



Office for
Nuclear Regulation



Consultation on Approved Code of Practice
for the Radiation (Emergency Preparedness
and Public Information) Regulations 2019

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Introduction

This consultative document is issued by the Office for Nuclear Regulation (ONR) on behalf of the Health and Safety Executive (HSE) in compliance with its duty to consult under section 16 of the Health and Safety at Work Act 1974.

This particular consultation will also be managed by ONR on behalf of HSE. Some of the contact details below reflect this arrangement.

Both ONR and HSE try to make their consultation procedures as thorough and open as possible. Responses to this consultation document will be made available on the consultation webpage after the close of the consultation period where they can be viewed by members of the public.

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 2018 (DPA) and the Environmental Information Regulations 2004 (EIR)). Statutory Codes of Practice under the FOIA and EIR also deal with confidentiality obligations, among other things.

If you would like ONR to treat any of the information you provide, including personal information, as confidential, please explain your reasons for this in your response. If HSE or ONR receive a request under FOIA or EIR for the information you have provided, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will be disregarded for these purposes. Requests for confidentiality should be made explicit within the body of the response.

General Data Protection Regulation (GDPR)

ONR is accountable for ensuring the appropriate treatment of your personal information under GDPR. We will apply appropriate security measures to protect your personal data and ensure your individual rights under the regulation:

<https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/individual-rights/right-of-access/>

Full details on the regulation:

<https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/>

Article 50 of the Treaty on European Union

This consultation, which will be managed by ONR on behalf of HSE, relates to the implementation of Directive 2013/59/EURATOM that lays down basic safety standards for protection against the dangers arising from exposure to ionising radiation. Specifically, this consultation is on proposed Approved Code of Practice (ACOP) to support revisions to the Radiation (Emergency Preparedness and Public Information) Regulations that have transposed the nuclear and radiological emergency preparedness and response requirements in the Directive.

The EU referendum on 23rd June 2016 saw the people of the United Kingdom vote to leave the European Union. The government respected the result and triggered Article 50 of the Treaty on European Union on 29th March 2017 to begin the process of exit.

However, until exit negotiations are concluded, the UK remains a full member of the European Union and all the rights and obligations of EU membership remain in force.

During this period the Government will continue to negotiate, implement and apply EU legislation. Consequently, the Health and Safety Executive (HSE) is seeking stakeholder views on its proposals. It believes that public consultation provides an open and transparent approach to its decision-making. Following consultation, the HSE Board will decide on ACOP content.

Code of Practice on Consultation

HSE is committed to best practice in consultation and to the Government's Consultation Principles. The Government is improving the way it consults by adopting a more proportionate and targeted approach, so that the type and scale of engagement is proportional to the potential impacts of the proposal. The emphasis is on understanding the effects of a proposal and focussing on real engagement with key groups rather than following a set process.

Additional guidance can be found at:

<https://www.gov.uk/government/publications/consultation-principles-guidance>

How to respond

The preferred method for receiving comments on the ACOP and guidance is by email to the Contact ONR Account: Contact@onr.gov.uk

Hardcopy responses can be sent to the below address:

Contact ONR (ACOP Consultation)
ONR Policy & Communications Team
The Office for Nuclear Regulation (ONR)
4.S.3. Redgrave Court
Merton Rd
Bootle
Merseyside
L20 7HS

To enable us to provide follow-up information in relation to the consultation, please provide an email address with any written responses.

We would be grateful if you could send an email address when you provide your response. This will allow us to inform you when HSE intends to publish information concerning consultation responses on its website.

Responses must be received by **5 June 2019**.

If you require a more accessible format of this document please send details to the contacts previous and your request will be considered.

What happens next?

ONR will acknowledge all responses and give full consideration to their substance in the finalising of the ACOP. ONR may contact you again if we have a query in respect of your response. We will also tell you when we publish information concerning the consultation responses prior to this information being placed on the HSE website.

Complaints

If you have any complaints about the consultation process (as opposed to comments about the issues, which are the subject of the consultation) please address them to:

(Mr) Kobina Lokko – Senior Policy Advisor
ONR (ACOP Consultation)
ONR Policy & Communications Team
The Office for Nuclear Regulation (ONR)
4.S.3. Redgrave Court
Merton Rd
Bootle
Merseyside
L20 7HS

Email: Contact@onr.gov.uk

ONR aim to respond to all complaints in accordance with ONR's complaints process which can be found at: <http://www.onr.org.uk/complaining-about-onr.htm>.

If you are not satisfied with the outcome, you can raise the matter with the Information Commissioner's Office at Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF; or HSE's Chief Executive, Dr David Snowball at Health and Safety Executive, Redgrave Court, Merton Road, Bootle, Merseyside, L20 7HS; or Adrienne Kelbie, Chief Executive at the Office for Nuclear Regulation at the same building address. You can also write and ask your MP to take up your case with us or with Ministers. Your MP may also ask the independent Parliamentary Commissioner for Administration (the Ombudsman) to review your complaint.

Purpose of the consultation

This consultation relates to the implementation of Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation.

The consultation is on the introduction of Approved Code of Practice (ACOP)¹ to support the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR), which transpose the emergency preparedness and response elements of the Directive. This Approved Code of Practice will be approved by the Board of the Health and Safety Executive (HSE), issued as part of a supporting publication that includes as well as this proposed ACOP, good practice guidance. There will be no formal public consultation on the content of this good practice guidance.

This Consultation Document seeks your responses to the eight questions at pages 29 - 30, which ask for:

- Views on the usefulness and clarity of the proposed ACOP in helping you meet your legal duties (Q1 – Q2);
- Views on specific ACOP for some Regulations (Q3 – Q7); and
- Any issues we need to be aware of with the introduction of ACOP (Q8).

This consultation relates to Regulations that will apply in Great Britain

Background

Current REPPIR 2001 is supported by Guidance on Regulations; there is no current ACOP. The decision to introduce ACOP to support REPPIR 2019 reflects both changes to the policy intent for nuclear and radiological emergency planning in Great Britain and associated changes in Regulations. We want to ensure consistency in the planning process, for example the assessment of emergency scenarios and the setting of detailed emergency planning zones (essentially the planning zones we have now), which in future will be set by the Local Authority, rather than the Regulator. Together, these changes suggest a role for statutory guidance through ACOP to assist both operator and Local Authority duty holders by setting out a preferred approach to complying with their legal duties.

The Approved Code of Practice is statutory guidance. If a duty holder follows the Code, they will be meeting their statutory duties. If they do not follow the advice in the Code, they may still be meeting their duties, but it will be for the duty holder to demonstrate the approach they have taken is equivalent to the Code and therefore meets these expected standards.

¹ The consultation does not revisit the Government's policy approach to the implementation of the emergency preparedness elements of the Basic Safety Standards Directive 2013/59/EURATOM. The Government's November 2017 consultation and its response to that consultation can be found on the BEIS section of GOV.UK:

<https://www.gov.uk/government/consultations/revised-requirements-for-radiological-protection-emergency-preparedness-and-response>

For this reason, ACOP tends to be used sparingly within an outcome-focussed and goal-setting legislative framework in which duty holders are expected, and given the freedom, to think about their approach to demonstrating compliance so to encourage active management and continuous improvement.

The publication in support of REPPIR 2019 will include ACOP but also more general good practice guidance on Regulations, of the type in the current REPPIR Guidance on Regulations L126. This consultation is on ACOP only, as HSE is required to do when issuing ACOP exercising its functions under the Health and Safety at Work etc. Act 1974. More advice is provided in the explanatory good practice guidance, which if followed, will ensure a duty holder is usually doing enough to comply with the law.

In summary, the draft ACOP in this consultation is designed to provide users with confidence in how to comply with the law. In particular, the ACOP here should help duty holders where:

- There are certain preferred or recommended methods to be used (or standards to be met) to achieve compliance; and
- The nature of the issue being addressed is such that in most cases users should be strongly encouraged to pursue those methods.

This proposed ACOP should also:

- Provide clear and succinct guidance; and
- Be easy for the intended users to understand.

Drafting of the ACOP has been overseen by a Steering Group of duty holders, the co-regulators (HSE and ONR), the Devolved Administrations, Government Departments, and others such as Public Health England.

Proposed approved code of practice

REPPiR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
Regulation 4: Hazard evaluation		
<p><i>Regulation 4(1-2)</i></p> <p><i>(1) The operator of any premises to which these Regulations apply must make a written evaluation before any work with ionising radiation is carried out for the first time at those premises.</i></p> <p><i>(2) The evaluation required under paragraph (1) must be sufficient to identify all hazards arising from the work undertaken which have the potential to cause a radiation emergency.</i></p>	<p>The hazard evaluation should determine:</p> <ul style="list-style-type: none"> a) the potential consequences of each radiation emergency in terms of the maximum effective dose to persons off-site assuming no protective actions are implemented, and b) the likelihood of the consequence occurring. <p>Evaluating a low likelihood for a radiation emergency to occur should not be used as a reason for discounting the hazard from having the potential to cause a radiation emergency. Operators should consider the possibilities for radiation emergencies with extremely low likelihoods but potentially severe or very severe consequences.</p>	<p>This proposed ACOP expands upon the regulation by requiring that the hazard identification process should identify both the likelihood and the consequence of the hazard, that the potential for a radiation emergency should not be discounted solely on the basis of its likelihood.</p>
<p><i>Regulation 4(3)</i></p> <p><i>(3) Where the evaluation required under paragraph (1) does not reveal any hazards having the potential to cause a radiation emergency, reasons for such a conclusion should be set out in that evaluation.</i></p>	<p>The justification for such a conclusion should be based upon the limited radiological consequences of any hazard being less than 1 mSv effective dose over the period of a year and not upon arguments associated with the low likelihood of the event.</p>	<p>In contrast with REPPiR 01, in REPPiR 19 there is the expectation that unforeseen events will be considered. Hence this ACOP explains that you should not screen events out of the consequence assessment</p>

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
		based solely upon the likelihood of the event.
<p><i>Regulation 4(6)</i></p> <p><i>(6) The operator must provide the regulator with details of the evaluation made under paragraph (1) within 28 days of the date on which it is made.</i></p>	<p>The written evaluation report required under Regulation 4(1) should include a description of (with supporting references to the details, as appropriate) of the following particulars:</p> <ul style="list-style-type: none"> (a) the name and address of the operator; (b) the postal address of the premises where the radioactive substance will be processed, manufactured, used or stored, or where the facilities for processing, manufacture, use or storage exist; (c) the date that the work with ionising radiation will commence or, if it has already commenced, a statement to that effect; (d) a general description of the premises; (e) a description and details of any radioactive substance on the premises which is likely to exceed any quantity or mass specified in Schedule 1 or Schedule 2; (f) a plan of the premises in question and a map of the environs; (g) a diagram and description of any single plant or enclosed system containing more than the quantity or mass of any radioactive substance specified in Schedule 1 or Schedule 2, and the nature of the containment for the radioactive 	<p>This ACOP defines the minimum content of the evaluation report under Regulation 4(1) which is not defined elsewhere in the regulations.</p>

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	<p>substance;</p> <ul style="list-style-type: none"> (h) a description of the hazards identified; (i) the potential for the hazard and its associated consequences to occur; (j) the associated source terms; (k) the off-site radiological doses; (l) those factors which could precipitate a significant release of any radioactive substance and the protective action to be taken to prevent such a release; (m) those factors which could precipitate a smaller but continuing release of any radioactive substance and the protective action to be taken to mitigate such releases; (n) those factors which could give rise to an incident involving the initiation of an unintended self-sustaining nuclear chain reaction or the loss of control of an intended self-sustaining nuclear chain reaction and, in either case, the protective action to be taken to prevent any such incident; and (o) information concerning the management systems and staffing arrangements by which the radioactive substance is controlled and by which the procedures are controlled. <p>Sufficient records should be kept of the results of the evaluation, including in cases where it is concluded</p>	

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	there is no potential for a radiation emergency, to allow for external verification.	
Regulation 5: Consequence assessment		
<p><i>Regulation 5 (1-2)</i></p> <p><i>(1) Where the evaluation undertaken under regulation 4 reveals the potential for a radiation emergency to occur, the operator must make an assessment, in accordance with Schedule 3, to consider and evaluate a full range of possible consequences of the identified radiation emergencies, both on the premises and outside the premises, including the geographical extent of those consequences and any variable factors which have the potential to affect the severity of those consequences.</i></p> <p><i>(2) The assessment required by this regulation must be completed within two months after the hazard evaluation required by regulation 4.</i></p>	<p>The operator should adopt the following process for the consequence assessment:</p> <ul style="list-style-type: none"> a) use the outputs of the hazard evaluation to assess a full range of potential radiation emergencies identified against the REPPIR risk framework presented in Appendix 2, Figure 2; b) determine a representative range of source terms; c) undertake the consequence assessment for these source terms in accordance with Schedule 3; and d) perform a sensitivity study where the predicted likelihood of a radiation emergency lies in the outline planning region of the REPPIR risk framework but close to the boundary of the detailed planning region. The sensitivity study should assess what the implications are of increasing the likelihood by one order of magnitude to determine whether a small change in the likelihood assumption leads to a disproportionate increase in radiological consequence due to a severe radiation emergency moving from the outline planning region into the detail planning region. 	<p>This ACOP requires the selection of a range of radiation emergencies using the REPPIR risk framework for input into the consequence assessment to be performed in accordance with Schedule 3. It also requires an assessment on the limit of the boundary to prevent a cliff-edge for radiation emergencies on this boundary between detailed and outline planning and expands on the requirements for the consequence assessment performed in accordance with Schedule 3.</p>

REPPiR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	<p>The representative range of source terms should:</p> <ul style="list-style-type: none"> a) include a number of the most bounding cases within the detailed emergency planning zone and the outline planning zone of the REPPiR risk framework (Appendix 2, Figure 2); and b) sufficient number of source terms to enable the operator to demonstrate in a transparent way how it has determined the recommended minimum planning areas for detailed and outline planning and the recommended distances for sheltering, evacuation and the administration of stable iodine tablets. 	
Regulation 6: Review of hazard evaluation and consequence assessment		
<p><i>Regulation 6(1-4)</i></p> <p><i>(1) Where the operator proposes a material change, or where a material change occurs, in the work with ionising radiation to which an operator was required to make an evaluation pursuant to regulation 4(1), the operator must make a further assessment to take account of that change.</i></p> <p><i>(2) For such time as the work with ionising radiation in respect of an evaluation made pursuant to regulation 4(1) continues, the operator must, within 3 years of the date of the last evaluation (whether made in accordance with regulation 4, paragraph (1) or this paragraph), or longer, if agreed by the regulator, either—</i></p>	<p>A) Operators should consider a ‘material change’ as a change in their work with ionising radiation which has the potential to change the nature or scope of the hazards associated with the work in a way that may require amendments to:</p> <ul style="list-style-type: none"> (a) the operator’s arrangements for the prevention of radiation emergencies or mitigation of the consequences of radiation emergencies; (b) the operator’s emergency plan; or (c) the local authority’s off-site emergency plan. <p>B) A record of the further assessment and evaluation made under 6(1) and 6(2)(a) should either take the form of updates to the previous hazard evaluation</p>	<p>A: This <u>expands on what should be considered</u> to be a ‘material change’ and <u>is the preferred method</u>.</p> <p>B: This expands on how the assessment should be recorded</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>(a) make a further evaluation; or</i></p> <p><i>b) if there is no change of circumstances which would affect the last consequences report required by regulation 7, make a declaration to that effect.</i></p> <p><i>(3) Where a declaration is made in accordance with paragraph (2)(b), a copy of that declaration must be provided to the local authority and to the regulator within 28 days of the making of the declaration.</i></p> <p><i>(4) The further evaluation required by this regulation must comply with the provisions of regulation 4(2) to (4), and regulation 5, where applicable.</i></p>	<p>details and consequence records sent to the regulator under regulations 4(6) and 7(7) respectively or provide new such records for the premises.</p> <p>C) The declaration under 6(2)(b) should be a formal statement that there has been no change in circumstances which would affect the previous hazard evaluation details and last consequences assessment required by regulations 4(6) and 7(7), and also that the previous consequence report under regulation 7(3) continues to apply.</p>	<p>as the <u>preferred method</u> of showing how the records made under regulations 4 and 7 should be updated.</p> <p>C: This <u>expands on the details</u> that should be recorded in the declaration.</p>
<p>Regulation 7: Consequence report</p>		
<p><i>Regulation 7(7)</i></p> <p><i>(7) The operator must provide the regulator with details of the assessment made under regulation 5 and the consequences report within 28 days of the date on which the consequences report is sent to the local authority.</i></p>	<p>The details of the assessment to be provided to the regulator should include the following particulars, where they are relevant:</p> <ul style="list-style-type: none"> (a) the name and address of the operator; (b) the results of the assessment against the risk framework; (c) details of the atmospheric dispersion analysis; (d) the results of the radiological consequence assessment used to determine the 	<p>This ACOP defines the minimum content of the assessment report which is sent to the regulator under Regulation 7(7) which is not defined elsewhere in the regulations</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	<p>recommended minimum area for detailed emergency planning;</p> <p>(e) the results of the radiological consequence assessment used to determine the recommended minimum geographical area for outline emergency planning where required to perform the determination required under 9(1)(b), or in the case of civil nuclear operators covered under Regulation 9(1)(a) for comparison against the default distance specified in Schedule 5 for the purposes of proposing a change under Regulation 9(2);</p> <p>(f) an assessment of the area likely to be affected by the dispersal of any radioactive substance and the period of time the dispersal is likely to take place;</p> <p>(g) an assessment of the likely exposures to ionising radiation of any person or class of persons as a result of any radiation emergency; and</p> <p>(h) an assessment of the necessity for an emergency plan to be prepared by the operator.</p>	
Regulation 8: Detailed emergency planning zones		
<p><i>Regulation 8(1)</i></p> <p><i>(1) The local authority must determine the detailed</i></p>	<p>The detailed emergency planning zone should provide an effective response to a range of radiation emergencies. It should be based on the minimum</p>	<p>This <u>expands on regulatory requirements</u> stating <u>preferred methods</u> of determining a DEPZ. These include details on how to</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>emergency planning zone on the basis of the operator's proposal under regulation 7(2) and may extend that area in consideration of.</i></p> <p><i>(a) local geographic, demographic and practical implementation issues;</i></p> <p><i>(b) the need to avoid, where practicable, the bisection of local communities; and</i></p> <p><i>(c) the inclusion of vulnerable groups immediately adjacent to the area proposed by the operator.</i></p>	<p>geographical extent proposed by the operator in the consequences report and should:</p> <ul style="list-style-type: none"> a) be of sufficient extent to enable an adequate response to a range of emergencies; and b) reflect the benefits and detriments of protective action by considering an appropriate balance between dose aversion and implementing protective action in a radiation emergency across too wide an area which could divert important resource from the affected areas which require the most attention. <p>In defining the boundary of a detailed emergency planning zone, the use of practical geographic features may be beneficial for ease of implementing the local authority's off-site emergency plan. Physical features such as roads, rivers, railways or footpaths should be considered as well as parish or postcode boundaries, particularly where these features and concepts correspond with other local authority emergency planning arrangements.</p>	<p>define the DEPZ boundary and considering the balance of benefits vs. detriments in deciding protective action.</p>
<p><i>Regulation 8(3)</i></p> <p><i>(3) The local authority must inform the operator and the regulator, within two months of having been sent the consequences report under regulation 7, of</i></p>	<p>The information provided to the operator and the regulator by the local authority of the determination of the detailed emergency planning zone should include:</p> <ul style="list-style-type: none"> a) a description of the area; b) a map showing the extent of the area; and 	<p>This <u>expands on regulatory requirements</u> by specifying the local authority must notify the operator and regulator in writing of the determination and that this should be supported by a suitable justification. This is judged to be</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<i>the determination made under paragraph (1).</i>	c) suitable basis for the determination including any pockets of detailed planning within the outline planning zone as per Schedule 6, Part 2, Chapter 2 3(b)(ii).	the most <u>preferred method</u> of compliance. Duty holders should be <u>strongly encouraged to pursue</u> this approach.
<p><i>Regulation 8(6)</i></p> <p><i>(6) The local authority may re-determine the detailed emergency planning zone -</i></p> <p><i>(a) if there is a change in the local area which necessitates such a re-determination; or</i></p> <p><i>(b) if the local authority deems it appropriate as a consequence of the operator's consequences report made after an evaluation in accordance with regulation 6(1) or 6(2)(a).</i></p>	<p>In order to understand if there has been a change in the local area which necessitates a re-determination, the local authority should consider planning applications within or immediately adjacent to the detailed emergency planning zone taking into account their potential impact on the effectiveness of the emergency plan.</p> <p>Re-determination of the detailed emergency planning zone should follow the approach set out under regulation 8(1)-(5).</p>	<p>This <u>expands on the duties</u> identified in regulations by highlighting the ongoing responsibility of the local authority to take account of planning and development.</p>
Regulation 9: Outline planning zone		
<p><i>Regulation 9(3)</i></p> <p><i>(3) The operator and the local authority may</i></p>	Where an outline planning zone is not considered necessary, the justification for the decision should be	This <u>expands on regulatory requirements</u> by specifying that

REPPiR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>propose in relation to a site falling within paragraph (1)(b), that the site has no outline planning zone.</i></p>	<p>recorded by the operator in writing. This decision should reflect the results of the operator’s hazard evaluation and consequence assessment as required by regulations 4 and 5 and Schedule 3 and take into account whether existing arrangements and capabilities (e.g. for the 2017 Regulations, COMAH, CCA) are sufficient.</p>	<p>the decision that no OPZ is necessary should be made and justified in writing. This is judged to be the <u>most preferred method</u> of compliance.</p>
<p>Regulation 10: Operator’s emergency plan</p>		
<p><i>Regulation 10(1)</i></p> <p><i>(1) Where the operator has made an evaluation in accordance with regulation 4(1) which shows that a radiation emergency might arise, the operator must make an adequate emergency plan designed to secure, so far as is reasonably practicable, the restriction of exposure to ionising radiation and the health and safety of persons who may be affected by radiation emergencies identified by the evaluation.</i></p>	<p>For the operator’s emergency plan to meet the legal requirement to be adequate, the operator should prepare the plan in accordance with the requirements of this regulation and the associated Schedules and should ensure the plan:</p> <ul style="list-style-type: none"> (a) is a written document, or set of documents; and (b) is capable of being put into effect without delay when required by: <ul style="list-style-type: none"> (i) providing the necessary information, instruction and training and making the necessary equipment available, in accordance with regulation 10(7); and 	<p>This <u>expands on what it is considered an adequate</u> plan. The plan should be written and putting in place the underpinning capabilities is the <u>preferred approach</u> to ensure that the plan can be put into effect without delay.</p> <p>As per Reg 11, ‘make’ means that the plan must be written and be immediately implementable. In the event of an emergency, Reg 17(1) requires the operator to implement the plan ‘without delay’ so we take it from this that training of individuals, putting equipment and processes in places, etc. will have to be</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	(ii) ensuring any other underpinning capabilities required to implement the plan are in place and readily available.	addressed when the plan is 'made'; otherwise this would lead to an unacceptable delay. The distinction here is between 'making' a plan (just a document) and a plan being able to be implemented the next day.
<p><i>a. Regulation 10(2)</i></p> <p><i>b. (2) When preparing an emergency plan, as required by paragraph (1), the operator must take into account—</i></p> <p><i>(a) the steps the operator has taken under regulation 4(4);</i></p> <p><i>(b) the consequences assessed in accordance with regulation 5, including any variable factors which might affect the severity of the emergency.</i></p>	<p>The operator should consider the following variable factors, where they are relevant:</p> <p>(a) aspects of the Schedule 3 requirements used in consequence assessments;</p> <p>(b) conditions in the affected facility, conditions affecting infrastructure or conditions affecting several facilities at once;</p> <p>(c) availability of personnel; and</p> <p>(d) multiple factors which could materialise in parallel.</p>	<p>This expands on what should be considered 'variable factors'.</p>
<p>Regulation 11: Local Authority's emergency plan</p>		
<p><i>Regulation 11 (1-2)</i></p> <p><i>(1) Where premises require an emergency planning zone under either or both of regulations 8 or 9, the local authority must make an adequate off-site emergency plan covering that zone or zones.</i></p> <p><i>(2) The plan required by paragraph (1) must be designed to mitigate, so far as is reasonably</i></p>	<p>For the off-site emergency plan to meet the legal requirement to be adequate, the local authority should prepare the plan in accordance with the requirements of this regulation and the associated Schedules and should ensure the plan:</p> <p>(a) is a written document, or set of documents;</p>	<p>This <u>expands on what it is considered an adequate plan</u>. The plan should be written and putting in place the underpinning capabilities is the <u>preferred approach</u> to ensure that the plan can be put into effect without delay. This is also consistent with</p>

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>practicable, the consequences of a radiation emergency outside the operator's premises.</i></p>	<p>and</p> <p>(b) is capable of being put into effect without delay when required by ensuring that prior information has been supplied in accordance with regulation 21 and by seeking assurances, so far as reasonably practicable, from organisations with a role in the plan that:</p> <p>(i) the necessary information, instruction and training has been provided and the necessary equipment for restricting exposure has been made available, in accordance with regulation 11(6);</p> <p>(ii) any equipment required to implement the plan has been made available by the operator in accordance with regulations 10(7) and 10(8) or the relevant organisation; and</p> <p>(iii) any other underpinning capabilities required to implement the plan are in place and readily available.</p>	<p>the operator's emergency plan.</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>Regulation 11(5)</i></p> <p><i>(5) In preparing an off-site emergency plan, pursuant to paragraph (1) or in reviewing such a plan pursuant to regulation 12(1), the local authority must consult—</i></p> <ul style="list-style-type: none"> <i>(a) the operator of the premises to which the plan relates;</i> <i>(b) Category 1 responders;</i> <i>(c) Category 2 responders (where appropriate);</i> <i>(d) each health authority in the vicinity of the premises to which the plan relates (if that health authority is not a Category 1 responder);</i> <i>(e) the Agency;</i> <i>(f) Public Health England, an executive agency of the Department of Health and Social Care known by that name;</i> <i>(g) in addition to Public Health England, if the premises to which the emergency plan relates is in—</i> <ul style="list-style-type: none"> <i>(i) Wales, Public Health Wales, and</i> <i>(ii) Scotland, Health Protection Scotland; and</i> <i>(h) such other persons, bodies or authorities as the local authority considers appropriate.</i> 	<p><u>Proposed ACOP Regulation 11(5)(f)</u></p> <p>The local authority should consult PHE’s Centre for Radiation, Chemical and Environmental Hazards to confirm its understanding of the following matters, where relevant, in addition to any other matters the local authority considers appropriate:</p> <ul style="list-style-type: none"> (a) the planning of urgent protective action as part of the off-site mitigatory action required by Schedule 6, Part 2, Chapter 1(f); (b) the application of reference levels required by regulation 20; and (c) PHE’s role in the off-site emergency plan. 	<p>This <u>expands on the matters</u> which PHE should be consulted on. These matters are required by other Regulations but those Regulations do not require consultation. PHE has the necessary expertise to provide urgent protective action / reference level advice and therefore consultation with PHE is the <u>preferred method</u>.</p>

Regulation 12: Reviewing and testing of emergency plans

<p><i>Regulation 12(1)</i></p> <p><i>(1) Each operator or local authority who has prepared an emergency plan pursuant to regulation 10 or 11, as the case may be, must, at suitable intervals not exceeding 3 years unless otherwise agreed by the regulator—</i></p> <p><i>(a) review and where necessary revise the plan for which they are responsible; and</i></p> <p><i>(b) test that plan, taking reasonable steps to arrange for all those with a role in the relevant emergency plan to participate in the test to such an extent necessary to ensure that the plan is effective.</i></p>	<p>A) The result of a review of an emergency plan should be recorded, including actions to address any recommendations. All changes to the emergency plan should be managed through the use of an auditable system which tracks and logs the changes from inception to completion of implementation.</p> <p>B) In the case of new operators, the operator or local authority who has prepared an emergency plan should test that plan to ensure the plan is effective before the operator can require any person to carry out work with ionising radiation. Testing of outline planning in the off-site emergency plan should only be undertaken if required by regulation 12(2).</p>	<p>A: This <u>expands on the regulatory requirement</u> to review the plan. This is judged to be the <u>preferred method</u> of compliance.</p> <p>B: This <u>expands on the regulatory requirement</u> to test the plan on a 3-year cycle by requiring new operators to do the first test before they start work.</p>
<p><i>Regulation 12 (2-7)</i></p> <p><i>(2) The test required by paragraph (1)(b) need not extend to testing a local authority’s emergency plan so far as it extends to the outline planning zone, unless—</i></p> <p><i>(a) a test is necessary in order to review or revise the plan, as required under paragraph (1)(a); or</i></p> <p><i>(b) the regulator requires a test.</i></p> <p><i>(3) The regulator may only agree that the review and test required under paragraph (1) may take place after the expiry of a three year period if—</i></p>	<p><u>Proposed ACOP Regulation 12(1), (2), (5), (6), and (7)</u></p> <p>An adequate test of an operator’s emergency plan or detailed planning in an off-site emergency plan should demonstrate:</p> <p>(a) that the plan meets the principles and purposes of an emergency plan set out in Schedule 7;</p> <p>(b) that the plan meets the requirements of regulations 10 or 11 (as appropriate), and the appropriate sections of Schedule 6;</p> <p>(c) that the plan can be practicably implemented</p>	<p>This sets out what an <u>adequate</u> test looks like to ensure that the plan is effective. Regulation 12(1)(b) requires the test to ‘ensure the plan is effective’ and 12(7) requires the test to be ‘adequate’ to show the plan can be implemented.</p>

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p>(a) <i>the operator or local authority, as the case may be, has sent a written request for such an extension of time to the regulator; and</i></p> <p>(b) <i>the written request is sufficient to demonstrate that the circumstances of the request are exceptional.</i></p> <p>(4) <i>A review required under paragraph (1) must take into account—</i></p> <p>(a) <i>changes occurring in the work with ionising radiation to which the plan relates;</i></p> <p>(a) <i>changes within the emergency services concerned;</i></p> <p>(b) <i>new knowledge or guidance, whether technical or otherwise, concerning the response to radiation emergencies;</i></p> <p>(c) <i>any material change to the assessment on which the plan was based since it was last reviewed or revised;</i></p> <p>(d) <i>any relevant information derived from an assessment of or a report about the effectiveness of an emergency plan required by regulation 17(4)(b) or (c); and</i></p> <p>(e) <i>any relevant information derived from a report into the outcome of an earlier test as required by paragraph (8).</i></p> <p>(5) <i>The operator must cooperate with a local authority which is subject to a duty to prepare an</i></p>	<p>and will be effective in the response to a radiation emergency to secure, so far as reasonably practicable, the restriction of exposure to ionising radiation and the health and safety of workers and the general public;</p> <p>(d) the completeness, consistency and accuracy of the emergency plan and other documentation used by organisations responding to an emergency;</p> <p>(e) the adequacy of the equipment and facilities and their operability; and</p> <p>(f) the competence of responding personnel to carry out the duties identified for them in the emergency plan.</p> <p>An adequate test of outline planning in the off-site emergency plan should demonstrate:</p> <p>(a) that the plan meets the principles and purposes of an emergency plan set out in Schedule 7;</p> <p>(b) that the plan meets the requirements for outline planning in regulation 11 and the appropriate sections of Schedule 6;</p> <p>(c) that the plan provides a credible basis for a response to a radiation emergency in the outline</p>	

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>emergency plan and Category 1 responders as to how the off-site emergency plan is to be tested.</i></p> <p><i>(6) A review or test of the plan required by this regulation must take into account any lessons learned from—</i></p> <p><i>(a) past emergency exposure situations, whether at the operator’s premises or not; and</i></p> <p><i>(b) the United Kingdom’s participation in emergency exercises at national and international level.</i></p> <p><i>(7) The test of the plan, required by paragraph (1)(b) must be adequate to test the ability to implement the plan in question, but the operator or the local authority, as the case may be, must consider the extent of the testing required bearing in mind:</i></p> <p><i>(a) the length of time since the last test;</i></p> <p><i>(b) the extent of the testing undertaken on the last occasion;</i></p> <p><i>(c) any activation of the plan as a response to a radiation emergency since the last test; and</i></p> <p><i>(d) any revisions made by the review required under paragraph (1)(a).</i></p>	<p>planning zone by demonstrating that high level actions have been identified, including where capabilities could be obtained from and how (this may be through expansion of arrangements in the detailed emergency planning zone where one exists);</p> <p>(d) the completeness, consistency and accuracy of the emergency plan and other documentation used by organisations responding to an emergency; and</p> <p>(e) the competence of responding personnel to carry out the duties identified for them in the emergency plan.</p>	

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>Regulation 12(8-10)</i></p> <p><i>(8) After completion of the test required by paragraph (1)(b), each operator or local authority, as the case may be, must prepare a report on the outcome of the test within three months of the conclusion of the test.</i></p> <p><i>(9) A report made under paragraph (8) must be sent to the regulator within 28 days of its preparation.</i></p> <p><i>(10) Where a report made under paragraph (8) was made by the operator, the operator must send it to the local authority within 28 days of its preparation, and where such a report was made by the local authority, the local authority must send it to the operator within 28 days of its preparation.</i></p>	<p>The report on the outcome of the test should:</p> <ul style="list-style-type: none"> (a) contain an overview of the exercise; (b) highlight the strengths and weaknesses of the emergency plan as shown by the exercise, focussing on areas where the plan was insufficient, or could not be implemented; (c) highlight areas where the operator's emergency plan and the off-site emergency plan were not aligned (where both plans are tested together); (d) include any lessons identified and recommendations to resolve these, including any required changes to the plan; and (e) include any actions associated with part (d) with an assigned action owner and agreed time to complete the action and implement any change. 	<p>These are the key points which should be included in a report, as a minimum. It <u>expands on the regulation</u> by providing detail on the requirements.</p>
<p>Regulation 13: Cooperation: operator and local authority</p>		
<p><i>Regulation 13 (1) (a-c)</i></p> <p><i>(1) The operator and the local authority must cooperate in respect of their duties to prepare emergency plans to ensure that—</i></p>	<p><u>Proposed ACOP Regulation 13(1)(b) and (c)</u></p> <p>Communication methods should be agreed between the operator and the local authority and any other responding organisation and recorded in the operator's and/or the off-site plan(s) as appropriate.</p>	<p>This ACOP <u>expands upon the duty</u> that plans should operate in conjunction with each other. This requirement is not covered elsewhere. Minimum levels of planning required i.e.</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p>(a) <i>the operator’s emergency plan and the local authority’s off-site emergency plan operate effectively both independently and in conjunction;</i></p> <p>(b) <i>communication between the operator and the local authority is expedited during any radiation emergency; and</i></p> <p>(c) <i>communication between the operator and the local authority and any organisation which is responding to the radiation emergency is expedited.</i></p>		<p>communication system(s) should be pre-agreed and codified. Not following the ACOP might delay communications during an emergency which would be a non-compliance under 13(1) (b) and (c). This the <u>preferred method</u> of compliance.</p>
<p>Regulation 14: Cooperation between local authorities</p>		
<p><i>Regulation 14(1-2)</i></p> <p>(1) <i>A local authority may request, in writing, the cooperation of another local authority in order to—</i></p> <p>(a) <i>make or review its off-site emergency plan;</i></p> <p>(b) <i>test its off-site emergency plan as required under regulation 12(1)(b).</i></p>	<p>Where the co-operation of another local authority is requested, the lead local authority should provide the cooperating local authority with a pre-planned schedule of activities. This schedule should describe the activities that the cooperating local authority is required to complete to assist in the drafting, review and / or testing of the off-site emergency plan, along with associated timescales for completion.</p>	<p>This ACOP because it <u>expands upon the duty</u> of another local authority to co-operate as it is more specific (i.e. requires the other local authority to assist in drafting or reviewing the plan) and requires a pre-planned and shared schedule of activities.</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>(2) Where a local authority has made a written request of another local authority under paragraph (1), the local authority which has received such a request must, as soon as reasonably practicable, cooperate in assisting the requesting local authority in both making and testing the off-site emergency plan.</i></p>	<p>Where the assistance of another local authority is required, a clear description of the role of that cooperating authority together with its responsibilities should be included within the lead local authority's off-site emergency plan.</p>	<p>These requirements are not covered elsewhere.</p> <p>It is reasonable to expect the Local Authority to have a schedule of activities that they carry out to update the off-site plan and plan for the test that they share with all stakeholders under established arrangements for local emergency planning. The lead local authority should work with all organisations including any other authorities, informing them of the schedule of activities so that each organisation can plan ahead and contribute (within reason) where required to enable the lead local authority to deliver regulatory outputs. Working to a schedule of activities is reasonable to expect and reduces the burden of many ad-hoc requests for assistance.</p> <p>If the other local authority did not follow the ACOP they could easily fall out of compliance. The lead local authority is <u>strongly encouraged</u> to plan their work with a schedule of activities to ensure the necessary input from</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
		all the LRF organisations and to meet regulatory timescales (i.e. review and test of plan every three years).
Regulation 15: Consultation and cooperation: employers		
<p><i>Regulation 15 (1-2)</i></p> <p><i>(1) In performing the duties imposed on an operator under regulations 4(1), 5(1), 6(1), 6(2), 7(1) and 10, that operator must consult any other employer who carries out work with ionising radiation on the premises and take into account relevant matters arising from that consultation.</i></p> <p><i>(2) Any employer who carries out work with ionising radiation at premises to which these Regulations apply must cooperate with the operator of those premises or the local authority in whose jurisdiction the premises is by providing information or otherwise to the extent necessary to ensure that the operator or local authority, as the case may be, is able to comply with the operator and the local authority's duty to prepare an emergency plan.</i></p> <p><i>(3) Any employer of any other person whose participation is reasonably required by any emergency plan required under these Regulations must cooperate with the operator or the local authority, as the case may be, in the exchange of information or otherwise to the extent necessary to ensure that the operator or the local authority is</i></p>	<p>A) Duties on Operators</p> <p>In relation to regulations 4(1), 5(1), 6(1), 6(2), 7(1) and 10, the operator should:</p> <ul style="list-style-type: none"> (a) request the details of relevant employers' work involving radioactive material in advance of drafting the hazard evaluation, and at each review of that evaluation. (b) consult any employers on the premises that have a role in the operator's emergency plan on that role when drafting the plan, or on any changes to that role on revision. (c) consider how relevant information obtained from the consultation with employees informs the hazard evaluation, the consequence assessment, reviews of either the evaluation or the assessment, or the operator's emergency plan. <p>B) Duties on Employers on Premises</p> <p>Employers should:</p> <ul style="list-style-type: none"> (a) upon request, provide the operator with a description of their work with ionising radiation 	<p>A: This <u>expands on the regulation</u> detailing what information is required (details of work with ionising radiation, role within the plan) and when (in advance of the drafting of and each revision to the hazard evaluation). The operator would be unlikely to fulfil the requirements of the regulation if it did not follow the ACOP.</p> <p>B: This <u>expands on regulatory requirements</u> by describing the information that should be provided by the employer (and by requiring the employer to put in place any measures needed to enable it to carry out its role in the plan. This is necessary to meet the intent of the regulation.</p>

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>enabled to comply with the requirements of these Regulations, insofar as the operator or the local authority's ability to comply depends on such cooperation.</i></p> <p><i>(1) The cooperation required by an employer or other person under paragraphs (2) and (3) extends to cooperation in the testing of emergency plans where such cooperation is necessary to secure compliance with regulation 12.</i></p>	<p>that involves radioactive material on the premises, advise the operator of any material change to their work with radioactive material on the premises, wherever practicable prior to that change.</p> <p>(b) put into place any reasonable measures that enable them to carry out their role in the operator's emergency plan within an agreed timeframe.</p> <p>C) Duties on Employers</p> <p>Employers of any other person whose participation is reasonably required by an emergency plan should:</p> <p>(a) Upon request, provide to the local authority or to the operator, details of procedures, employees, training, equipment or any other relevant information that is required to enable the local authority or the operator to perform their duties under these Regulations; and</p> <p>(b) Put into place any reasonable measures that enable them to carry out their role in either emergency plan within an agreed timeframe.</p>	<p>This expansion is not covered elsewhere in the Regulations. Duty holders would be <u>strongly encouraged</u> to follow the ACOP. If they did not it would lead to inadequate emergency plans.</p> <p>C: This <u>expands on regulatory requirements</u> by explaining what information would be required by the local authority or operator and requiring specific action to be taken to ensure the emergency plan is viable.</p>
<p>Regulation 20: Reference levels</p>		
<p><i>Regulation 20(1)</i></p> <p><i>(1) The operator or local authority which has prepared an emergency plan in accordance with regulation 10 or 11, as the case may be, must ensure that the emergency plan prioritises keeping</i></p>	<p>Reference levels should relate to the total residual effective dose (the dose expected to be incurred by an individual after protective action have been implemented) estimated to be received both during the</p>	<p>This <u>expands on regulatory requirements</u> by describing the periods and pathways that should be considered in relation to the</p>

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<i>effective doses below a 100 mSv reference level.</i>	<p>emergency (acute) and, for members of the public, over the first year following the emergency (annual).</p> <p>Reference levels for members of the public should include doses from the longer-term exposure pathways of ingestion, resuspension and external irradiation from deposited gamma-emitting radionuclides.</p>	dose quantities specified.
Regulation 21: Prior information to the public		
<p><i>Regulation 21 (1-2)</i></p> <p><i>(1) The local authority which has responsibility for an area covered by an off-site emergency plan with a detailed emergency planning zone must, in cooperation with the operator, ensure that members of the public are made aware of the relevant information, and, where appropriate, are provided with it.</i></p> <p><i>(2) The local authority which has responsibility for an area covered by an off-site emergency plan with an outline emergency planning zone must, in cooperation with the operator, ensure that members of the public have access to the relevant information.</i></p>	<p>Prior information should be supplied in an appropriate manner to members of the public who are in the detailed emergency planning zone, without their having to request it, so far as reasonably practicable.</p> <p>Prior information should be available in an accessible format to members of the public within the outline planning zone. If members of the public request such information they should be directed to it or provided with it in hard copy if requested.</p>	This expands on the regulatory requirement to provide information within DEPZs without their having to request it, clarifies the difference between the requirements within DEPZs and OPZs and enables public in OPZs to make a request for the information.
<i>(5) In preparing the information to be supplied in accordance with paragraph (1), the local authority</i>	In preparing the prior information the local authority should consult the operator, each local authority in the	This is justified as ACOP because it expands on the

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<p><i>must consult such persons who seems to that local authority to be appropriate.</i></p>	<p>detailed emergency planning zone and / or outline planning zone and the organisations that are named in the prior information, in addition to any other persons the local authority considers appropriate.</p>	<p>regulatory requirement by requiring consultation with specific parties. The LA would be expected to consult those listed in the ACOP and therefore it is a preferred method.</p>
<p><i>Regulation 21 (10)</i> <i>(10) Where a report is made pursuant to regulation 7, the local authority must make that report available to the public as soon as reasonably practicable after it has been sent to the regulator under that regulation (except that, with the approval of the regulator, the local authority must not make available any part or parts of such report for reasons of industrial, commercial or personal confidentiality, public security or national security).</i></p>	<p>A) The local authority should co-operate with the operator to identify whether any information should be excluded in the publicly available consequences report.</p> <p>B) The operator should make a written request to the regulator and the local authority to withhold any information identified in accordance with (paragraph above) at the time of submitting the consequences report to the local authority.</p> <p>C) The revised report should be made available to the public by the local authority as soon as is reasonably practicable after the regulator has given approval to withhold information.</p> <p>D)The local authority should ensure that publicly available versions of the consequences report are updated when changes are made under regulation 7(4).</p>	<p>A: This <u>expands on the regulatory requirement</u>, providing a means of identifying information which is industrially, commercially sensitive etc. Cooperation between the local authority and the operator is the <u>preferred method</u> for doing this.</p> <p>B: This <u>expands on the regulatory requirement</u> by specifying how the request should be made (written), when and by who. This method involves the operator in the process of identifying sensitive information (it is their report) and is therefore a preferred approach.</p> <p>C: This <u>expands on the regulatory requirement</u> by specifying when the local authority should publish a</p>

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
		<p>redacted report (as soon as possible after receiving approval to withhold information).</p> <p>D: This <u>expands on the regulatory requirement</u> by requiring the report to be kept up to date. Duty holders should be <u>strongly encouraged</u> to keep published information up to date.</p>
<p>Regulation 24: Radiation protection advisor</p>		
<p><i>Regulation 24 (1-2)</i></p> <p><i>(1) Every employer engaged in work with ionising radiation must consult one or more suitable radiation protection advisers about occupational and public exposure to assist with that employer’s preparations for responding to radiation emergency situations.</i></p> <p><i>(2) Where an employer consults a radiation protection adviser pursuant to the requirements of paragraph (1) (other than in respect of the observance of that paragraph), the employer must appoint that radiation protection adviser in writing and must include in that appointment the scope of the advice which the radiation protection adviser is required to give as if they were an employer under</i></p>	<p>A) To be suitable for the purposes of these Regulations, an RPA will need to have the specific knowledge, experience and competence required for giving advice on preparedness and response in radiation emergency situations for which the employer is making the appointment.</p> <p>B) Employers are required to consult an RPA where advice about occupational and public exposure is necessary for compliance with the Regulations. This should include:</p> <ul style="list-style-type: none"> (a) contingency planning; (b) emergency procedures; and (c) remedial actions. 	<p>A: This <u>expands on the regulatory requirement</u> by ensuring that the RPA is suitably experienced and competent to fulfil their duties. This is a clear expectation and is therefore a <u>preferred method</u>.</p> <p>B: This <u>expands on the regulatory requirement</u> by specifying the aspects of preparedness and response that the RPA should be consulted on. Consulting on these aspects will help to ensure compliance is achieved.</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
<i>the 2017 Regulations</i>		
Schedule 3: Assessment of consequences requirements (Regulation 5(2))		
<p><i>Schedule 3 (7-8)</i></p> <p><i>7. The assessment must identify any protective action that may need to be taken for the range of potential radiation emergencies.</i></p> <p><i>8. The assessment must assess the consequences of suitable and sufficient source terms by distance and by exposure pathway, and the distances to which protective action would be required based on the United Kingdom Emergency Reference Levels, published by Public Health England. [Footnote for location of PHE ERLs]</i></p>	<p><u>Assumptions for the radiological consequence assessment</u></p> <p>The consequence assessment performed in accordance with Schedule 3 should identify the range of potential consequences for:</p> <ul style="list-style-type: none"> a) the short-term (two days following the start of the release); and b) the long-term (in the twelve months following the radiation emergency). <p>The short-term consequence assessment should be used to determine:</p> <ul style="list-style-type: none"> a) the distance at which relevant ERLs would suggest that urgent protective actions are required for persons off-site; and b) the effective dose for emergency workers for comparison against the relevant reference level. <p>The long-term consequence assessment should be used to identify:</p>	<p>This ACOP describes what is considered ‘suitable and sufficient’ and defines how the distances for urgent protective action are determined including what emergency reference levels should be used.</p>

REPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	<p>a)the recommended extent of the geographical area upon which the local authority will determine the detailed emergency planning zone; and</p> <p>b)the effective dose to members of the public off-site for comparison against the relevant reference level in order to inform emergency planning.</p> <p><u>Operator’s recommendation of the minimum geographical extent for the detailed emergency planning zone</u></p> <p>For each representative source term that lies within the ‘detailed emergency planning required’ region of the REPIR risk framework (Appendix 2, Figure 2) the distance to where the potential dose saving (averted dose) from all relevant exposure pathways becomes equal to the lower ERL following implementation of the relevant urgent protective action, should be identified. These calculations should consider the most vulnerable member of the public off-site and should assume conservative weather conditions.</p> <p>(A) In calculating averted dose two calculations are required. Firstly, it should be assumed that the exposed individuals are subject to no protective actions and are outside during the entire exposure period (with no protection afforded from being inside a building). The second calculation is for the dose with</p>	

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	<p>the relevant protective action in place. The dose averted by this protective action is the difference between the two values.</p> <p>The largest distance identified from these assessments should be selected as a candidate for the recommended geographical extent for the detailed emergency planning zone.</p> <p><u>Determination of the distances for urgent protective actions</u></p> <p>The dose criteria upon which the operator's assessment identifies distances for consideration by the local authority for the introduction of appropriate urgent protective action (sheltering, and where appropriate, evacuation and stable iodine) should be that corresponding to the lower ERLs. The calculation of averted dose should be according to paragraph (A) above.</p> <p>In order to inform local authority planning for the implementation of urgent protective actions, the operator should also evaluate the distances where the upper ERLs may be applicable. Important factors such as the timescales within which protective action should be planned to be carried out should also be identified.</p>	

REPPIR 2019 Regulation Reference	Proposed ACOP text	Rationale for Decision
	<p><u>Assessment of total residual effective doses for members of the public</u></p> <p>The assessment of the geographical extent of the consequences of a radiation emergency should consider effective doses and, where relevant, equivalent doses, to members of the public from the boundaries of the premises out to a distance equivalent to 1 mSv effective dose in the first twelve months following an emergency. Urgent protective actions should be assumed to have been implemented.</p> <p>Ingestion doses should be based on the location of commercial food production from the vicinity of the site out to the distance at which food restrictions, if in place, would apply. After 24 hours, food restrictions should be assumed to be applied at the levels corresponding to the EU Maximum Permitted Levels in food currently applicable to the UK.</p>	