



Nuclear Generation Limited

Company Specification

Generic Emergency Plan

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Revision	Amendment	Impact level	Date
002	10 yearly periodic review. Changes to (a) initiating event (Section 1.1.2), (b) additional facilities (Sections 2.9), (c) additional equipment capability (Section 2.13), (d) adjacent station declaration (Section 2.22), (e) new glossary (Section 4), reference (Section 5) and records (Section 6) sections, (f) nomenclature and terminology updates (throughout), (g) REPIIR terminology changes (Section 1, 2), (i) Update to notifications (Figs 1 and 2); (h) removal of GTA role (Sections 1, 2)	Moderate	February 2018

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Substitutions in Section 1.3.2**AGR**

Site	DEPZ	Monitoring
<i>Dungeness B</i>	<i>2.4 km</i>	<i>40 km</i>
<i>Hartlepool</i>	<i>1.0 km</i>	<i>15 km</i>
<i>Heysham 1 and 2</i>	<i>1.0 km</i>	<i>15 km</i>
<i>Hinkley Point B</i>	<i>3.5 km</i>	<i>40 km</i>
<i>Hunterston B</i>	<i>2.4 km</i>	<i>40 km</i>
<i>Torness</i>	<i>3.0 km</i>	<i>15 km</i>

PWR

Site	REPPIR Offsite Emergency Planning Area	Monitoring
<i>Sizewell B</i>	<i>Reference to REPPIR Offsite Planning Area</i> <i>X = 3</i> <i>Y = 5</i> <i>Z = 1</i> <i>Include map</i>	<i>40 km</i>

This document will be reviewed every three years: Next review due mm/yyyy

This document forms part of the compliance arrangements for the following Site Licence Conditions: LC 8 Warning Notices and LC 11 (1, 4, 5, 6) Emergency Arrangements. This document shall not be changed without consultation with Independent Nuclear Assurance (INA).

Other substitutions throughout:

For Sizewell B replace Central Control Room and CCR with Main Control Room and MCR

1 GENERAL

1.1 Introduction

- 1.1.1** The siting, design, construction and operation of EDF Energy Nuclear Generation Ltd (EDF Energy NG) nuclear power stations are subject to the granting of a Nuclear Site Licence by the Health and Safety Executive (HSE) and must comply with the conditions attached to the Licence. The Office for Nuclear Regulation (ONR) is responsible for ensuring compliance with statutory requirements described in the Energy Act 2014 and for ensuring that proper standards of nuclear safety and security are achieved at all times.

A Nuclear Site Licence is granted only after ONR has fully satisfied itself that the licensee is a capable operator and has made an adequate Safety Case for the station and developed appropriate safety standards. The implementation of these standards reduces to a very low level the chance of an accidental event which might lead to the release of even small amounts of radioactivity. Nevertheless it is a condition of each Nuclear Site Licence that there shall be arrangements, approved by ONR, for dealing with an accident or emergency. No changes to these arrangements shall be made without subsequent approval from ONR. These arrangements incorporate procedures and actions for ensuring that appropriate measures are available for protecting the public, the workforce and satisfy the requirements of Health and Safety at Work Act (HSWA) so far as is reasonably practicable.

- 1.1.2** This Emergency Plan describes the principles of the emergency arrangements and fulfils Emergency Arrangements Condition 11(1) and (2) of the Nuclear Site Licence, whilst also supporting compliance with Regulation 7 of Radiation Emergency Preparedness and Public Information Regulations (REPPiR). This Site Emergency Plan and the Site Emergency Handbook [1] together form the "Operator's Plan" as required by REPPiR. The Plan and Handbook are provided to ONR as the Operator's Plan for REPPiR compliance because a reasonably foreseeable accident has been identified as credible.

The Emergency Plan also supports compliance with the Nuclear Industries Security Regulations 2003, as amended 2006 (NISR). The Site Emergency Plan, Site Emergency Handbook, Nuclear Site Security Plan (NSSP) and Joint EDF Energy Nuclear Generation and Civil Nuclear Constabulary Response Procedures provide the principles on which the

Site's security response will be based.

The initiating events which can cause an accident are not limited to internal plant failures. Although this document primarily describes the arrangements for dealing with accidental events involving the release of radioactivity, it also outlines the principles to be adopted in dealing with the large range of situations that could affect the operating conditions on site and the need for resilience of the response arrangements to meet these objectives:-

- a) To activate the site emergency arrangements by making an appropriate declaration.
- b) To issue appropriate warnings at the correct time and ensure the safe withdrawal of all persons on site from potentially hazardous areas and to pre-arranged assembly points.
- c) To notify rapidly all persons and external organisations concerned with implementing remedial actions (See Figures 1 and 2).
- d) To assemble and deploy, when necessary, emergency teams to assess and minimise the consequences of the accident or event.
- e) To maintain the safety and security of the site and nuclear materials held thereon.
- f) To assess the risk and extent of any potentially hazardous situation and ensure timely advice is given on appropriate measures to safeguard the public and that appropriate measures are taken to safeguard station personnel.
- g) To take measures necessary during accidents to consider and mitigate any potential environmental harm which could result from the event itself or as a result of emergency intervention activities.
- h) To minimise and then terminate any radiological or toxic releases and make the affected plant safe.
- i) To provide authoritative radiological protection advice to the Police, Local Authorities and others responsible for taking the necessary action to protect the public. This advice will be provided initially by the site Emergency Controller and subsequently by the CESC controller via the EDF Energy NG Company Technical Adviser until relieved of the responsibility by the Scientific and Technical Advice Cell (STAC) Chair.
- j) To provide accurate and timely information for the Local Authority to inform the public via the news media.
- k) To maintain an accurate record of events for later analysis and protect evidence in case a crime scene is established.
- l) To ensure the safety of unaffected plant.
- m) To develop criteria for stand-down and recovery from the event.

1.1.3 The primary objective of emergency preparedness is to ensure that arrangements in this Emergency Plan are always available to implement, whenever action is necessary to prevent any member of the public or station staff from being exposed to a significant health risk as a consequence of a nuclear accident or other hazardous events at the power station. For accidents where members of the public might be exposed to radiation Public Health England Centre for Radiation, Chemicals and Environmental Hazards (PHE-CRCE) has issued formal guidance on the criteria to be used in assessing the need for protective actions, the use of which is allowed for under relevant health and safety regulations. EDF Energy NG has adopted the PHE-CRCE guidance as the basis for formulating advice on the need for urgent countermeasures.

If an event should ever occur resulting in a release to the environment of significant quantities of radioactive material then, in addition to the operator, many off site organisations would be involved and called upon to take actions to protect the public. These organisations include the Police, Fire and Rescue Service, Ambulance Service, Local Authorities, Government Departments and National Agencies. Each of these groups has its own emergency responsibilities and procedures. These procedures are co-ordinated in the Off Site Emergency Plan by the Local Authority, which fulfils the requirements under Regulation 9 of REPPiR.

1.1.4 The Emergency Plan and the Off Site Emergency Plan are consistent with the arrangements described in the HSE booklet "Arrangements for Responding to Nuclear Emergencies" [2] and the HM Government Publications "Emergency Preparedness" [3] and "Emergency Response and Recovery" [4] / Scottish Government publication "Preparing Scotland: Scottish Guidance on Preparing for Emergencies" [5]. The Emergency Plan is also consistent with the Security Assessment Principles (SyAPs), which support implementation of the Nuclear Industry Safety Regulations (NISR) 2003.

1.1.5 The detailed instructions and guidance for EDF Energy NG staff are given in the Site Emergency Handbook and the Central Emergency Support Centre (CESC) / Strategic Co-ordination Centre (SCC) Handbook. The roles and responsibilities of the offsite organisations are described in their plans. A major feature of nuclear emergency arrangements for any nuclear power station is the need to ensure good co-ordination between those organisations directly involved; this is maintained by regularly holding

Emergency Planning Consultative Committees (EPCC).

For site and intervention personnel radiation dose limits will be controlled in accordance with REPIR and other relevant regulations issued under the HSWA.

1.1.6 The ability of EDF Energy NG to implement the Plan has to be demonstrated to ONR by regular exercises. During these exercises the training and competence of staff together with the adequacy of resources are comprehensively tested. Off site organisations are encouraged to test their arrangements at the same time.

1.2 Stages of an Accident or Emergency

Depending upon the nature and duration of an accident or emergency the emergency organisation may evolve in three stages:-

1.2.1. Stage 1

Stage 1 starts with the initiation of the emergency response organisation as a result of the declaration of a Site Incident, Off Site Nuclear Emergency (see Section 1.4) or other event which requires an emergency response but is not part of a Site Incident or Off Site Nuclear Emergency. Once initiated a declaration is made and trained station staff then form a site emergency response organisation under the command of the Emergency Controller based on the site (see Section 2.2). They operate from emergency facilities (see Section 2.9), with primary and alternative facilities available as a minimum. The Emergency Controller is responsible for initiating the emergency actions to be taken by EDF Energy NG staff and for ensuring the offsite organisations which have responsibility for initiating countermeasures to protect the public are alerted. The station is permanently staffed in such a way that a site emergency response organisation can be set up immediately. Additional key station personnel are available on call.

For an Off-Site Nuclear Emergency a SCC and associated Media Briefing Centre (MBC) will be activated by the Police.

In a security incident, a Site Incident will not be automatically declared as this would require personnel to muster, when lockdown may be a more appropriate method for

protecting personnel and enabling the CNC to deal with whatever is happening. However, when lockdown has been lifted and if required, a Site Incident will be declared.

1.2.2. Stage 2

Stage 2 occurs approximately 1 hour later when EDF Energy NG establishes a CESC at the EDF Energy NG offices in Barnwood as the primary location, or at an alternative location if appropriate. Activities depend on the status (see Section 1.4):

- a) Site Incident - The CESC staffed by EDF Energy NG will provide technical support to the station as necessary and, at the appropriate time agreed with the Emergency Controller, take over responsibility for issues such as offsite radiological monitoring, interfaces with company and external organisations whilst continuously assessing the possibility of the Site Incident developing into an Off Site Nuclear Emergency. The CESC Controller provides oversight of the event to consider the potential safety impact on other EDF Energy NG power stations
- b) Off Site Nuclear Emergency - The CESC staffed by EDF Energy NG together with other relevant organisations will continue to provide technical and liaison support to the station as necessary. At the appropriate time as agreed with the site Emergency Controller the CESC takes over control of the deployment of the offsite monitoring resources, assessment of the need for countermeasures and provision of expert advice to the SCC. The CESC will also co-ordinate technical information for dissemination within the company, including to external agencies and the media.

During this stage the Emergency Controller is responsible for onsite actions and the CESC Controller for deployment of EDF Energy NG environmental monitoring resources, the provision of expert advice on countermeasures to the SCC and the dissemination of information to external agencies.

1.2.3. Stage 3

Stage 3 occurs in an Off Site Nuclear Emergency only, when the STAC is declared fully operational and the STAC Chair assumes responsibility for giving authoritative advice to Police, Local and Health Authorities and other external organisations on any actions necessary to protect the public. The EDF Energy NG Company Technical Adviser and

team will support the ONR Team and continue to liaise with the CESC/ECC Controller. The Strategic Commander will coordinate media briefing.

1.3 Consequences of an Accident or Emergency

1.3.1 The most likely outcome of an accident at a nuclear power station involving the release of radioactive material is that no member of the public would be directly harmed. However, there is a potential for the consumption of foodstuffs to be restricted. The main potential hazard lies in the radioactivity which accumulates in the nuclear fuel while the reactor is operating. If an event led to a release of radioactivity to the atmosphere then some of the gaseous and volatile radioactive material could be transported by the wind from the site. The dispersion of such material by the wind has been extensively studied and the emergency response organisation is equipped to assess its effects. The release could be of a relatively short duration or it could be spread over a longer period of time depending on the nature of the incident. The radioactive material dispersed would be invisible but would behave in a similar way to a plume or cloud of smoke, dispersing in the atmosphere and depositing some of its contents on the ground. The concentration of radioactivity in the plume would decrease with distance from the site, being diluted and dispersed as it moved downwind, and the hazard would consequently decrease rapidly with distance from the initial release.

1.3.2 Provision of company advice to the Police on the need (if any), for protective measures to be undertaken to safeguard the public is the responsibility of the Emergency Controller or CESC Controller and will be given by the responsible EDF Energy NG Company Technical Adviser until relieved by the STAC Chair. In formulating such advice, consideration will be given to:-

- a) The results of actual measurements and assessments of the radiological hazard off site. Advice will be based on the potential reduction in dose that could be offered by the implementation of countermeasures according to the principles set out by PHE-CRCE.
Or
- b) The potential for an offsite radiological hazard to develop, such that countermeasures should be implemented on a precautionary basis.

The following countermeasures would be considered:-

a) Sheltering

In addition to the general advice contained in the information to local residents, when sheltering is to be implemented as a positive assured countermeasure those in the affected sectors would be directly advised of the need to stay indoors, close doors and windows, and take other simple protective measures.

b) Administration of Stable Iodine Tablets

Members of the public who might be exposed during the passage of the plume will be provided with stable iodine tablets. This will minimise the effects of any uptake of radioactive iodine. This countermeasure will normally be combined with (a) and/or (c).

c) Evacuation

Evacuating the public from an affected area will reduce the risk of prolonged exposures to radioactivity in the plume, and, in later stages, to radioactivity deposited from the plume.

d) Food and Water Control

Controlling potentially contaminated food and water supplies will be achieved through the duties placed on the appropriate UK statutory bodies and the equivalent for the National Assembly for Wales, or the Scottish Government.

The responsibilities for carrying out the above measures are detailed in the relevant Local Authority's Off-Site Emergency Plan (see Section 3).

{This section to be replaced for stations with re-determined REPPiR Offsite Planning Area and separate Urgent Countermeasures Area}. A Detailed Emergency Planning Zone (DEPZ) of {Insert DEPZ Value} kilometres from the site has been established. This has been agreed with ONR and local emergency agencies and is coincident with the public information area. This takes account of local factors that may exist, e.g. an adjacent nuclear site. Such arrangements are however flexible and the distance for implementation of countermeasures can be extended if necessary. The restrictions on the distribution of milk and other foodstuffs could extend beyond the DEPZ distance and EDF Energy NG maintains arrangements for monitoring radioactivity to a distance of {Insert Monitoring Value}. The amount of radioactivity beyond this distance would be extremely small but possibly still measurable.

(Alternative Text for stations with re-determined REPPiR Emergency Offsite Planning Areas and separate Urgent Countermeasures Areas). A REPPiR Offsite Emergency Planning Area extending between X and Y km from the site, has been determined by ONR. , with advice from PHE-CRCE, have identified an area in which urgent countermeasures could be required in the event of an Off Site Nuclear Emergency. This Urgent Countermeasures Area extends to Z km in all directions from the centre of the {Name} station. Such arrangements are however flexible and the distance for implementation of countermeasures can be extended if necessary. The restrictions on the distribution of milk and other foodstuffs could extend beyond the REPPiR Emergency Planning Area distance and EDF Energy NG maintains arrangements for monitoring radioactivity to a distance of {Insert Monitoring Value}. The amount of radioactivity beyond this distance would be extremely small but possibly still measurable.

PHE-CRCE will co-ordinate environmental monitoring by Government Departments and Agencies to provide additional information for longer term decisions on the possible restriction of milk, foodstuffs and water supplies.

- 1.3.3** EDF Energy NG recognises the need for the local community in the vicinity of the Power Station to be alerted and kept informed on the progress of any accident and its effects. Arrangements are in place for informing not only people in the affected sectors where protective measures may need to be taken, but also people outside those sectors so that they do not suffer unnecessary stress or concern.

EDF Energy NG will co-operate with the Police and Local Authorities, who have the responsibility for communicating advice or instructions directly to members of the public primarily using local radio or TV and other available methods/facilities. Advisory information has been issued, in accordance with REPPiR, to local residents within the DEPZ *{or for stations with re-determined REPPiR Offsite Planning Areas replace with REPPiR Emergency Offsite Planning Area }* explaining actions that may have to be taken during an emergency.

- 1.3.4** Following the declaration of an Off Site Nuclear Emergency, EDF Energy NG will, as soon as reasonably practicable, and in consultation with other responders, provide a report on the circumstance of the event, benefits of actions taken to limit radiation exposure and measures taken to prevent further release of radiation. Within 12 months of the event, a full

report of the consequences of the event and the effectiveness of the emergency response will be prepared and submitted to ONR within 28 days of the report's completion. The report or copy will be retained for 50 years.

1.4 Definitions of Site Incident and Off Site Nuclear Emergency

1.4.1 Site Incident

Definition: "A hazardous condition which is confined in its effect to within the boundary of the site aligned with EPGMS".

A Site Incident does not call for the full implementation of the Emergency Plan or, necessarily, the alerting of the offsite Emergency Services. However, following the activation, the emergency organisation detailed in this plan will be adapted to respond effectively to the specific circumstances of the event. The declaration of a Site Incident may identify when mitigating actions are required to prevent a radiation emergency occurring. To this end the possibility of a Site Incident developing into an Off Site Nuclear Emergency would be continuously assessed.

1.4.2 Off-Site Nuclear Emergency

Definition: "A hazardous condition which results, or is likely to result, in the need to consider urgent countermeasures to protect the public outside the boundary of the site, which may be supported by EPGMS information, from a radiological hazard".

The declaration of an Off-Site Nuclear Emergency identifies when mitigating action may be required to prevent a radiation emergency occurring or that a radiation emergency has begun. In this case a radiation emergency is as defined in REPPIR.

2 THE SITE EMERGENCY ORGANISATION

2.1 Emergency Preparedness

The Station Director assigns responsibility for the preparedness of the emergency arrangements to a specific post within the site organisation. The post holder, together with EDF Energy NG central support, is responsible for ensuring that the arrangements on site adequately meet the objectives of the Site Emergency Plan and for liaison with the Local Authority for the preparation of the Off Site Emergency Plan. The post holder, together with EDF Energy NG central support is also responsible for ensuring the arrangements on site adequately meet the objectives of the Nuclear Site Security Plan.

2.2 Response

Depending on the nature and duration of an event the emergency organisation may evolve in three stages. For a Site Incident only Stage 1 and a limited part of Stage 2 will apply.

2.2.1 Stage 1

The Shift Manager is Emergency Controller and will assume command until the ECC on site is established, when the duty Emergency Controller will take command (including during out of hours) from the Shift Manager. The Shift Manager remains the duly authorised person for plant operations throughout the event

The Emergency Controller will establish an emergency organisation and is responsible for:-

- a) Determining the condition of the event, declaring a Site Incident or Off Site Nuclear Emergency and carrying out the relevant notification as required by the Plan (see Figures 1 and 2).
- b) Ensuring the immediate safety of personnel on site.
- c) Making the plant safe (although in practice this will be managed by the Shift Manager).
- d) Security of the site.
- e) Providing advice or reassurance messages to the Police to ensure the protection and safety of the public until the CESC and SCC becomes operational.
- f) Requesting assistance from the Emergency Services as necessary.

-
- g) Deploying the site emergency personnel as appropriate.
 - h) Liaising with the Civil Nuclear Constabulary (CNC) and Home Office Police/Police Scotland, as necessary.
 - i) Monitoring and assessing the levels of radioactivity on and off site as necessary.
 - j) Preparing an initial press statement and liaising with the Public Relations staff.
 - k) Assessing the course of the accident and reviewing its status.
 - l) Keeping personnel on the site informed of the situation.
 - m) Formulating (in conjunction with the Shift Manager and ECC staff and for specific security threats the CNC) an appropriate response to the event and bringing the situation under control.
 - n) Authorising emergency exposure limits.
 - o) Liaising with the Senior Fire Officer regarding any firefighting activities.
 - p) [Liaison with the adjacent station Emergency Controller regarding any implications for its staff *{Include If Applicable}*].

2.2.2 Stage 2

In the event of a Site Incident, the CESC will be set up to initially carry out 2.2.2 (c), (d), (e) and (f) only.

When the CESC and SCC is operational the CESC Controller can, at the appropriate time as agreed with the Emergency Controller, assume responsibility for:-

- a) The co-ordination, direction and control of company off site monitoring within the DEPZ *{or for stations with re-determined REPPIR Offsite Planning Areas replace with REPPIR Emergency Planning Area (REPA)}*.
- b) Provision of expert advice on urgent countermeasures for protecting the public:-
 - [i] Initially direct to the Police
 - [ii] Via the EDF Energy NG Company Technical Adviser when in post at the SCC
 - [iii] Via the STAC Chair when in post at the SCC
- c) Liaison with Government Departments, Agencies and other organisations having responsibilities in an emergency.

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- d) The co-ordination, direction and control of offsite monitoring beyond the DEPZ *{or for stations with re-determined REPPIR offsite planning areas replace with REPPIR Offsite Planning Area}* out to the distance specified in 1.3.2.
 - e) Providing any necessary support to the site and ensuring that the full resources of EDF Energy NG are directed to assist.
 - f) Media interface support.

On arrival at the SCC the EDF Energy NG Company Technical Adviser will assume responsibility for; the provision of authoritative advice to the Police, Local and Health Authorities and other Agencies on early countermeasures to protect the public. S/he will utilise expert advice supplied initially by the Emergency Controller and subsequently by the CESC Controller, once the responsibility has been transferred.

2.2.3 Stage 3

The STAC Chair will assume the responsibility at the SCC for giving authoritative advice to the Police, Local and Health Authorities on any action necessary to protect the public. The EDF Energy NG Company Technical Adviser will support the STAC.

2.3 Declaration Conditions

The reactors are fully equipped with automatic protection and the data displayed in the Central Control Room, which is manned at all times, provides detailed information on the state of the plant. In the event of this information indicating abnormal conditions the Shift Manager will carry out an immediate investigation and assessment. If the situation demands, the Shift Manager as Emergency Controller will initiate actions in accordance with the conditions for declaring a Site Incident or an Off Site Nuclear Emergency listed in Table 2.3.1.

{Include [A] or [B] identified below as appropriate}

2.3.1 [A] Advanced Gas Cooled Reactors

CONDITION		STATE
[a]	Evidence that fuel integrity may have been jeopardised coupled with an uncontrolled rise in reactor power or reactor temperature is observed.	Site Incident
[b]	A significant loss of coolant gas from the reactor circuit is confirmed * as defined in SOI/M <i>{Insert Reference}</i> .	
[c]	A rapid and significant rise in circuit gas activity or Burst Can Detection (BCD) readings is observed * as defined in SOI/M <i>{Insert Reference}</i> .	
[d]	A loss, or damage to, electrical supplies or conventional plant occurs having significant implications for reactor safety **.	
[e]	A safety hazard on site from new fuel or irradiated fuel outside the reactor is considered to exist.	
[f]	An unexpected and potentially hazardous rise in on site radiation or contamination levels is confirmed.	
[g]	A rapid rise in BCD readings is observed associated with a reactor trip on automatic protection.	
[h]	There is evidence of obstruction or damage to irradiated fuel pins which may involve the release of activity to the reactor gas circuit.	
[i]	Reactor conditions are such that the use of the secondary or tertiary shutdown becomes necessary.	
[j]	Emergency Services personnel are required to make access to a Radiological Controlled Area (RCA) in significant numbers.	
[k]	Evacuation of the Central Control Room.	
[l]	An occurrence with the potential to harm persons on site requiring full accounting for personnel across site, such as a major fire, flooding, severe weather, a significant release of gas or liquor which could present an asphyxiation or toxic hazard.	
[m]	An external hazard which could affect the safety of the site.	
[n]	The person empowered to declare a Site Incident considers that the circumstances demand such action or that there is an operational safety benefit in initiating the emergency organisation.	

CONDITION		STATE
[o]	A significant loss of coolant gas occurs together with a high level of radioactivity in the coolant gas *as defined in SOI/M {Insert Reference}.	Off Site Nuclear Emergency
[p]	Measurements on or off site indicate that a discharge of radioactive material has occurred which could result in the need for urgent countermeasures to protect the public.	
[q]	Perimeter monitoring equipment indicates that a significant quantity of airborne radioactivity is being released from the site.	
[r]	The person empowered to declare an Off Site Nuclear Emergency considers that the circumstances demand such action.	

* Include reference to SOI/M if appropriate.

** Depending on the severity of the implications consideration should be given to declaring an Off Site Nuclear Emergency.

[B] Pressurised Water Reactor

CONDITION		STATE
[a]	Any fission product barrier is believed to be or is breached or challenged in either an extreme or severe manner as defined in SOI N° 8.1 Critical Safety Function Monitoring.	Site Incident
[b]	A rapid increase in Reactor Coolant System activity coupled with a Chemical and Volume Control System let down radiation high alarm.	
[c]	An increase in containment radiological and/or environmental conditions is observed.	
[d]	An accident occurs during irradiated fuel handling operations resulting in high radiation and/or airborne activity alarms in the Containment or Fuel Building.	
[e]	The inability of the charging system to maintain primary circuit water inventory is observed.	
[f]	An uncontrolled increase in any steam generator level coupled with an increase in steam generator outlet N-16 measurements is observed.	
[g]	Initiating of both a condenser off gas activity high alarm and a steam generator blow down radiation high alarm.	

[h]	An occurrence with the potential to harm persons on site requiring accounting for personnel across site, such as a major fire, flooding, severe weather, a significant release of gas or liquid which could present an asphyxiation or toxic hazard.	
[i]	A significant increase in site radiation levels is observed.	
[j]	Emergency Services personnel are required to make access to a Radiological Controlled Area (RCA) in significant numbers.	
[k]	Evacuation of the Main Control Room.	
[l]	There is a loss of shutdown cooling coupled with high radiation and/or airborne activity in containment.	
[m]	An external hazard which could affect the safety of the site.	
[n]	The person empowered to declare a Site Incident considers that the circumstances demand such action or that there is an operational safety benefit in initiating the emergency organisation.	
CONDITION		STATE
[o]	Two or more fission product barriers are believed to be or are breached or challenged in either an extreme or severe manner as defined in SOI N° 8.1 Critical Safety Function Monitoring, except in the case of Steam Generator Tube leak(s) when a Site Incident under Condition (f) may be more appropriate	Off Site Nuclear Emergency
[p]	In conjunction with plant indications signifying raised radioactivity levels on plant, Perimeter Monitoring Equipment Alarms are confirmed on two or more adjacent operating detectors indicating that a quantity of airborne radioactivity is being released from site.	
[q]	The person empowered to declare an Off Site Nuclear Emergency considers that the circumstances demand such action.	

2.4 Initiation of an Emergency Response and Cancellation

2.4.1 Site Incident, Off Site Nuclear Emergency or Site Lockdown

A declaration or initiation of the emergency response organisation will be made as early as possible when it is suspected that normal control or management of the site cannot be

maintained or site lockdown is required. This enables the emergency response organisation to be in place prior to full consequences of the event occurring. By taking a conservative and precautionary approach it is accepted that the emergency arrangements may be invoked without becoming operational.

A Site Incident or Off Site Nuclear Emergency will only be declared by an authorised Emergency Controller (including the Shift Manager).

A Site Lockdown will only be initiated by authorisation of the Emergency Controller (including Shift Manager). The EDF Energy Security Guard in the Site Security Control Room also has a standing delegation to initiate a Site Lockdown in a site security emergency.

Any change of state will be notified to all persons and organisations already notified.

2.4.2 Cancellation of a Site Incident, Off Site Nuclear Emergency or Site Lockdown

Once the situation which gave rise to the declaration of a Site Incident or Off Site Nuclear Emergency has been brought under control the declaration of that state may be cancelled. The responsibility for issuing that cancellation will rest with the Emergency Controller or the CESC Controller depending upon the stage reached in the Site Incident or Off Site Nuclear Emergency, with the STAC chair (once established) responsible for ordering the cessation of urgent countermeasures, as follows:

- a) Following the declaration of a Site Incident, the Emergency Controller will cancel the declaration at any appropriate time. If the CESC is operational s/he will consult with the CESC Controller before cancelling the declaration.
- b) Following the declaration of an Off Site Nuclear Emergency, the Emergency Controller may in consultation with the CESC Controller, and other relevant organisations, cancel the declaration of an Off Site Nuclear Emergency and give advice to the Police and Local Authorities accordingly.
- c) When the STAC is fully operational and the STAC chair is in place, the STAC Chair will advise Police and Local Authorities on the cessation of any urgent countermeasures which may have been initiated. The responsibility for cancelling the on site declaration

always remains with the Emergency Controller, who may consult the CESC Controller. EDF Energy will advise ONR of their intentions in advance.

- d) Once the situation which gave rise to the initiation of a lockdown has been brought under control, the lockdown can be cancelled. The responsibility for issuing that cancellation rests with the Emergency Controller after liaison with the Force Incident Manager (FIM).

2.5 Warnings on Site

2.5.1

- a) * A general site warning of an event or other significant occurrence requiring the activation of the emergency response organisation and internal accounting for all site personnel will be given, on the authorisation of the Emergency Controller in the form of a Site Internal Muster Alarm which consists of *{Insert Description}*
- b) * A general site warning of an event or other significant occurrence requiring the activation of the emergency response organisation and external accounting for all site personnel will be given, on the authorisation of the Emergency Controller, in the form of a Site External Muster Alarm which consists of *{Insert Description}*

{ = Delete or Include as applicable}*

Should a Site Incident or Off Site Nuclear Emergency be declared the Site Internal Muster Alarm this will be followed immediately by a public address system (PAS) announcement containing at least the following:-

“Attention all personnel, a Site Incident/Off Site Nuclear Emergency is now in force”

to indicate that the Emergency Plan has been initiated.

The initial announcement should include any action required by staff on site e.g. making themselves safe, the requirement to muster, potential hazardous areas of the site, any immediate actions to take to avoid exposure to hazards and reassurance statements.

- c) A general site warning of an event requiring “lockdown” and all site personnel to rapidly secure themselves in situ will be given on the authorisation of the Emergency Controller. The site warning will take the form of a Personal Address System announcement.

- 2.5.2** A change in state from Site Incident to Off Site Nuclear Emergency will be announced over the PAS, preceded by a site alarm. Cancellation will also be announced over the PAS.
- 2.5.3** The Site alarm(s) requiring for the accounting of personnel or lockdown will be audible in all accessible areas of the site. In normally accessible areas, where noise levels are high, the alarm will be indicated by visual signals.

2.6 Notification

Following the declaration and initiation of the site emergency response, the Emergency Controller is responsible for ensuring that the relevant off site organisations are informed of the declaration. See Figure 1 and 2.

2.7 Accounting for Personnel

The purpose of accounting for personnel is to determine whether or not all personnel are safe and to establish the names and last known positions of any persons who are missing. The Emergency Controller will be kept informed of the status of the muster process to inform priorities for the response organisation

All personnel on site are required to report to assembly points designated for mustering on the first sounding of the Site Alarm. Emergency responders carrying out mitigating actions for the event, under the control of the Shift Manager may be directed at the time to report to a different location. The conditions at the assembly points will be monitored for tenability. Details of these arrangements are contained in the Warning Notices (see Section 2.16).

After the sounding of the alarm, a correlation of the muster will be completed as soon as possible, to determine a list of personnel who have not recorded their safe presence.

The Emergency Welfare and Administration Officer, or delegate, will correlate the muster results during office hours. The Shift Manager, or delegate, will perform this duty out of office hours, until relieved by the Emergency Welfare and Administration Officer.

During lockdown accounting for personnel should be undertaken as soon as reasonably practicable, to confirm the safety, security and presence of personnel.

2.8 Stable Iodine Tablet Issue on Site

All personnel on site will take stable iodine tablets on the declaration of an Off Site Nuclear Emergency. In the event of Site Incident, stable iodine tablets will only be taken on the instructions of the Emergency Controller. [Stable iodine tablets will not be taken for an event on a defuelled adjacent site *{Include if appropriate – Hunterston, Hinkley Point, Dungeness, Sizewell}*]

2.9 Site Emergency Facilities

Facilities have been identified for use in an emergency. These are detailed below in 2.9.1 - 2.9.4. For each facility there is a primary facility identified. However, should the primary facility be untenable then one or more alternative locations have been identified.

It is recognised that some emergency command centres (such as the ECC) may not be able to be established during Lockdown and that other arrangements may have to be established in this situation, based on the nature of the hazard (such as intruders to site).

2.9.1 Emergency Control Centre (ECC)

The ECC is a dedicated facility to manage the site, command the response organisation (including Emergency Services on the site) and, in the initial phase, interface with external agencies. The primary ECC is situated in the *{Insert Location}*. Should the need arise an alternative ECC is available at *{Insert Location}*.

The basic equipment provided in each ECC includes: maps, station procedures, drawings, communications equipment, tenability monitoring equipment, wind speed and direction indicators, plotting equipment, log sheets and general stationery.

The ECC staff will include the following key SQEP personnel (available on a 24 hour standby rota), to become operational:-

- Emergency Controller
- Emergency Health Physicist
- Emergency Reactor Physicist {for SZB replace with Emergency Nuclear Engineer}
- Emergency Welfare and Administration Officer

For a protracted event they will be assisted by Assistant Controllers and appropriate ECC support staff to carry out plotting, communications, radio operation and security liaison as necessary (see Figure 3).

2.9.2 Access Control Point (ACP)

For any event which creates an uncontrolled hazardous area, an entry and egress point will be established to command and control activities safely in the area. The control point will be located as appropriate for the event, taking into account the prevailing conditions. In its simplest form this may be a single barrier, e.g. in a road for minor fires.

However, for reactor plant based events an ACP will be established at a suitable pre-planned location to provide safe, controlled and rapid access to the affected area. The initial location of the ACP will depend upon the location of the event and the prevailing environmental conditions. Should the need arise an alternative ACP would be available at *{Insert Location}*.

All access to the affected area will be made through an ACP. Exceptionally other routes may be used but only with the agreement of the Access Controller.

The ACP is equipped with means of communicating directly with Emergency Teams, the M/CCR and the ECC.

There is adequate space, equipment and facilities for the contamination, radiation dose and breathing apparatus control necessary for the safe and effective dispatch and reception of emergency teams, including Emergency Services, and for the initial treatment of casualties. A Medical Decontamination Facility is available should the need arise. The facility will be manned by a designated first-aider.

2.9.3 Main/Central Control Room (M/CCR)

Within the station M/CCR there are dedicated facilities to enable the initial management of the site, command of the response organisation and interface with external support during an emergency. Once the duty Emergency Controller takes responsibility these facilities will be used to manage and co-ordinate the ongoing activities in the damaged area and to make the plant safe. The facilities include: maps, station procedures, drawings, communications equipment, tenability monitoring equipment, wind speed and direction indicators, plotting equipment, log sheets and general stationery. The initial location will normally be the M/CCR. Should the need arise, an Emergency/Alternative Indication Centre for the reactors would be available at *{Insert Location}*.

2.9.4 Security Control Facilities

Within the site there are dedicated facilities to enable the site to be secured, muster to be initiated and to manage access and egress from the site including by the Emergency Services during an emergency. The facilities include: maps, emergency procedures, communications equipment and tenability monitoring equipment.

The Main Gatehouse will normally be used for managing site access. Should the need arise an alternative location is available at *{Insert Location}*.

There is also a dedicated Site Security Control Room (SSCR) which is equipped with site surveillance and communications equipment. It will initiate lockdown and control immediate CNC and security staff activity. Should the need arise this functionality is also available at *{Insert Location}*.

2.9.5 Shift Minimum Emergency Role Staffing

A record of the current shift staffing is available from the [site specific e.g. CCR] indicating cover for emergency roles which will meet or exceed the minimum manning as detailed below.

Location	Post	Generic	[Station]
CCR	SM	1	1
	MCRS	1	1
	Desk	2	2
	Total	4	4
ACP	Controller	1	1
	Asst	1	1
	BAECO	1	1
	First Aid	1	1
	Total	4	4
IRT	Total	12	<SITE SPECIFIC>
Security*	ESSCo	1	1
	Roll Call	1	1
	Total	2	2
TOTAL		22	

(NOTE- DELETE GENERIC NUMBERS AND LEAVE ONLY SITE NUMBERS)

* these roles are covered by security in support of the emergency response, the minimum staffing for security is determine by ONR (CNS) requirement

2.10 Emergency Staff

2.10.1 All Personnel

The actions to be taken by station personnel are similar for either a Site Incident or an Off Site Nuclear Emergency.

Mustering procedures will be implemented upon sounding the alarm. Once mustered, Emergency Teams will promptly report to the appropriate location to initiate response duties unless already engaged in action to mitigate the event. Visitors and contractors will be advised of their muster arrangements on arrival at the site.

All personnel will be alerted and informed of what specific immediate actions to take in accordance with the detailed arrangements contained in the Emergency Handbook. Staff

responsible for plant operation will take steps to safeguard the plant and to minimise the effects of the accident. Further instructions will be issued to staff not having specific emergency duties.

The Emergency Handbook provides detailed instructions of what to do in a lockdown situation.

All personnel undertaking emergency scheme roles are Suitably Qualified and Experienced (SQEP) to undertake these duties.

2.10.2 Emergency Controller

- a) Certain senior members of the station staff are authorised in writing, in accordance with approved arrangements, to act as Emergency Controller. The current list of those authorised to be Emergency Controllers is posted on Site Licence Noticeboards. In the event of a Site Incident or an Off Site Nuclear Emergency the duty Emergency Controller will take control of the emergency organisation. There is a standby rota to ensure that an Emergency Controller is always available.
- b) The Emergency Controller is in overall command of the site, the emergency organisation at the time and has responsibility for the co-ordination of the safety and security of personnel on site, the operation and protection of the plant, authorising dose control limits as specified in the Emergency Handbook, the notifications external to the site to initiate company support and the Off Site Emergency Plan, the provision of information to any adjacent nuclear site and the initial provision of advice for the protection of the public. The Emergency Controller and supporting staff will be based in the ECC.
- c) It is probable that the first indication that an event at the station has either occurred or is imminent will be received by the Shift Manager. The duty Emergency Controller will be notified immediately.
- d) Should emergency actions be initiated by the Shift Manager, they will continue to perform the duties of the Emergency Controller until relieved by a member of staff authorised to undertake the duty of Emergency Controller.

2.10.3 Emergency Health Physicist

The Emergency Health Physicist will advise the Emergency Controller on all the radiological aspects of the emergency and direct the on site and initial off site health physics activities from the ECC.

There is a standby rota to ensure that an Emergency Health Physicist is always available.

2.10.4 Emergency Reactor Physicist {for SZB replace with Emergency Nuclear Engineer}

The Emergency Reactor Physicist will advise the Emergency Controller on reactor safety and any necessary emergency reactor operation.

There is a standby rota to ensure that an Emergency Reactor Physicist is always available.

2.10.5 Emergency Welfare and Administration Officer

The Emergency Welfare and Administration Officer will advise the Emergency Controller on all ECC administrative matters, the welfare of personnel on site and status of responding emergency staff. The Emergency Welfare and Administration Officer will be responsible for directing the muster and resources for the emergency organisation

There is a standby rota to ensure that an Emergency Welfare and Administration Officer is always available.

2.10.6 Shift Manager

The Shift Manager will perform the duties of Emergency Controller until relieved. Thereafter the Shift Manager will be responsible to the Emergency Controller for carrying out any remedial actions on the site necessary to protect personnel and to render the plant safe. The Shift Manager will be responsible for the safe reception and deployment on site of external Emergency Services.

2.10.7 Access Controller

The Access Controller will set up and direct operations at the ACP and will control the movement of all personnel through the ACP. The Access Controller will be responsible for the deployment and safety of teams at the ACP, for all those in the affected area, and for the provision of stores, communications and logistical support. After the initial assessment has been made, the Access Controller will co-ordinate and instruct teams on the remedial actions necessary in the affected area and, as necessary, will manage dose control within the limits authorised within the Emergency Handbook. The Access Controller will be in direct communication with the Shift Manager to take direction, advice and information into account. The Access Controller will keep the Shift Manager informed of the situation in the affected area.

2.10.8 Emergency Site Security Coordinator (ESSCo)

Emergency Site Security Coordinator (ESSCo) will direct incoming Emergency Services via a safe route to the appropriate location and ensure they are suitably briefed (through supervision of Security Guards), maintain the security functions for the site, including accounting for personnel on site and advising the Emergency Controller on any specific actions required relating to site security.

2.11 Site Emergency Response Capability

2.11.1 Intervention

There are a minimum number of personnel with emergency duties who immediately assemble on the declaration of a Site Incident or an Off Site Nuclear Emergency. Responsibility for their direction will rest with the Shift Manager.

An adequate number of trained intervention personnel will be available on the site or on standby at all times to perform concurrently the tasks below:-

a) Access Control to Damage Area.

The ACP will be under the supervision of the Assistant Access Controller who (under the direction of the Access Controller), will be responsible for the provision of breathing

apparatus, decontamination and radiation dose control. When available, additional staff will be deployed as necessary at the ACP for the effective support of teams in the affected area.

b) Incident Response

An incident response team will be formed from staff trained and competent to carry out in an emergency, as required, an initial assessment of the Damage Area together with radiation, CO₂ and temperature measurements, rescue of missing persons, fire-fighting, first aid, emergency plant operations and damage control.

c) Site Security Guards

Site Security guards will control site access and egress and undertake the site security duties and muster activities required.

2.11.2 Emergency Response Team {Alternative text used for SZB – Damage Repair Team and ACP Support}}

Non-shift staff will be available to form an emergency response team. This resource will be available on standby or by call in arrangements to provide support to the shift teams and specialist advice. Key objectives are:-

- a) To engineer permanent damage repairs under the direction of the emergency response team's leader.
- b) To carry out site surveys, if required, under the direction of the Emergency Health Physicist.
- c) To support staff at the ACP such as organising resources and returning teams.
- d) To support IRT in emergency tasks such as rescue of missing people and emergency first aid.

2.11.3 On Site Survey

{For AGR Stations} On site hazards will be monitored to protect site personnel. Depending on the nature of the incident, the primary hazards might be from CO₂, radiation, contamination or toxic release. Information from the fence monitoring and CO₂ systems will be used to provide advice on protection of site personnel.

On site hazards will be monitored to protect site personnel. The emergency response team will provide staff to survey levels of radiation, airborne radioactivity, CO₂ and signs of damage to buildings and plant as required. An appropriate vehicle is available and will report results to the Emergency Health Physicist. Deployment will be at the discretion of the Emergency Health Physicist.

{Alternative text for Sizewell B} On site hazards will be monitored to protect site personnel. The primary hazards will be radiation, fire or chemical release. Information from the Perimeter Fence Monitoring System and installed plant monitoring systems will be used to provide advice on protection of site personnel.

The ACP will provide staff to survey levels of radiation, airborne activity and signs of damage to buildings as required.

2.12 Off Site Survey and Countermeasures

2.12.1 Off Site Survey

On declaration of a Site Incident or Off Site Nuclear Emergency the off site survey vehicles will be deployed immediately without any consideration of need. If following deployment the off site survey vehicles are not required consideration for stand-down of the off site survey vehicles will be made by the Emergency Controller. Having contacted the CCR or ECC, the teams will proceed initially to pre-determined sampling points where they will take air samples and radiation dose rate measurements. The results of these measurements will be promptly transmitted to site and the CESC as appropriate.

As a matter of urgency air samples will undergo assessment by gamma spectrometry as directed by the Emergency Health Physicist. The results will be communicated to the ECC or CESC to enable an assessment of any release and to recommend any necessary actions to protect and reassure the public.

When the CESC has been declared operational the responsibility for directing the off site survey may be transferred to the CESC Health Physicist.

2.12.2 Assessment and Countermeasures

a) Predetermined Countermeasure Advice

An agreement has been established with the *{Insert Name of Local Health Authority or Director of Public Health as appropriate}* authorising the Emergency Controller to advise the public and personnel on site when appropriate to take stable iodine tablets. This will enable the countermeasures of sheltering and taking of stable iodine tablets to be urgently introduced on the declaration of an Off Site Nuclear Emergency throughout the DEPZ *{or for stations with re-determined REPPiR Emergency Offsite Planning Areas insert Z km Urgent Countermeasures Area}* based on the principle for the precautionary use of countermeasures to protect the public. It should be recognised that the predetermined countermeasure area may not be the same as the REPPiR Emergency Offsite Planning Area.

b) Hazard Assessment

The initial assessment of the severity of the potential hazard to the public will be made on the total Beta/Gamma activity of special air samples counted by vehicle-borne equipment. If off site measurements indicate a total Beta/Gamma airborne activity of 10^5Bq/m^3 or greater, then, in the absence of gamma spectrometry information i.e. off site survey results, it will be assumed a person exposed to this concentration over a period of 6 hours would receive a committed dose to the thyroid of 300mSv (the PHE-CRCE lower Emergency Reference Level (ERL) for evacuation). Evacuation would, in the absence of any other countermeasures being introduced, be justified. Exposure time to receive this dose will increase or decrease in proportion to the concentration of airborne radioactivity.

Total Alpha activity will be measured on all the samples used for Gamma Spectrometry. If an alpha air activity greater than 30Bq/m^3 above natural background is measured then evacuation (possibly excluding the issue of stable iodine tablets) will be initiated.

c) Countermeasure Advice

The Emergency Controller on being advised of a total Beta/Gamma airborne activity, either from gamma spectrometry or the off site survey results, that exceeds the action levels stated above will, irrespective of any countermeasures previously implemented, advise the Police of the need to implement countermeasures for all persons exposed in the affected areas. This is unless the release has, or will imminently cease, or the isotopic composition indicates that the dose averted by the actions will not approach the lower ERL for the justification of the relevant countermeasure.

d) Modification of Countermeasure Advice

High resolution gamma spectrometry measurements of off site air samples will allow a determination of the isotopic composition of the release to be made. This information will allow a realistic assessment of potential radiation dose to be made thus allowing any earlier advice formulated without information on isotopic composition to be confirmed or revised.

2.12.3 Ground Deposition

Measurements of deposited radioactivity will be made as appropriate to assess radiation exposure and any requirement for protective actions.

If circumstances prevail that dose rate measured would cause an exposure to a member of the public exceeding the lower ERLs in 6 hours, consideration would be given to advising the implementing of suitable countermeasures to restrict access or evacuate.

2.12.4 Emergency Plume Gamma Monitoring System/ Site Boundary Monitoring System

Gamma radiation monitors are installed at intervals around the perimeter of the site to provide a time-related profile of any airborne radioactivity released from the site. Continuous readings of gamma dose rate are logged and are available in the ECC and CCR.

The system will also provide real time indication of increasing or decreasing trends in the airborne release.

2.13 Emergency Equipment

Supplies of additional emergency equipment are available in special stores located at appropriate locations to enable the implementation of this Plan in response to an external natural hazard, such as flooding, seismic events or other extreme weather events. This includes both equipment stored on site and away from the site, which can be deployed to support the restoration of critical safety functions in an emergency.

Equipment includes supplies of breathing apparatus, protective clothing, communications and radiation monitoring equipment as well as deployable equipment such as mobile water pumps, electricity generators, damage repair tools, specialist equipment including reverse osmosis, pond coolers and telecommunications systems along with other support equipment e.g. lighting towers.

Equipment assigned to support this Plan is monitored and maintained in accordance with written schedules. This equipment will be available continuously.

2.14 Personal Dose Assessment

Facilities are available for urgent dose assessment of the external radiation received by persons during an emergency using approved dosimeters. An Approved Dosimetry Service would carry out internal dose assessment and record keeping. Following assessment medical surveillance will be established for individuals as appropriate.

2.15 Communications

The site is served by a number of communication systems including internal and public telephone networks. The ECC has a direct phone to the CCR. A public address and staff paging system covers all areas of the site.

A radio communication system covering the surrounding area is used for co-ordination of the off site survey and can be operated from the ECC and the CESC. Portable two-way radios are available for on site communications.

The Civil Nuclear Constabulary (CNC) has communications and radio equipment to support their operations on the site. Their equipment is compatible with that of 'blue light' responders.

2.16 Warning Notices

Warning Notices are posted in all permanent site buildings giving brief and concise instructions to occupants in the case of an accident.

The notices include:

- a) Notification to the CCR of an event.
- b) The Site Alarm signals.
- c) General actions to be taken before leaving working positions.
- d) Locations of Muster Points and instructions for the Muster.
- e) Emergency actions for contractors and other visitors to the site.
- f) What to do in the event of a site lockdown order.

2.17 Training

All personnel with emergency duties receive specific training. Details of this training are contained in the Company's Generic Emergency Scheme Training (GEST) documentation e.g. Role Training Guides, Mentor Guides, and Lesson Plans. All members of the emergency scheme are suitably qualified and experienced to perform their assigned role in an emergency.

All staff, contractors and visitors receive induction training to enable correct actions to be followed in an emergency.

2.18 Emergency Exercises

Regular emergency exercises are carried out as part of the emergency training for all personnel, involving participation by duty emergency role holders. Certain exercises are demonstrated formally to ONR and external organisations are encouraged to participate in emergency exercise.

2.19 Strategic Co-ordination Centre (SCC)

Associated with the site is a SCC located at *{Site Specific}*. The prime function of the SCC is to decide on the actions to be taken off site to protect the public, to ensure that those actions are implemented effectively and to ensure that authoritative information and advice on these issues is passed to the public. The operational status and functions of the SCC are co-ordinated by the Police “Gold” Commander/Strategic Co-ordinator who is responsible for the executive management of the off site aspects of the incident.

The SCC initially receives expert advice on countermeasures from the Emergency Controller. When operational, the CESC will supply expert advice on countermeasures to the SCC. The Company Technical Advisor uses this expert advice to provide authoritative advice to the SCC Strategic Co-ordinator until relieved by the STAC Chair.

There is a MBC associated with the SCC to pass authoritative information and advice to the public via the media. The MBC is run by the Police.

2.20 Central Emergency Support Centre (CESC)

The CESC at Barnwood will be set up for a Site Incident or an Off Site Nuclear Emergency.

The CESC will include the following key roles available on a 24hr standby to enable the CESC to become operational within an hour:-

- CESC Controller
- CESC Controller's Secretary
- CESC Health Physicist
- CESC Technical Support Team Leader
- Plant Status and Liaison Officer
- CESC Security Liaison Officer
- Off Site Survey Radio Operator
- Communications Coordinator
- CESC Welfare and Support Officer

For a protracted event these roles will be supported by assistants and specialists available on standby within a similar timescale. For a protracted event resource may be called upon to support from other sites as appropriate.

The CESC is under the overall direction of the CESC Controller, who is responsible for ensuring that the CESC operates in such a way as to fulfil its functions of serving and supporting the affected SCC and on site response.

The prime function of the CESC is to acquire and assess all necessary technical data that has a bearing upon the radiological hazard to the public and to pass clear advice based upon that technical assessment to the SCC in such a form that those at the SCC can make informed and timely decisions on the need to take action to protect the public. This function is primarily discharged by the Radiological Assessment Team.

The CESC also provides a technical support service to the affected station and acts as the focal point for routing advice and material assistance to the affected station. The Technical Support Team primarily discharges this function.

The CESC also provides authoritative advice on any security aspects of an event and the strategies needed to maintain security to the affected site and the rest of the company. It will coordinate company and external resources to provide the required advice or assistance. The CESC will also brief the Executive Team and liaise with relevant external organisations.

The CESC will also take responsibility for the onward transmission of monitoring results and the outcome of radiological assessments to external agencies such as the Food Standards Agency and to the SCC as well as supplying information to the company's Chief Officers. This function is primarily discharged by the Information Support Team using EDF Energy NG's Incident Information Management System.

2.21 Support from the Adjacent Non-EDF Energy NG Station

{Dungeness, Hinkley Point, Hunterston Only}

The adjacent station, which is not owned by EDF Energy NG, provides the following services* to *{Insert Station Name}* on the basis of a contract entered into by EDF Energy NG and adjacent nuclear operator which contains the detailed specification and reference criteria for the services.

{Sizewell Only} - The following services will be available to both Sizewell A and Sizewell B. The station providing these services is outlined in the A and B Station Emergency Handbooks (this will change over time as the A station continues decommissioning activities).

- a) Off Site Survey
- b) On Site Survey
- c) Emergency Plume Gamma Monitoring System
- d) Meteorological Equipment
- e) ECC
- f) Alternative ECC
- g) Alternative ACP
- h) Security Roll Call Arrangements
- i) Off Site Radio System
- j) District Survey
- k) Maypack Gamma Spectrometry
- l) Helicopter Landing Site
- m) Provision of stable iodine tablet supplies to External Agencies
- n) SCC and CESC– Off Site Nuclear Emergency facilities

{ Amend list as necessary}*

2.22 Support Between Adjacent EDF Energy NG / EDF Energy Nuclear New Build Stations

{Heysham Only}

The adjacent station provides the following services on the basis of agreement between the two stations and as defined and detailed in the relevant Emergency Handbooks:-

SITE INCIDENT / OFF SITE NUCLEAR EMERGENCY DECLARED BY	SUPPORT SERVICES PROVIDED BY ADJACENT STATION	
	HEYSHAM 1	HEYSHAM 2
Heysham 1		On Site Survey Alternative ECC Security Response

SITE INCIDENT / OFF SITE NUCLEAR EMERGENCY DECLARED BY	SUPPORT SERVICES PROVIDED BY ADJACENT STATION	
	HEYSHAM 1	HEYSHAM 2
Heysham 2	Off Site Survey Alternative ECC District Survey	

{Hinkley Point only}

The adjacent station provides the following services on the basis of agreement between the two stations and as defined and detailed in the relevant Emergency Handbooks:-

SITE INCIDENT / OFF SITE NUCLEAR EMERGENCY DECLARED BY	SUPPORT SERVICES PROVIDED BY ADJACENT STATION	
	HINKLEY POINT B	HINKLEY POINT C
Hinkley Point B	{To be populated and updated as changes arise}	{To be populated and updated as changes arise}
Hinkley Point C	{To be populated and updated as changes arise}	{To be populated and updated as changes arise}

2.23 Support Between EDF Energy NG Power Stations

Shift Managers on duty at other Stations will be called upon to assist in an emergency. They will automatically provide additional off site survey teams, Health Physics personnel, and equipment in accordance with the predetermined response or as requested by the CESC/SCC.

It is recognised that the provision of such assistance will temporarily reduce the unaffected stations' normal level of emergency scheme staffing and equipment. This will be coordinated and managed by the CESC.

Providing support for other sites will not compromise a sites capability to respond to an incident on its own site. Appropriate actions will also be undertaken to minimise the

likelihood of an event taking place on the unaffected site(s), as far as reasonably practicable.

2.24 Support to the Adjacent Non-EDF Energy NG Station

{Dungeness, Hinkley Point, Hunterston Only}

The following services* are provided to *{Insert Adjacent Station Name}*, which is not owned by EDF Energy NG, on the basis of a contract entered into by EDF Energy NG and adjacent nuclear operator which contains the detailed specification and reference criteria for the services.

- a) Off Site Survey
- b) On Site Survey
- c) Emergency Plume Gamma Monitoring System
- d) Meteorological Equipment
- e) ECC
- f) Alternative ECC
- g) Alternative ACP
- h) Security guarding services (DNB only) scheduled to cease Q2 2016
- i) Security Roll Call Arrangements
- j) Off Site Radio System
- k) District Survey
- l) Maypack Gamma Spectrometry
- m) Helicopter Landing Site
- n) Provision of stable iodine Tablet supplies to External Agencies
- o) SCC and CESC - Off Site Nuclear Emergency facilities

{ Delete from list as necessary}*

2.25 Multiple Stations Declaration

Arrangements are in place to manage the circumstances where more than one station is required to declare a Site Incident or Off Site Nuclear Emergency at the same time. These

are described in the Emergency Handbook and CESC handbook. Sufficient supplies of equipment are available at various off site storage depots to support an incident at more than one location.

3 COLLABORATION WITH EXTERNAL ORGANISATIONS

3.1 Planning Phase

EDF Energy NG collaborates with the external organisations locally through the EPCC and nationally through a Business, Energy & Industrial Strategy (BEIS) led forum to ensure that local and national Off Site Emergency arrangements are co-ordinated with the *{Name of Station}* Emergency Plan. The EPCC is formally consulted on plan changes.

3.2 Emergency Phase

During an Off Site Nuclear Emergency the Police, Local Authorities and other organisations may need to take actions to protect the public, as in the case of many other kinds of civil emergencies. These actions form part of the overall response plan however EDF Energy NG is not responsible for their implementation. Each organisation has its own Emergency Plan based on statutory duties and specialism which, together with the EDF Energy NG Plan, comprise the emergency arrangements to protect the public from any harm which might be caused by a nuclear accident. The plans are flexible and can be extended in scope because they are integrated into the plans for dealing with other kinds of major accidents or disasters, such as extensive flooding or a toxic chemical release.

For a Site Incident, Emergency Services will be informed or called to site as appropriate in support of the site emergency response.

Details of the role, actions and responsibilities of the external organisations are contained in the Off Site Plan *{TITLE}* prepared by the *{Name of Authority}*.

4 DEFINITIONS

ACP	Access Control Point
BAECO	Breathing Apparatus Entry Control Officer
BCD	Burst Can Detection
BEIS	Department for Business, Energy and Industrial Strategy
CCR / MCR	Central/Main Control Room
CCRS / MCRS	Central/Main Control Room Supervisor
CESC	Central Emergency Support Centre
CNC	Civil Nuclear Constabulary
DEPZ	Detailed Emergency Planning Zone
E/AIC	Emergency/Alternative Indication Centre
ECC	Emergency Control Centre
EDF Energy NG	EDF Energy Nuclear Generation Ltd
EPCC	Emergency Planning Consultative Committee
EPGMS / SBMS	Emergency Plume Gamma Monitoring System / Site Boundary Monitoring System
ERL	Emergency Reference Level
ESSCo	Emergency Site Security Coordinator
FIM	Force Incident Manager
GEST	Generic Emergency Scheme Training
HSE	Health and Safety Executive
HSWA	Health and Safety at Work Act
IRT	Incident Response Team
MBC	Media Briefing Centre
NISR	Nuclear Industries Security Regulations
NSSP	Nuclear Site Security Plan
ONR	Office for Nuclear Regulation
ONR (CNS)	Office for Nuclear Regulation (Civil Nuclear Security)
PAS	Public Address System
PHE-CRCE	Public Health England Centre for Radiation, Chemicals and Environmental Hazards
Radiation Emergency	When used in context of REPPiR definition: Any event (other than a pre-existing situation) which is likely to result in any member of the public being exposed to ionising radiation arising from that event in excess of any of the doses set out in Schedule 1 of REPPiR and for this purpose any health protection measure to be taken during the 24 hours immediately following the event shall be disregarded
RCA	Radiological Controlled Area
REPPiR	Radiation Emergency Preparedness and Public Information Regulations
ROEPA	REPPiR Offsite Emergency Planning Area

SEPA	Scottish Environment Protection Agency
SERT	Standby Emergency Response Team
SCC	Strategic Co-ordination Centre
SSCR	Site Security Control Room
SOI/M	Station Operating Instruction / Manual
SQEP	Suitably Qualified and Experienced Personnel
STAC	Science and Technical Advice Cell
SyAPs	Security Assessment Principles

5 REFERENCES

1	{Add Reference}	{Station Name} Emergency Handbook
2	ISBN: 071760828X	Arrangements for Responding to Nuclear Emergencies, Health and Safety Executive, 1994
3	https://www.gov.uk/government/publications/emergency-preparedness	Emergency Preparedness, Cabinet Office, 2012
4	https://www.gov.uk/government/publications/emergency-response-and-recovery	Emergency Response and Recovery, Cabinet Office, 2013
5	ISBN: 9781780454818	Preparing Scotland: Scottish Guidance on Resilience
6	BEG/ICP/DM/006	Records Management

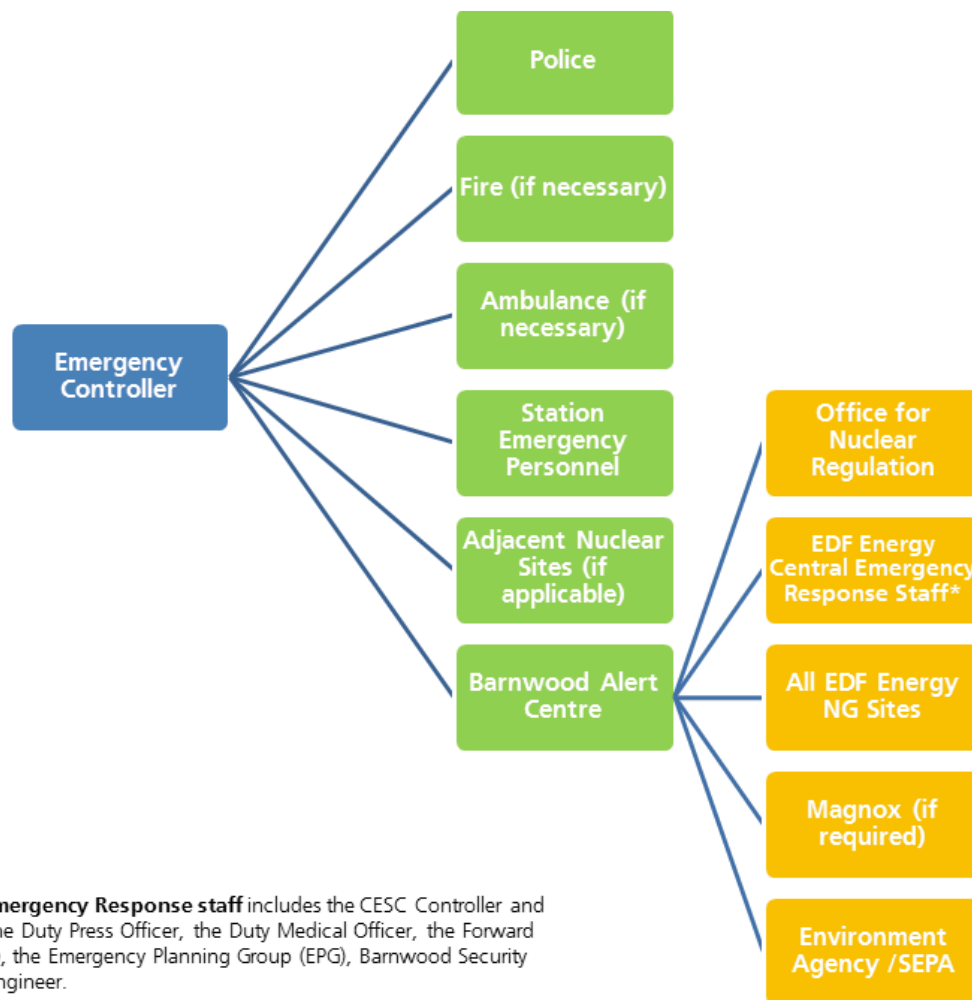
6 RECORDS

No.	Record Title	Template No./ Identifier	Record No./ Identifier or Link to Record	Requirement for Record	Record Originator	Record Owner	Retention Period	Storage Location	Security Classification
01	Full report of the consequences of the event and the effectiveness of the emergency response	N/A	N/A	This document	EDF Energy NG	EDF Energy NG	50 years	EDF Energy NG	Not Protectively Marked

Records associated with this SPEC shall be controlled, stored and archived in accordance with the requirements of BEG/ICP/DM/006 [6].

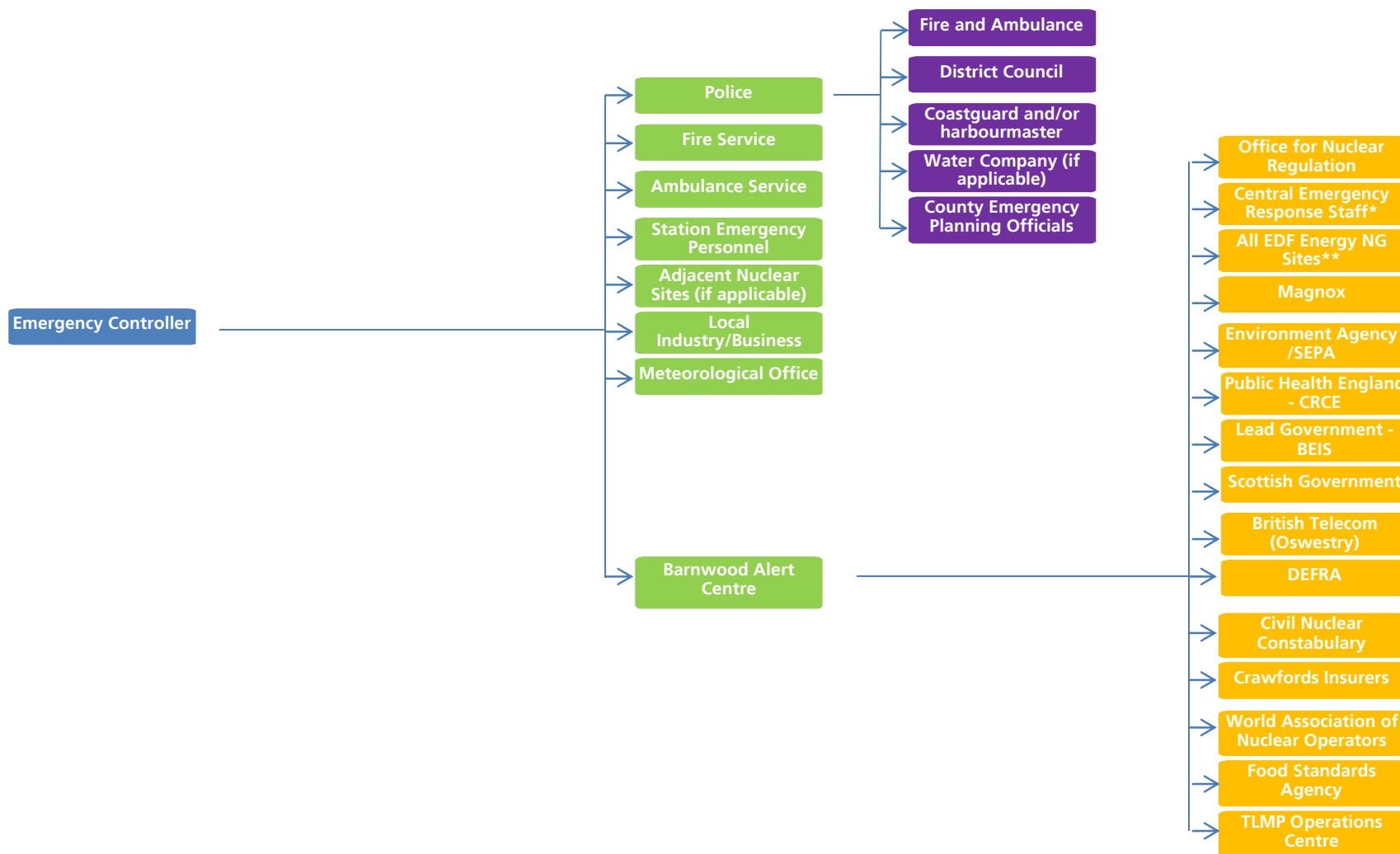
FIGURE 1 NOTIFICATION CHAIN FOR A SITE INCIDENT

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*EDF Energy Central Emergency Response staff includes the CESC Controller and team, Nuclear Security, the Duty Press Officer, the Duty Medical Officer, the Forward Deployment Service (FDS), the Emergency Planning Group (EPG), Barnwood Security and the Duty Telecoms Engineer.

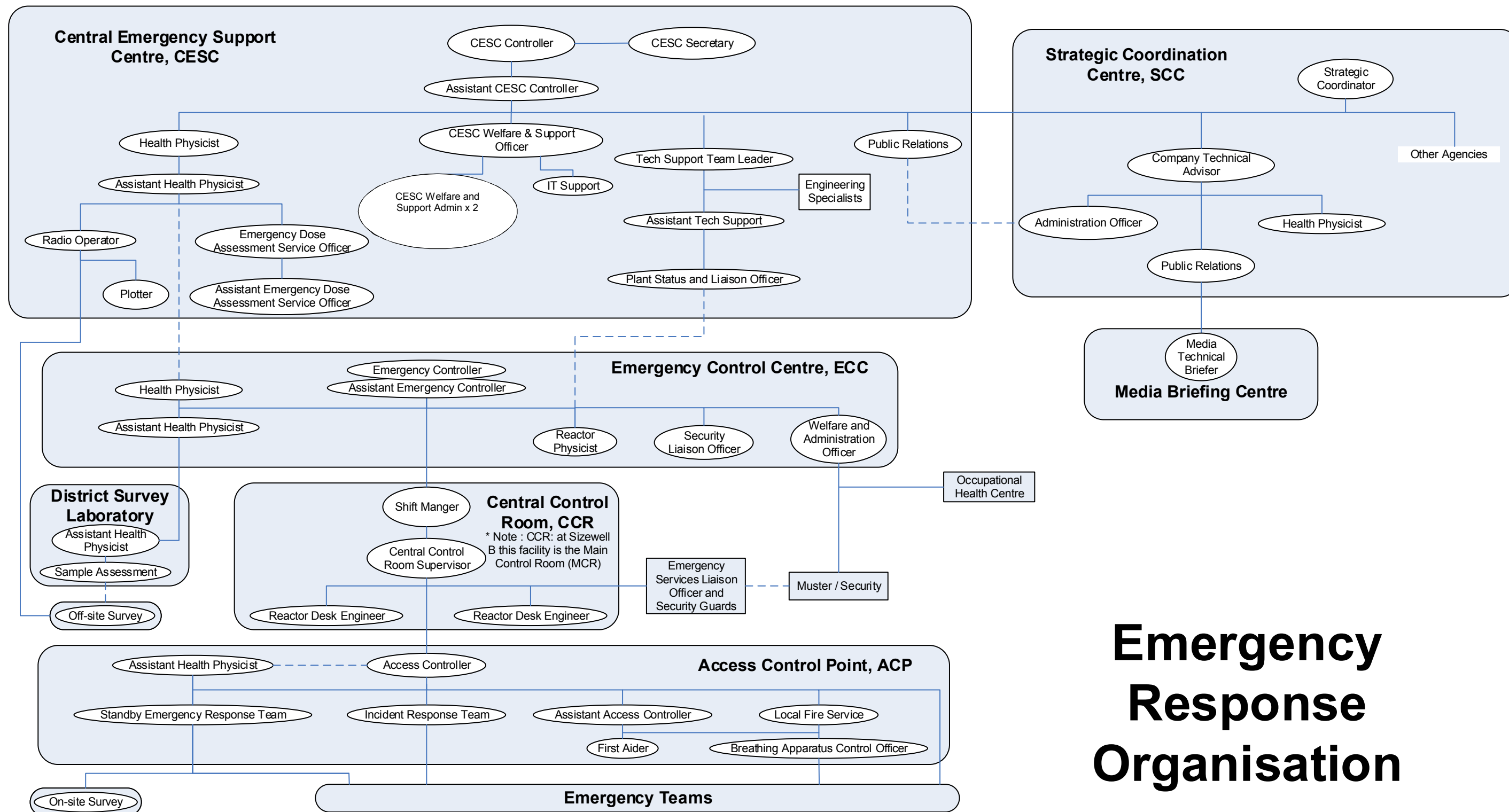
FIGURE 2 NOTIFICATION CHAIN FOR AN OFF SITE NUCLEAR EMERGENCY



There is no requirement to insert the DEPZ map, where sites have redetermined the off-site planning this will be referenced in appropriate EDF Energy documentation.

FIGURE 3 EMERGENCY RESPONSE ORGANISATION

{For Stations with REPIR Emergency Planning Area Plan, this becomes Figure 4}



Emergency Response Organisation