



Office for
Nuclear Regulation

**Determination of the Off-Site Emergency Planning and Prior
Information Areas for the Dungeness A Nuclear Licensed Site**

**Radiation (Emergency Preparedness and Public Information)
Regulations 2001**

Project Assessment Report ONR-DFW-PAR-15-024

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EXECUTIVE SUMMARY

Determination of the Off-site Emergency Planning and Prior Information Areas for the Dungeness A Nuclear Licensed Site: Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) 2001

The Office for Nuclear Regulation (ONR) is responsible for regulating Great Britain's (GB) nuclear industry in order to protect the health and safety of employees and the public against risks of harm arising from work with ionising radiations.

ONR's regulatory responsibilities also include a legal duty under REPPiR. Where, based on the operator's assessment, ONR concludes that there is a potential for reasonably foreseeable radiation emergencies, as defined in the regulations then ONR determines an off-site emergency planning area (i.e. the area within which, in ONR's opinion, any member of the public is likely to be affected by any such radiation emergencies). In these cases, ONR also has a legal duty to determine an area within which prior information is to be distributed to the public. A radiation emergency is defined in REPPiR as an event where a person off-site is likely to receive a radiation dose in excess of the thresholds in REPPiR (typically an effective dose in excess of 5 mSv) in the 12 months following the radiation emergency. It therefore constitutes an important component of the UK's overall emergency response framework.

REPPiR requires operators, in this case Magnox Limited (Ltd), who carry out work involving threshold quantities of radioactive materials, to undertake a Hazard Identification and Risk Evaluation (HIRE) in relation to their work with ionising radiations. The HIRE 'process' must a) identify all hazards with the potential to cause a radiation accident, and evaluate the nature and magnitude of the risks to employees and other persons (e.g. those who live or work nearby) and b) where radiation risks to the above persons exist from an identifiable radiation accident, shall then take all reasonably practicable steps to prevent any such accident and limit the consequences of any which does occur. A report of this assessment known as a Report of Assessment (RoA) must be sent to ONR either prior to commencement of the work with ionising radiation, following any relevant material change in this work, or within three years of the last assessment, whichever is the shorter.

On 24 October 2013, following ONR's assessment of the 2012 Magnox Ltd's RoA submission, ONR concluded that a radiation emergency was not reasonably foreseeable and that, consequently, there was no basis for ONR to determine the REPPiR off-site emergency planning and prior information areas around the Dungeness A nuclear licensed site. In 2015, Magnox Ltd. submitted a declaration of no change in circumstances of its previous assessment, together with supporting technical information to fulfil the requirements of REPPiR regulation 5(2).

This ONR Project Assessment Report (PAR) describes and explains the basis for ONR's re-determination, in accordance with REPPiR, of the requirement for both an off-site emergency planning area and the area within which prior information is to be distributed around the nuclear licensed site of Dungeness A. ONR has made an assessment of the Magnox Ltd. declaration of no change and supporting technical submissions in accordance with its regulatory processes, guidance associated with REPPiR and relevant ONR technical assessment guides. ONR's assessment of Magnox Ltd.'s technical submission supports the regulatory decision that a radiation emergency from the Dungeness A nuclear licensed site is not reasonably foreseeable. Consequently, regulations 7(1), 9(1) and 16(1) of REPPiR, which relate to operator emergency plans, off-site emergency plans and the consequent need for ONR to specify planning and prior information areas, do not apply.

Accordingly, ONR will notify both Kent County Council and Magnox Ltd. of its decision that there continues to be no requirement under REPPiR for off-site emergency planning or prior information areas for the Dungeness A nuclear licensed site.

The recommendations of this report are that ONR:

- Write to Kent County Council to notify them that there continues to be no requirement for a REPPIR off-site emergency planning area for the Dungeness A nuclear licensed site. This should be copied to Magnox Ltd.
- Write to Kent County Council to notify them that there remains no requirement under REPPIR for the local authority to prepare an off-site emergency plan in respect of the Dungeness A nuclear licensed site, although the requirement remains in respect of the Dungeness B nuclear licensed site.
- Inform Magnox Ltd. that there continues to be no requirement to ensure the appropriate provision of prior information to the public in relation to the Dungeness A site.
- Inform Magnox Ltd. that there continues to be no requirement under REPPIR regulation 7 for an operator's emergency plan.
- Inform EDF Energy, who operates Dungeness B, that there continues to be no requirement under REPPIR for the local authority to prepare an off-site emergency plan in respect of the Dungeness A nuclear licensed site, although the requirement remains for the Dungeness B nuclear licensed site.
- Inform, by copy of its letter to Kent County Council, the Food Standards Agency, the Maritime and Coastguard Agency, Environment Agency and the Department for Business, Energy & Industrial Strategy, of ONR's decision.

Whilst there remains no requirement for detailed emergency planning under REPPIR in relation to the Dungeness A nuclear licensed site, proportionate emergency arrangements for the protection of the public remain in the form of;

- operators have general duties Under the Health and Safety at Work Act 1974 to ensure, so far as is reasonably practicable, the safety and welfare of employees and other persons;
- under the provisions of REPPIR, regulation 4(2), operators have a general duty to take all reasonably practicable steps to prevent an identifiable radiation accident and to limit the consequences of any such accident that does occur; and
- operators who hold a nuclear site licence are required, without prejudice to other licence conditions, under LC 11 (emergency arrangements) to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects; and
- to prepare necessary contingency plans as required by regulation 12 of the Ionising Radiations Regulations 1999.

These other duties are not directly affected by ONR's determination, and, where ONR is the enforcing authority, ONR will continue to seek assurance that Magnox Ltd. remains compliant with these legal obligations, including any such provision and co-ordination of adequate off site emergency arrangements as these other duties may require.

LIST OF ABBREVIATIONS

DEPZ	Detailed Emergency Planning Zone (Ref: REPPIR regulation 9(1))
EURATOM	European Atomic Energy Community
FEPA	Food and Environment Protection Act 1985
FSA	Food Standards Agency
GB	Great Britain
HIRE	Hazard Identification and Risk Evaluation
IAEA	International Atomic Energy Agency
mSv	milliSievert
MAC	Miscellaneous Activated Components
NIA	Nuclear Installations Act 1965
ONR	Office for Nuclear Regulation
PAR	Project Assessment Report
RA	Reference Accident
REPPIR	Radiation (Emergency Preparedness and Public Information) Regulations 2001
RoA	Report of Assessment
RPV	Reactor Pressure Vessel
SAPs	(ONR) Safety Assessment Principles
TAG	(ONR) Technical Assessment Guide

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1 REGULATORY CONTEXT

The UK Energy Act (reference 1) requires the Office for Nuclear Regulation (ONR) to do whatever it considers appropriate for the purposes of protecting persons against risks of harm arising from ionising radiations from GB nuclear sites, including through:

- securing the health, safety and welfare of persons at work on GB nuclear sites; and
- protecting persons, other than persons at work on GB nuclear sites, against risks to health or safety arising out of or in connection with the activities of persons at work on GB nuclear sites.

ONR does this by providing efficient and effective regulation of the nuclear industry, holding it to account on behalf of the public, and, in particular, ensuring that appropriate arrangements are put in place to deal with a nuclear emergency.

ONR's responsibilities also include a legal duty, where it concludes that there is a potential for a reasonably foreseeable radiation emergency (as defined in REPPiR) (reference 2) to determine an off-site emergency planning area. This is the area within which, in ONR's opinion, any member of the public is likely to be affected by such an emergency¹. In these cases, there is also a legal duty under the same regulations, for ONR to determine an area within which prior information is to be distributed to the public². A radiation emergency is defined in REPPiR as an event where a person off-site is likely to receive a radiation dose in excess of the thresholds in REPPiR (typically an effective dose in excess of 5 milliSieverts (mSv)) in the 12 months following the radiation emergency. It therefore constitutes an important component of the UK's overall emergency response framework.

This report sets out ONR's assessment and regulatory decision for the continued basis that there is no requirement for off-site emergency planning and prior information areas for the Magnox Ltd. Dungeness A nuclear licensed site, in accordance with the requirements of REPPiR regulations 9(1) and 16(1) respectively (reference 2).

2 BACKGROUND

The UK nuclear regulatory system requires that every licensee (i.e. nuclear site license holder) demonstrate to the regulator that it fully understands the hazards and risks associated with its operations and controls them appropriately. The regulator (in this case ONR) assesses the safety and security of the design and operation of nuclear plant to ensure that licensees' provisions are robust, and that any risks are reduced so far as is reasonably practicable.

Magnox Ltd. is the company responsible for decommissioning of the Dungeness A site on behalf of the Nuclear Decommissioning Authority (NDA), a non-departmental public body in the UK which is responsible for managing the effective and efficient clean-up of the UK nuclear legacy.

In relation to emergency planning, REPPiR requires operators, in this case Magnox Ltd., to undertake a Hazard Identification and Risk Evaluation (HIRE) of all hazards arising from their work with the potential to cause a radiation accident on their site. These assessments shall be sufficient to demonstrate that all such hazards have been identified and the nature and magnitude of the radiation risks to employees and other persons arising from those

¹ ONR has historically used the term detailed emergency planning zone (DEPZ) to refer to the area it defined under REPPiR regulation 9 as requiring an off-site emergency plan. (The term is still used this way in some ONR guidance.) As the term is not used within REPPiR itself (although referred to in the related guidance), and to ensure legal clarity and avoid misunderstanding amongst stakeholders, this report refers to the 'REPPiR off-site emergency planning area' under regulation 9 rather than to 'detailed emergency planning zone' or 'DEPZ'.

² This is sometimes, and has historically been, referred to as the Public Information Zone (PIZ) under regulation 16, but for the same reason as given above is not used in this report. This report refers to the 'REPPiR prior information area'.

hazards have been evaluated. Where the assessment shows that a risk exists from an identifiable radiation accident, the operator shall take all reasonably practicable steps to prevent any such accident and limit the consequences of any such accident which does occur. REPPIR also requires that operators submit a Report of the Assessment (RoA) of their HIRE to ONR prior to commencement of the work, following any material change, and at least every three years, whichever is the shorter.

Where, based on the operator's technical assessments, ONR concludes that it is reasonably foreseeable that a radiation emergency (as defined in REPPIR) could arise, REPPIR requires ONR to determine areas within which, in its opinion, persons (including any member of the public) are likely to be affected by such emergencies. This then defines the area for which local authorities are required to prepare an adequate off-site emergency plan (regulation 9(1)) and for which operators are required to provide specified prior information (regulation 16(1)) to members of the public without them having to request it and also make that information publicly available.

ONR is of the opinion that the extent of areas for local authority 'detailed' off-site planning and for the provision of prior information by the operator to the public should usually be the same. This is a reflection of the fact that the factors considered by ONR, over and above the operator's technical assessment, for determination of these areas are the same. As a consequence, and for simplicity, where the term 'REPPIR off-site emergency planning area' is used in this report, it should be assumed to refer equally to the off-site emergency planning and prior information areas.

The off-site emergency plan, in cases where one is required, should include urgent countermeasures in order to reduce radiation doses to members of the public, such as sheltering, evacuation, administering stable iodine tablets (in the case of operating nuclear reactors), and other protection measures that are relevant, reasonably practicable, and proportionate to the radiological risk.

On 24 October 2013, following the ONR assessment of the 2012 Magnox Ltd. HIRE and RoA submission, (reference 3) ONR concluded that a radiation emergency was not reasonably foreseeable and that, consequently, there was no technical basis for ONR to determine the REPPIR off-site emergency planning and prior information areas around the Dungeness A nuclear licensed site (reference 4).

In February 2015, Magnox Ltd. submitted a declaration of no change of circumstances (reference 5) to fulfil the requirements of REPPIR regulation 5(2). Magnox Ltd. also undertook a full review of the reference safety case, including modifications that have been made since the previous assessment, and concluded that there were no additional faults that could give rise to a reasonably foreseeable radiation emergency. This review was recorded in the form of a Safety Case Management Report (reference 6) which was submitted with the declaration of no change.

3 SCOPE

The assessment described in this report sets out the basis for, and conclusions of, the re-determination of the REPPIR off-site emergency planning and prior information areas relating to the Dungeness A nuclear licensed site. This has been undertaken in accordance with the guidance on REPPIR (reference 7) and the relevant ONR supporting Technical Assessment Guide (TAG) (reference 8), which incorporates ONR's principles for determination of REPPIR areas, and related guidance, as revised in 2013.

ONR's principles recognise the learning that has emerged from global events such as occurred at Fukushima (reference 9), and the subsequent need to review the scope of off-site emergency planning. They also reflect ONR's commitment to maintaining high standards of nuclear safety by regulation at nuclear installations, and its continual efforts to

seek improvements to standards and to the consistency and transparency of its decision making.

Provisions for the implementation of food restrictions are not relevant to the process of determining the REPPIR off-site emergency planning area on the basis that they are provided separately (Food and Environment Protection Act 1985 (FEPA) (reference 10) and are under the legal jurisdiction of the Food Standards Agency (FSA). These provisions are therefore addressed by separate legislation other than REPPIR, may be exercised in a broader range of circumstances (i.e. not restricted to a radiological event), and are subject to existing planned implementation arrangements made by the FSA. They are therefore out with the scope of this report.

4 METHODOLOGY

4.1 ONR'S PROCESS FOR DETERMINING A REPPIR OFF-SITE EMERGENCY PLANNING AREA

This process requires that ONR:

- A. Conduct an independent technical assessment of the information provided by the licensee in their RoA seeking and using additional information as appropriate; and
- B. Where the potential for a REPPIR defined reasonably foreseeable radiation emergency exists, establish and consider any other relevant practical and strategic factors relating to the planning and practical implementation of measures to restrict public exposure so far as reasonably practicable (e.g. urgent countermeasures) for those persons who are likely to be affected by a radiation emergency.

Step A requires ONR to assess the operator's identification and characterisation of the likelihood, nature and magnitude of the radiation related risks that may result from a radiation accident. ONR also assess the operator's assessment of whether there is the potential for a radiation emergency to occur that is reasonably foreseeable. If this potential exists ONR will then consider the likely extent of any area within which the dose criteria contained within Schedule 1 of REPPIR may be met or exceeded. This indicates the minimum distance for further consideration in Step B, and is usually presented in the operator's HIRE reports as a circle with a specified radius centred at the source of the potential accident.

Step B applies additional pragmatic, population (including vulnerable groups), geographic and practical factors to the ONR determination and requires dialogue with the relevant local authority. The nature of these factors is set out in detail in the relevant ONR TAG (reference 8). Whilst the determined REPPIR off-site emergency planning area, as a result of considering these additional factors, need not be circular, it cannot be smaller than that arising from the technical assessment under Step A.

4.2 BASIS OF ASSESSMENT

The REPPIR off-site emergency planning area must, as a minimum, include all of the area around the site within which any person could receive an effective dose in excess of 5 mSv in the year following a radiation emergency that is reasonably foreseeable (or other dose criteria defined in REPPIR Schedule 1). When assessing the extent of exposure, REPPIR requires that operators, in this case Dungeness A, Magnox Ltd., assess the potential doses to members of the public from all exposure routes and, for this purpose, must disregard any health protection countermeasures that may be implemented by the local authority, emergency services or the exposed persons themselves, during the first 24 hours immediately following the event.

When work with ionising radiation continues in respect of a previously submitted RoA, Regulation 5(2) of REPIR requires that the licensee send to ONR a declaration that there is no change of circumstances that would affect the last report submitted. In February 2015 Magnox Ltd. submitted a declaration of no change (reference 5).

ONR undertook a review and assessment of the original Magnox Ltd. 2012 REPIR submission (reference 3) along with the subsequent declaration of no change submission (reference 5) to ensure that they are appropriate in response to REPIR requirements (reference 11). This forms the basis the 'Step A' (see section 4.1) assessment described in this report.

4.3 STANDARDS AND CRITERIA

4.3.1 ACTS, REGULATIONS AND GUIDANCE

The relevant standards and criteria considered within this assessment are those contained within REPIR (reference 2) and its associated guidance (reference 7). REPIR are regulations created under the Health and Safety at Work Act 1974 and implements the articles on intervention in cases of radiation emergencies contained in the European Council Directive 96/29/EURATOM (European Atomic Energy Committee) - Basic Safety Standards for the Protection of the Health of Workers and Members of the Public against the Dangers from Ionising Radiation (reference 12).

4.3.2 SAFETY ASSESSMENT PRINCIPLES & LICENCE CONDITIONS

ONR's Safety Assessment Principles (SAPs) provide inspectors with a guiding framework for making consistent regulatory judgements on nuclear safety cases. Although the SAPs are not directly relevant to the assessment of REPIR submissions, cognisance has been taken of SAP: AM.1 in particular (reference 13).

4.3.3 TECHNICAL ASSESSMENT GUIDES

The SAPs are supported by a suite of internal Technical Assessment Guides (TAG), of which the following is relevant to this assessment:

- The technical assessment of REPIR submissions and the determination of detailed emergency planning zones, ONR NS-TAST-GD-082 Revision 2, 2013 (reference 8). This TAG incorporates ONR's principles for the determination of REPIR off-site emergency planning areas, and related guidance, as revised in 2013.

4.3.4 NATIONAL AND INTERNATIONAL STANDARDS AND GUIDANCE

The following national guidance has also been considered and, where appropriate, has informed this assessment:

- A guide to the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (reference 7).

ONR also notes the relevance of the following international standards and guidance:

- IAEA Safety Standard Series – Preparedness and Response for a Nuclear or Radiological Emergency GSR Part 7 (reference 14).
- IAEA Safety Standards – Arrangements for Preparedness for a Nuclear or Radiological Emergency GS-G-2.1 (reference 15).

5 ASSESSMENT OF TECHNICAL SUBMISSIONS

The RoA, in its current issue, for the Magnox Ltd. Dungeness A nuclear licensed site was submitted to ONR in 2012. Magnox Ltd submitted a declaration of no change in February 2015 in relation to the 2012 RoA in line with the requirements of REPPiR regulation 5(2).

A summary of the Magnox Ltd's. submissions (reference 5 and 6) and of ONR's technical assessment (reference 11) are detailed in sections 5.1 and 5.2 respectively.

5.1 MAGNOX LTD REPORT OF ASSESSMENT

In accordance with REPPiR regulation 5(2) Magnox Ltd. submitted a declaration of no change to ONR in 2015. This stated that a review had taken place of the HIRE and RoA (originally submitted to ONR in 2012) as well as modifications that had taken place on the site since that submission. It concluded that there was no significant increase or decrease in risk or change in circumstances that would affect the previous RoA (reference 5).

The RoA submitted in 2012 (reference 16) concluded that there was no reasonably foreseeable radiation emergency. The most significant fault was determined to be corrosion or erosion of the Reactor Pressure Vessel (RPV), duct pipework or boilers causing a minor breach of the primary circuit and release of contaminated air, with a public dose consequence of less than 1 mSv.

The Magnox Ltd. Safety Case Management Report (reference 6) submitted in support of the declaration of no change in February 2015 identified four faults which were taken forward for further assessment to determine the potential public dose consequence.

The faults identified were a minor loss of primary circuit containment resulting in loss of contaminated air leading to a public dose of 1.73×10^{-2} mSv, a low level waste fire resulting in a public dose of 1.86×10^{-3} mSv, a seismic event resulting in a breach of resin and sludge tanks resulting in a public dose of 1.21×10^{-3} mSv and a newly identified fault of contamination of flood water due to corrosion of miscellaneous activated components in the reactor void resulting in a public dose of 1.2×10^{-1} mSv.

5.2 ONR TECHNICAL ASSESSMENT

The 2015 submission together with the 2012 RoA and its supporting documents, have been reviewed and reported on by an ONR specialist assessor (reference 11). The assessment concludes that Magnox Ltd.'s review satisfies the requirements of REPPiR and is sufficiently comprehensive. Magnox Ltd. has declared that radioactive substance inventories had not changed significantly since 2012 when the RoA had been prepared. ONR's specialist assessor notes that Magnox Ltd. has reviewed all safety case modifications for their likely effect upon its continuing compliance with the requirements of REPPiR. This has resulted in the identification of a new fault condition which it concludes does not have the potential to cause a radiation emergency as defined in regulation 2 of REPPiR.

The new fault identified assumes that the Reactor Voids are flooded resulting in the subsequent corrosion of Miscellaneous Active Components (MAC) within the void. The flood water is then assumed to seep out from the reactor void, along with entrained active material, and mix with the local ground water resulting in a public dose uptake of 1.2×10^{-1} mSv. Magnox Ltd. states that the flood water would need to remain in the void for a long period of time for the MAC to corrode significantly. The ONR specialist assessor considered this to be a reasonable assumption based upon the likely corrosion rates. The public dose calculation assumes that the corrosion is associated with the worst activity material possible. In addition, the consequence calculations do not take account of any natural decontamination of the water that may occur as it leaks out from the void, through cracks and adventitious openings.

Taking the factors presented into consideration as well as the magnitude of the public dose of 1.2×10^{-1} mSv, the ONR specialist assessor is content with both the scope and methodology employed by Magnox Ltd. in its review.

The ONR specialist assessor reviewed each of the fault modalities considered by Magnox Ltd. in its RoA (and referenced HIRE documents) with respect to the likely public dose consequences. This review concluded that there were no sustainable grounds upon which to challenge Magnox Ltd.'s findings in regard to either the probability or dose consequences that might arise from the occurrence of these fault conditions. ONR is satisfied with Magnox Ltd.'s conclusion that none of the identified fault conditions are capable of causing doses to a member of the public in excess of the values cited in Schedule 1 of REPPiR.

Accordingly, it is the ONR specialist assessor's opinion that it is not reasonably foreseeable that a fault at Dungeness A could lead to a radiation emergency as defined by REPPiR.

As a result of these findings, in particular, the absence of the need for a local authority off-site emergency plan under REPPiR, it is my opinion that Step B of ONR's determination process (relating to the application of other practical and strategic factors to a planning area) is not required.

5.3 CONCLUSION OF TECHNICAL ASSESSMENT

ONR is satisfied that a radiation emergency as defined in REPPiR is not reasonably foreseeable at the Dungeness A nuclear licensed site. The doses associated with the identified faults radiation accidents would result in consequences falling below the threshold of applicability of regulations 7, 9 and 16 of REPPiR (which relate to the requirement for an operator's emergency plan, the determination of an off-site planning area by ONR, the preparation by the local authority of a corresponding off-site emergency plan and the provision of prior information by the operator.)

There is no basis for ONR to determine REPPiR off-site emergency planning and prior information areas for the Dungeness A nuclear licensed site, in accordance with the requirements of REPPiR regulations 9(1) and 16(1) respectively.

As a result of the absence of the need for a local authority off-site emergency plan under REPPiR, Step B (section 4.1) of ONR's determination process (relating to the application of other practical and strategic factors to a planning area) is not required.

6 CONCLUSIONS

This report describes ONR's assessment of the Magnox Ltd. RoA for the Dungeness A nuclear licensed site and the consequential requirements, if any, for REPPiR off-site emergency planning and the provision of prior information to members of the public.

The conclusions of this report are as follows:

- ONR is satisfied that the technical submissions made by Magnox Ltd. demonstrate that members of the public are not likely to be exposed to effective doses at or in excess of 5 mSv in the year following a reasonably foreseeable radiation emergency (or other relevant dose value in Schedule 1 of REPPiR) from the Dungeness A nuclear licensed site, and
- There continues to be no requirement under REPPiR regulations 7(1), 9(1) and 16(1) for an operator's emergency plan, the identification of off-site planning and prior information areas by ONR, the preparation of a local authority off-site emergency plan, or for the provision by the operator of prior information to the public in respect of its Dungeness A nuclear licensed site.

Although this review confirms that there remains no requirement for detailed emergency planning under REPPiR in relation to the Dungeness A nuclear licensed site, proportionate emergency arrangements for the protection of the public nonetheless remain, in particular:

- operators have general duties under the Health and Safety at Work etc. Act 1974 to ensure, so far as is reasonably practicable, the health, safety and welfare of employees and the health and safety of other persons;
- under the provisions of REPPiR, regulation 4(2), operators have a general duty to take all reasonably practicable steps to prevent an identifiable radiation accident and to limit the consequences of any such accident that occurs; and
- operators who hold a nuclear site licence are required, under licence condition 11 (emergency arrangements) to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects; and
- to prepare appropriate contingency plans as required by regulation 12 of the Ionising Radiations Regulations 1999.

Where it is the enforcing authority, ONR will continue to regulate Magnox Ltd. and ensure that it remains compliant with these legal obligations.

7 RECOMMENDATIONS

As a result of the conclusions of this report, the recommendations are that ONR:

- Recommendation 1: Write to Kent County Council to notify them that there continues to be no requirement for a REPPiR off-site emergency planning area for the Dungeness A nuclear licensed site. This should be copied to Magnox Ltd.
- Recommendation 2: Write to Kent County Council to notify them that there remains no requirement under REPPiR for the local authority to prepare an off-site emergency plan in respect of the Dungeness A nuclear licensed site, although the requirement remains in respect of the Dungeness B nuclear licensed site.
- Recommendation 3: Inform Magnox Ltd. that there continues to be no requirement to ensure the appropriate provision of prior information to the public in relation to the Dungeness A site.
- Recommendation 4: Inform Magnox Ltd. that there continues to be no requirement under REPPiR regulation 7 for an operator's emergency plan.
- Recommendation 5: Inform EDF Energy, who operates Dungeness B, that there continues to be no requirement under REPPiR for the local authority to prepare an off-site emergency plan in respect of the Dungeness A nuclear licensed site, although the requirement remains for the Dungeness B nuclear licensed site.
- Recommendation 6: Inform, by copy of its letter to Kent County Council, the Food Standards Agency, the Maritime and Coastguard Agency, Environment Agency and the Department for Business, Energy & Industrial Strategy, of ONR's decision.

8 REFERENCES

1. The Energy Act 2013, Chapter 32.
Part 3, Chapter 1, 'The ONR purposes', paragraph 68(1).
Part 3, Chapter 4, 'Function of the ONR', paragraph 78, 'Principal function'.
The Stationery Office. December 2013. IBN 978-0-10-543213-5
2. Statutory Instruments 2001 No. 2975
Radiation (Emergency Preparedness and Public Information) Regulations 2001.
3. ONR-CNRP-AR-12-131
Assessment of Dungeness A REPPiR HIRE RoA
12th October 2013.
4. Letter to Kent County Council informing them of the ONR determination.
24th October 2013.
5. Magnox Ltd. Declaration of no change letter
DNA51594N 18th May 2015
6. Dungeness A Site Safety Case Management Report 016
Review of Safety Case Fault Schedules in Support of the REPPiR HIRE Report
Issue 1 February 2015
7. A guide to the Radiation (Emergency Preparedness and Public Information)
Regulations 2001. L126. 2002. <http://www.gov.uk/pubns/priced/l126.pdf>
8. The technical assessment of REPPiR submissions and the determination of detailed
emergency planning zones, ONR NS-TAST-GD-082 Revision 2 2013.
www.onr.org.uk/depz-onr-principles
9. Koichi Tanigawa et al. Loss of life after evacuation: lessons learned from the
Fukushima accident. Lancet: Volume 379 Issue 9819 889-891, 10 March 2012
10. Food and Environment Protection Act 1985
11. ONR-DFW-AR-15-018
Assessment of the Dungeness 'A' REPPiR Hazard Identification and Risk Evaluation:
Report of Assessment Declaration of No Change Submission. September 2016.
12. Council Directive 96/29 Euratom of 13 May 1996 laying down basic safety standards
for the protection of the health of workers and the general public against the dangers
arising from ionising radiation. Official Journal of the European Communities (1996)
39, No L159, 1-114 IBSN 0 11 915263 0
13. ONR Safety Assessment Principles for Nuclear Facilities, 2014 Edition, Revision 0.
AM.1 Accident management and emergency preparedness.
14. IAEA Safety Standards Series (General Safety Requirements) No GSR Part 7 dated
November 2015. Preparedness and Response for a Nuclear or Radiological
Emergency. ISBN 978-92-0-105715-0.
http://www-pub.iaea.org/MTCD/Publications/PDF/P_1708_web.pdf
15. IAEA Safety Standards – Safety Guide No GS-G-2.1 2007. Arrangements for
Preparedness for a Nuclear or Radiological Emergency. ISBN 92-0-109306 3.
http://www-pub.iaea.org/mtcd/publications/pdf/pub1265_web.pdf
16. NP/SC 5128 Revision 1 Dungeness 'A': REPPiR Regulation 6(4) Hazard Identification
and Risk Evaluation: Report of Assessment. June 2012