as soon as practicable.

Oil Leak/Spill

There are a number of items of plant which use significant quantities of oil, such as presses. While an oil leak may not have a significant immediate risk to people, the environmental consequences may be significant.

CHEMICAL SPILLAGE

EMERGENCY ACTION

- **DO NOT** use radios or mobile telephones, or operate any electrical switches if the material is unknown, or known to be flammable
- If the spilled or leaking substance is unknown
    - Evacuate the immediate area
    - If possible, and safe to do so, isolate any leaking equipment
    - Request the Fire Service and Safety Shift [redacted]
    - Inform Facility Emergency Control [redacted]
    - Await further instructions and brief emergency services on their arrival
- If the substance is known
    - if possible, and safe to do so, isolate any leaking equipment
    - advise supervisor immediately
    - if the spill is significant (i.e. >5 litres), or at risk of entering the drainage system, cover or block off exposed drains (where possible) to prevent escape from the immediate area in to the Site drainage system or general environment
    - create an exclusion zone around the affected area in accordance with any local instructions
    - inform Facility Emergency Control [redacted] of the nature of the incident and whether any drainage systems are at risk
    - consult local Operating Instructions, COSHH assessments and/or Safety Data Sheets for specific instruction on handling and disposal of material
    - if the circumstances are within the scope of local instructions, clear up the spill using provided spill kits and approved containers for disposal

OIL LEAK/SPILL

EMERGENCY ACTION

- Follow the emergency actions for a known spilt chemical substance above, with particular attention on containment and prevention of oil entering drains or the general environment.

Gas Leak

A number of different types of gases are in use in the Facility, either in fixed or temporary installations, meeting the requirements of Pressure Systems Safety Regulations.

All gases stored or used have been subjected to risk assessment. Where appropriate, Safety Data Sheets and special handling instructions are available at the workplace or relevant local Document Control Centre and the ECP.

[redacted]

GAS LEAK

EMERGENCY ACTION

- **DO NOT** use radios or mobile telephones, or operate any electrical switches if the gas is flammable or unknown
- Evacuate the area around the leak, making equipment safe and closing any supply valves, if possible and safe to do so, as you leave
- Alert personnel working in the area, including those working in lower levels of plant rooms or inspection pits
- If not known, determine the type of gas that has leaked if possible and safe to do so
- If safe to do so, also isolate the gas supply at the appropriate bottle if not already done during evacuation
- Inform Facility Emergency Control [redacted] as soon as practicable

Flooding

This FERP considers flood by rainfall, where water has entered a building (through leaking roof, under doors, etc.), leakage of water or steam from pipe fracture, taps being inadvertently left running or operation of a pressure relief valve.

Where a leak or ingress of water has been discovered, consideration should be given to the isolation of electrical supplies where plant or equipment may be affected. The ECP should be notified at the first opportunity.

If the source of water is a steam leak that must be resolved in accordance with the response instructions for loss or steam or steam leak first.

Flooding may have occurred due to the activation of protective quench systems associated with explosives machining. If the system is initiated in response to an incident whilst machining explosives, the requirements associated with damaged or endangered explosives must be followed in the first instance.

FLOODING

EMERGENCY ACTION

- **DO NOT** enter the affected area if steam is suspected as the source of water, but ensure the requirements for a steam leak are followed (page 51)
- Ensure that any equipment and processes have been made safe, isolating any affected electrical circuits where possible and safe to do so
- Switch off any running taps or equipment that may be the source of the water
- Inform Facility Emergency Control [redacted] and advise on the severity of the situation and requirements for assistance
- Evacuate the affected area and ensure all personnel have been accounted for
- Establish a control point and liaise with Site Services, Site Utilities, Shift Manager or Fire Service personnel as necessary, providing information on possible low points requiring pumping operations

Activation of Quench Systems

EMERGENCY ACTION

- **DO NOT** enter the room where the system was activated and restrict access
- **Ensure the requirements for damaged or endangered explosives are followed if quench was activated whilst machining explosives (page 37)**
- Check that electrical supplies associated with machine tool have been isolated and ensure that equipment and processes have been made safe
- Inform Facility Emergency Control [redacted] and advise on the severity of the situation, possible contaminants and requirements for assistance

Asphyxiation by Oxygen Depletion

Bottled gas is used within the Facility either as part of the process or in support of maintenance activities. These include: nitrogen for purging purposes, sulphur hexafluoride as high voltage electrical insulation, argon or helium for inert atmospheres, and propane for explosives hazard testing.

LPG, propane or acetylene may also be brought in for welding, cutting or roof repair operations in support of maintenance or construction activities. These are not routine and require special authorisation.

Liquid nitrogen is also used to store items at very low temperature or cool process equipment. A significant leak or spill of this liquid can release a large volume of gas in to the work place, displacing oxygen and resulting in a risk of asphyxiation. Oxygen depletion alarms are fitted in process areas assessed as requiring them.

Loss of Breathing Air

Various types of respiratory protection are in use in the Facility. Some respiratory protection equipment is self contained, some is dependent on bottle fed, compressed breathing air hoods/respirators.

All respiratory protection equipment in use in the Facility is subjected to regular operational and functional checks. All personnel who have a need to use respiratory protective equipment are trained in the use of that equipment.

ASPHYXIATION BY OXYGEN DEPLETION

EMERGENCY ACTION

- If an oxygen depletion alarm sounds
  - Evacuate the relevant room or area (if inside it), closing any doors behind you
  - **DO NOT** enter, or re-enter, the relevant room or area
  - Inform Facility Emergency Control [redacted] from a safe location
  - Check that all gas supplies to the room are isolated at the bottles where possible and safe to do so
- If a person is suspected as being asphyxiated
  - Immediately evacuate the relevant room or area (if inside it) to a safe place, upwind of any possible gas release if appropriate
  - **DO NOT** enter the affected area to investigate, or attempt a rescue, without self contained breathing apparatus or appropriate training
  - Request Fire and Medical Services [redacted] from a safe location, or instruct someone else to, and to return confirming they have done so
  - Inform Facility Emergency Control [redacted]
  - Cordon off the area to prevent inadvertent access
  - Check that any gas supplies to the area are isolated at the bottles where possible and safe to do so
  - Await the arrival of emergency services and brief them on the hazard

LOSS OF BREATHING AIR

EMERGENCY ACTION

- Withdraw staff from the area immediately, shutting down operational plant if safe to do so
- Summon first aid (locally or via [redacted]) to determine any ill effects which may have been suffered by staff (e.g. oxygen depletion or inhalation of fumes or particulates). which may require monitoring to observe for delayed effects
- If personnel need to be recovered follow the actions for suspected asphyxiation by oxygen depletion (above)
- Cordon off the area to prevent inadvertent access
- Isolate the breathing air system to prevent further use

Electrical Power Failure

The electrical supply can suffer interruption for a variety of causes, including: total failure of the electrical supply to the Site, sub-station failures, local electrical circuit failure or operation of a protective device (residual current or fuse).

All electrical systems within the facility are designed to "fail safe".

Ventilation Failure (including Air Conditioning and Refrigeration)

There are a number of work areas equipped with local exhaust ventilation (LEV) or engineered ventilation in order to protect workers from the possible build up of noxious or explosive gases and fumes arising from production or test activities.

Some explosives begin curing and other flammable materials degrade more rapidly at room temperature. To extend the life of these materials they are stored in refrigerated or air conditioned environments. While failure of such plant and equipment will cause no immediate danger, the risks to quality and usability of the materials may be elevated.

Humidity control is provided in some areas for safety and/or quality reasons. Failure of these systems will not cause an immediate danger, but sensitive materials should be made safe until conditions are corrected for safe handling.

Where it is possible that refrigerant gases could leak into an enclosed/confined area the risk of asphyxiation must be considered.

ELECTRICAL POWER FAILURE

EMERGENCY ACTION

- Ensure requirements for ventilation failure (below) are carried out if the power failure results in this
- Ensure that equipment and processes have been made safe
- Switch off equipment and plant so that it cannot re-start under uncontrolled conditions
- Check that any operation or process that was in progress is contained, or appropriately cordoned off with an exclusion zone, in accordance with any local contingency arrangements
- If the loss of power has, or could, compromise safety inform Facility Emergency Control [redacted] about the situation
- If the loss of power is more localised or has no safety implications, make non-urgent contact with the WCC [redacted], or local Approved Person (Electrical)

VENTILATION FAILURE

EMERGENCY ACTION

- Ensure that equipment and processes have been made safe where possible
    - without subjecting anyone to unnecessary exposure to gas or fumes
    - with consideration to possible safety implications of inappropriate environmental conditions (e.g. humidity)
- Evacuate to a place of safety, alerting others working in the area and closing any doors behind you
- Notify Facility Emergency Control [redacted]

Warning

Where it is possible that refrigerant gases could have leaked into an enclosed/confined area the risk of asphyxiation must be considered. In this situation, the instructions for asphyxiation by oxygen depletion (page 47) must be considered in the first instance.

Loss of Steam Supply

The Site steam-main supplies saturated steam at 3barg (42psi) to many buildings within the Facility. The steam pressure is regulated to each building according to its needs. Steam is used in many explosive processing operations as an indirect source of heating and also to provide central heating to buildings.

Failure at source would result in partial or total loss of steam which would result in gradual loss of temperature in heating systems.

Failure due to a pipe rupture or operation of an over pressure device is potentially dangerous as there may be an uncontrolled escape of saturated steam at high pressure.

Failure of the steam supply to the Facility climatic chambers and other heating systems will often trigger an automatic shut down. This will not lead to an explosive hazard but could lead to a failed test or process.

Loss of Compressed Air or Vacuum Supply

Many processes and plant operations within the Facility are dependent on a continuous supply of compressed air and/or utilise a local vacuum pump.

DI Site Utilities Group (SUG) is responsible for maintaining the air-main pressure at 6barg (85psi). Back-up compressors are available and are automatically switched into operation when required.

Some processes have local air compressors which are needed to supplement the Facility air-main or act as stand-alone compressors. These are maintained by the DI Asset Care (Maintenance) Team and any faults or failures must be brought to their attention as soon as possible.

In all cases where a vacuum needs to be maintained there are local written instructions and training given to staff for appropriate emergency response if the vacuum reduces or fails.

LOSS OF STEAM SUPPLY OR STEAM LEAK

Failure at Source (steam main)

EMERGENCY ACTION

- Shut the process down and, if appropriate, turn off the steam supply to prevent uncontrolled pressure or heat build up when the supply is reinstated
- Make safe in accordance with local operating instructions
- If cooling of the process may lengthen it or otherwise compromise safety, inform Facility Emergency Control [redacted] and advise the nature of the situation, otherwise make non-urgent contact with the WCC [redacted]

Steam Leak (pipe rupture / operation of over pressure device)

EMERGENCY ACTION

- Evacuate and cordon off the affected area to prevent unauthorised access
- Inform Facility Emergency Control [redacted] and advise the nature of the incident

LOSS OF COMPRESSED AIR OR VACUUM SUPPLY

EMERGENCY ACTION

- Ensure that equipment and processes have been made safe, following any local contingency arrangements where necessary
- Switch off equipment and plant so that it will not restart under uncontrolled conditions
- Check that any operation or process that was in progress is contained, or appropriately cordoned off with an exclusion zone, in accordance with any local contingency arrangements
- If safety may have been compromised by the failure, inform Facility Emergency Control [redacted] of the situation, otherwise make non-urgent contact with the WCC

Loss of Shielding

The Facility contains a number of radioactive sources and X-ray equipment, generally used for radiographic inspection.

Loss of, or damage to, shielding, or failure of an interlock, due to a mechanical or electrical fault could result in the exposure of personnel to ionising radiation in the immediate area. Local contingency plans are in place where sources are used routinely.

Alternatively, loss of shielding due to a fire or explosion could lead to the exposure of personnel to both ionising radiation and radioactive materials in the immediate area with the potential for the release of RA material in to the environment.

LOSS OF SHIELDING

EMERGENCY ACTION

- Evacuate to a place of safety (maximising distance & and other shielding)
- Ensure all staff are alerted and evacuated
- If possible, and safe to do so, switch off any electrical X-ray equipment
- Ensure the area is secure or cordoned off
- Alert your Radiation Protection Supervisor (RPS)
- Request Health Physics emergency support [redacted] identifying the type and characteristics of the exposed source
- Inform Facility Emergency Control [redacted] and advise of the situation, including source details
- Carry out any local contingency plans only when authorised by the FEC/RPS

Source Exposed During Fire or Explosion

Warning

There is always a possibility that an initial explosion may be followed by another

EMERGENCY ACTION

- Take cover at a location which affords protection from the local radiation hazard and provides shelter or some amount of protection against the ingress of RA material
- When safe to do so, evacuate to a place of safety upwind of any RA dispersal
- If possible, from a place of safety
    - notify the Emergency Services [redacted] and declare a "Facility Emergency", providing details of the location and nature of the incident (including, if known: quantity of explosives involved, status of other nearby explosives, quantity and type of RA material that has been exposed)
    - inform Facility Emergency Control [redacted] giving the same information
- Await the arrival of the emergency services, or instructions from the FEC or the Public Address system

Vehicle Breakdown

The breakdown of a vehicle within the Facility may not pose an immediate risk. However, dependent on the location of the breakdown, other activities may be compromised, such as the transit of emergency vehicles or the movement of explosives and/or RA material.

VEHICLE BREAKDOWN

Vehicle Not Carrying Explosives

ACTION

- Warn other vehicles using the clearway of the breakdown
- From the nearest phone, contact the WCC [redacted] and advise on the breakdown location
- Return to the vehicle and await the arrival or instructions of Transport Operations & Maintenance

Vehicle Carrying Explosives

EMERGENCY ACTION

- **DO NOT** attempt to move the vehicle
- Warn other vehicles using the clearway of the breakdown
- From the nearest phone, inform Facility Emergency Control [redacted] and advise on breakdown location
- Return to the vehicle and await the arrival or instructions of Transport Operations & Maintenance

Vehicle Carrying Explosives and RA Material

EMERGENCY ACTION

- **DO NOT** attempt to move the vehicle
- Warn other vehicles using the clearway of the breakdown
- Using the radio issued for material movement, contact the Explosives Movement Controller (MC)/Facility Emergency Control and advise on the location of the breakdown
- Await further instructions from the MC and/or FEC
- Other staff deployed during the movement to control clearway access should remain at their stations until advised by the MC/FEC

Laser Eye Strike

Damage to the eye can be caused by a laser as a consequence of: failure to wear, or failure of PPE, or the malfunction of the laser or interlocks.

It is essential that expert medical attention is sought immediately for an incident where eye damage has been caused or is suspected. The Emergency Services should be advised immediately using the term "Laser Eye Strike" which will illicit the correct response.

Details of the laser power, wavelength and mode of operation (continuous or pulsed) need to be communicated to medical treatment staff. Each room should have a "laser hazard card" with this information to accompany the patient.

LASER EYE STRIKE

EMERGENCY ACTION

- Isolate power to the laser if possible and safe to do so without risk of further exposure to the beam
- Evacuate the room, taking the laser hazard card and closing the door behind you
- Shout for assistance of a trained First Aider
- Request Medical assistance [redacted] stating LASER EYE STRIKE
- Open main doors, if necessary, to allow ambulance access
- Inform Facility Emergency Control [redacted]
- Go, or send someone else, to the agreed rendezvous point to brief the emergency services on arrival, providing them with the laser hazard card to assist treatment

CAUTION

Details of the laser about the laser that caused the injury are useful to medical treatment staff. It is important to remember the laser hazard card, or at least know the name and model of the laser, if you cannot recall the details:

- Wavelength
- Power
- Mode of operation (continuous or pulsed with repetition rate & length)

The ECP should be able to provide this information from a copy of the Facility Laser Database

Security Incident (Intruder)

Due to the nature of AWE's activities, it could be the focus of peaceful demonstrators or criminal/terrorist organisations. Once on Site, it is possible for an intruder to gain access to the Explosives Areas at any point along the extensive length of security fencing around the large area involved.

It is essential that any intruder is quickly located and apprehended before they put themselves or others at risk from operations, any damage is sustained, or security is further compromised.

Where operations could pose a risk to intruders or responding MDP officers, they should be made safe as quickly as possible

SECURITY INCIDENT (INTRUDER)

EMERGENCY ACTION

- **DO NOT** attempt to remove or deal with the intruder
- **DO NOT** activate the fire alarm
- **DO NOT** evacuate the building unless in imminent danger or instructed to do so
- Make operations safe and secure
- Contact MDP [redacted] as soon as possible, reporting: number of intruders, their description, last known location, direction of travel and if carrying anything
- Inform Facility Emergency Control [redacted]
- Advise if explosives and/or radioactive material could be compromised
- Remain where you are with doors and windows, and curtains or blinds, closed until instructed otherwise

Communications Systems Failure

The Facility relies upon communications for safe operations and an effective emergency response capability. They are required for: staff to raise an initial alert, alerting them of other incidents, and the subsequent response. They include:

- landline communications
- Public Address (local or Site-wide) and local intercoms
- mobile communication systems (radio, mobile telephone, or pagers)

Asbestos Release

Routine surveys monitor the condition of all known asbestos, which is identified in the Facility Asbestos Register. Reference to this is made before allowing work tasks to proceed in close proximity to asbestos.

If materials known, or suspected, to contain asbestos are found, disturbed or damaged, access to the area should be restricted to prevent potential inhalation or wider contamination. The ECP should be informed immediately.

COMMUNICATIONS SYSTEM FAILURE

ACTION

- If the Public Address system is not operating, or cannot be heard clearly
  - inform the WCC [redacted]
  - **DO NOT** continue operations until an alternative warning system is in place
- If a landline telephone, or replacement handset, does not work
  - inform the WCC
  - **DO NOT** continue operations unless an alternative telephone line or contingency arrangement is in place
- If a radio, mobile telephone or pager does not work
  - get the battery replaced by the WCC or an Approved Person (Electrical), or return it to the issuing office for recharging or maintenance
  - **DO NOT** continue operations for which the device is provided until a replacement has been obtained

ASBESTOS RELEASE

EMERGENCY ACTION

- If material known, or suspected, to be asbestos is found or damaged
  - Stop work immediately, making safe tools and equipment
  - Evacuate the immediate area and create an exclusion zone round it
  - Notify Facility Emergency Control [redacted], advising on the nature of the incident
  - If you believe you may have asbestos on you
    - do not touch nose, mouth or any other part of your body
    - restrict your movements so as to minimise spread of any contamination
  - Await further instructions from the FEC and/or Asbestos Focal Group for clean up and personal decontamination if necessary

Annex A - Actions on Receipt of a Telephone Threat