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|---|-------------------------------------|---|----------------|
| ONR GUIDE   |                                     |   |                |
| GUIDANCE TO SUPPORT THE MEMORANDUM OF UNDERSTANDING BETWEEN ONR AND HSE ON EFFECTIVE REGULATION OF IRR17 IN RELATION TO THE TRANSPORT OF RADIOACTIVE MATERIAL |                                     |   |                |
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## **1. INTRODUCTION**

1.1 In 2018, the Office for Nuclear Regulation (ONR) formally entered into a Memorandum of Understanding (MoU) with the Health and Safety Executive (HSE) on effective regulation of the Ionising Radiations Regulations 2017 (IRR17) in relation to the transport of radioactive material arising from the transfer of enforcement responsibilities under IRR17 itself.

1.2 The MoU is available on the ONR website at <http://www.onr.org.uk/documents/2018/mou-onr-hse.pdf>

1.3 The MoU establishes the high-level working relationship between ONR and HSE.

1.4 This Guide is for the reference of ONR and HSE staff to support effective cooperation and communication, and the delivery of both parties' regulatory responsibilities.

## **2. PURPOSE AND SCOPE**

2.1 This document is intended to confirm existing operational liaison arrangements and to provide standalone guidance to ONR and HSE inspectors concerning the working-level implementation of this MoU between both parties.

2.2 The MoU and this guidance document relate principally to the enforcement responsibilities associated with IRR17 and the transport of radioactive material.

2.3 ONR and HSE will review the MoU not later than three years after signature.

2.4 This ONR Guide is subject to periodic amendment and review as appropriate, to ensure that working arrangements between ONR and HSE are relevant, deliverable and proportionate. The ONR Team with responsibility for transport inspection activities will carry out any updating of this Guide.

## **3. THE IONISING RADIATIONS REGULATIONS 2017 (IRR17)**

3.1 It is recognised that there are other regulatory bodies with enforcement responsibilities in relation to transport aspects of IRR17. This guidance relates only to HSE and ONR in relation to who takes the enforcement lead for IRR17 in relation to transport of radioactive material by road, rail and inland waterway in Great Britain.

3.2 In relation to IRR17, ONR is the enforcing authority in relation to civil transport of radioactive material in Great Britain by road, rail and inland waterway.

3.3 In relation to IRR17, HSE is the enforcing authority in relation to defence transport of radioactive material in Great Britain by road, rail and inland waterway.

3.4 The over-arching details relating to enforcement are laid out in the MoU.

3.5 As independent regulators HSE and ONR are legally required by virtue of Section 96 of the Energy Act 2013 to enter into and maintain arrangements to cooperate and exchange information with each other in connection with the carrying out of their respective regulatory functions. The MoU and actions arising from it are intended to fulfil that statutory requirement.

## **4. WORKING-LEVEL ARRANGEMENTS**

4.1 In accordance with Section 96(1) of the Energy Act, ONR and HSE will seek to provide assistance to one another to support regulatory interventions, where appropriate.

4.2 The detail of agreed working arrangements as they apply to a range of operational situations is detailed in Appendix 10.1.

## **5. LIAISON**

5.1 It is vital that ONR and HSE inspectors liaise with one another in regard to transport enforcement and matters arising where further action is required. This will be routinely achieved via the HSE/ONR Operational liaison forum which meets on a regular basis, and directly as the situation dictates.

## **6. ENFORCEMENT**

6.1 Both ONR and HSE will work together in line with the provisions of the Regulators' Code to ensure that regulatory activities are consistent, coordinated and comprehensive and will ensure that enforcement decisions relating to transport contraventions are made in consultation with the other, taking into account the others' view and in accordance with the relevant organisations Enforcement Policy Statement, operational procedures, and Enforcement Management Model (EMM).

## **7. INFORMATION**

7.1 The nature of information to be exchanged is detailed in Appendix 10.2.

7.2 Care should be taken to handle information appropriately according to its' security classification.

7.3 In relation to data protection issues, ONR and HSE have an agreement to support their work in relation to this issue. [ **Information Sharing Agreement between HSE and ONR** in relation to the transport of radioactive substances, effective from 11/12/18, CM 2018/385625]

7.4 ONR and HSE do not share databases for the purposes of recording inspection or enforcement activity for respective dutyholders in relation to IRR17 and transport of radioactive material.

## **8. COST RECOVERY**

8.1 Although applicable to HSE, Fee for Intervention (FFI) is not applicable in relation to IRR17 transport enforcement undertaken by ONR.

## **9. REQUESTS FOR DISCLOSURE OF INFORMATION / MEDIA ENQUIRIES**

9.1 All requests for disclosure of information relevant to IRR17 dutyholders involved in transporting radioactive material should be directed to the relevant organisation based on enforcement responsibility. If either organisation is intending to disclose information relevant to the other, it will make the other aware of its intention prior to disclosure.

For ONR, this is via [contact@onr.gov.uk](mailto:contact@onr.gov.uk)

For HSE, this is via <http://www.hse.gov.uk/foi/index.htm>

9.2. All media enquiries concerning ONR's duty holders will be coordinated by ONR's Communications Team. Similarly media enquiries concerning HSE's duty holders will be coordinated by HSE Media Centre. Where there is shared enforcement remit, considering the nature of the work undertaken, both organisations will liaise to ensure the other is aware so as to provide an appropriate response.

## 10. APPENDICES

### 10.1: Working level arrangements

10.1.1 This document details a range of foreseeable operational circumstances and highlights where ONR and where HSE are likely to have the IRR17 enforcement lead in relation to radioactive material being transported or moved. The scenarios presented here cannot be exhaustive, and the detail of individual cases may need to be discussed with the relevant HSE/ONR Operational lead to determine an appropriate way forward to ensure effective regulation for those particular circumstances.

10.1.2 HSE has nominated operational leads for this work, as does ONR, and issues or concerns inspectors have should be channelled via their respective operational lead in the first instance.

10.1.3 Inspectors should consider the following general pointers when seeking to assess who (between HSE and ONR only) takes the enforcement lead for IRR17 in relation to transport of radioactive material by road, rail and inland waterway in Great Britain.

- a) Transport is defined in IRR17 Regulation 2(1) as carriage on a road or through another public place (whether on a conveyance or not) or by rail, inland waterway, sea or air.
- b) In-transit storage is a "pause" in the journey, and constitutes "transport."
- c) Temporary storage where radioactive material may be transiently held between periods of its' use, does not constitute "transport."
- d) Transport extends from any preparatory process (such as packaging) until the material has been unloaded at its destination so this includes in-transit storage. Where transport ceases will be a matter of inspectors judgement, based on circumstances however it is likely that transport will continue until the goods have been properly received by the consignee.
- e) ONR is the enforcing authority for civil transport of radioactive material transported by road, rail and inland waterway, including in-transit storage. Civil transport is transport other than for the purposes of defence. 'Road' is defined in The Health and Safety (Enforcing Authority) Regulations 1998 (EAR) and relates to those which are accessible to the public.
- f) HSE is the enforcing authority for all transport of radioactive material by road, rail and inland waterway, including in-transit storage, where transport is for defence purposes. Defence purposes is not defined in relevant legislation, however see (g) below.
- g) In relation to IRR17 and what is and is not transport for defence purposes, it is irrelevant what is being transported – it is the purpose of the transport that is relevant. If an item can have both a civil or military use, the enforcing authority for any particular journey will depend on the purposes of the transport.

h) Where intended civil transport of radioactive material involves transport by road at any stage, ONR is likely to be the enforcing authority.

i) Where the intended journey relates to civil transport and involves only transport by pedestrian, with or without the use of any associated conveyance, HSE is likely to be the enforcing authority.

j) Whereas 'transport' is defined in Regulation 2, there is no IRR17 definition of 'movement' but the terms are distinct and different. Transport covers all conveyance through public places. The inferred meaning of movement is conveyance through a place to which there is some public access restriction.

k) HSE is likely to be the enforcing authority for movement other than where this takes place on nuclear premises. ONR is the enforcing authority for movement on nuclear premises.

10.1.4 Tables 10.1 to 10.6 provide a range of operational scenarios and likely enforcement roles, along with supplementary considerations to assist inspectors. Scenarios are based on collective operational experience. Although the discussion focuses on requirements of IRR17, other relevant radiation legislation is referenced as appropriate in the 'Basis of Understanding/Supplementary information' section to assist inspectors although it should be noted that references to legislation are not exhaustive.

10.1.5 The working assumption is that the material under consideration meets the definition of a radioactive substance given in IRR17 Regulation 2(1).

10.1.6 As well as being the enforcing authority for IRR17 in relation to defence transport by road and rail, HSE is also the enforcing authority for a range of other IRR17 practices (processing, production, storage, holding, use of radioactive substances) so where ONR inspectors have concerns in these areas, arising from inspections or otherwise, these should also be forwarded to HSE as appropriate.

10.1.7 Of relevance to transport, it should be noted that HSE is the appropriate authority in relation to suspected overexposure (Reg 26) and notification of certain occurrences (Reg 31) which involves spill or release of material or loss or theft of radioactive substances, where these take place other than on nuclear premises. [HSE is also clearly the authority in relation to a range of other regulatory requirements i.e. medical appeals, approval of dosimetry services, specifying criteria of competence for Radiation Protection Advisers (RPAs)]

10.1.8 In Tables 10.1 to 10.6:-

CDG refers to The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment 2009

TEA13 refers to The Energy Act 2013

EAR refers to The Health and Safety (Enforcing Authority) Regulations 1998

CAA refers to the Civil Aviation Authority

ORR refers to the Office of Rail and Road

BEIS refers to the Department for Business, Energy and Industrial Strategy

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**Table 10.1 Operational scenarios typically relating to radioactive material at airports and sea ports**

| Identifier & scenario  | Likely enforcement lead   | Basis of understanding/supplementary information  |
|--|---|---|
| <p><b>10.1 In connection with airports and seaports</b><br/> <b>10.1.1 In-transit storage of radioactive material at an airport cargo shed</b></p> |   |   |
| <p>a) routine inspection</p>   | <p>ONR to take IRR17 lead in relation to transport of radioactive material, transport extending from any preparatory process (such as packaging) till material has been unloaded at its' destination so this includes in-transit storage.</p> | <p>All in-transit storage or any pause remains "transport", and therefore ONR is the enforcing authority.</p> <p>EAR specifies ONR's enforcement remit in relation to IRR17. This aligns with ONR's transport purpose in TEA13. Transport begins with any preparatory process (such as packaging) and ends with the package being unloaded at its destination.</p> <p>HSE and ONR have agreed that ONR will generally have enforcement responsibility for the entirety of land-based transport of packages containing radioactive material where that journey also involves transport by public road. This means that ONR will be the enforcing authority for transfer through a restricted access location following a road journey i.e. airside through all ground based operations, until the recognised interface with CAA is reached (as detailed in current HSE/HSENI/CAA MoU and associated guidance CAP1484). This aligns with the BEIS policy intent for ONR to enforce where HSE did previously in relation to IRR99.</p> <p>ONR would take the IRR17 enforcing remit in IRR17 in relation to exposure of ground handling staff and passengers. Crew exposure is a matter for CAA.</p> <p>Note: ONR does not have an enforcement remit airside in relation to CDG.</p> <p>Note: Environment Agencies will have an interest in relation to environmental legislation governing radioactive material. Generally they allow in-transit storage for 2 weeks without permit/authorisation.</p> |

**Table 10.1 (continued)**

| Identifier & scenario   | Likely enforcement lead   | Basis of understanding/supplementary information  |
|---|---|---|
| <p><b>10.1 In connection with airports and seaports</b><br/>           10.1.1 In-transit storage of radioactive material at an airport cargo shed</p>   |   |   |
| <p>b) When a package gets stuck i.e. can't continue its intended journey, and then package is taken into longer term storage at an in-transit depot until the issue preventing it continuing its journey is resolved.</p> | <p>ONR, as this is still transport, even though the material has not reached its' destination.</p>  | <p>There are many reasons why a package containing radioactive material can get stuck i.e. inappropriately labelled, radioactive contents have not been declared, or declared incorrectly, package damaged requiring re-packing. Assuming the package continues its' intended journey, ONR would retain enforcement responsibility for IRR17 and transport.</p> <p>Where a package can no longer make its' original journey because a consignee no longer wishes to accept it i.e. contaminated steel items, alternative transport arrangements may be required. ONR would retain enforcement responsibility for the new transport arrangements. Where it is clear material can neither make its original journey, nor are there alternative transport arrangements planned, then in these circumstances there is scope for enforcement responsibility to switch to HSE as material may be considered to be in temporary storage.</p> <p>Note: May also involve Environment Agencies as storage could well exceed the 2 week period they generally allow to avoid the need for permit/authorisation under environmental legislation governing radioactive material.</p> |
| <p><b>10.1 In connection with airports and sea ports</b><br/>           10.1.2 UK Border Force operations</p>   |   |   |
| <p>a) routine inspection</p> <p>b) Suspect package identified via Operation Cyclamen coming into country and quarantined by UK Border Force for further examination, package opened and contents may be spilled</p>       | <p>a) HSE lead as Border Force has no transport role</p> <p>b) ONR is enforcing authority for IRR17 transport as this is not the destination for the package.</p> | <p>b) There may be an element of preparation of a new package suitable for onward transport.</p> <p>Note: CDG would apply where the package was not airside, so ONR would also be enforcing this in relation to Class 7 dangerous goods (radioactive material)</p>  |



**Table 10.1 (continued)**

| Identifier & scenario   | Likely enforcement lead   | Basis of understanding/supplementary information  |
|---|---|---|
| <p><b>10.1 In connection with airports and seaports</b><br/>                     10.1.3 Inappropriately packaged radioactive material in cargo hold on aircraft arriving into the UK</p>  |   |   |
| <p>Resulting doses to</p> <p>a) aircraft crew</p> <p>b) passengers</p> <p>c) ground handling staff,</p> <p>d) 3<sup>rd</sup> party carriers/driver when subsequently moved by road down the transport chain</p> <p>e) consignee</p> | <p>a) CAA</p> <p>b) ONR</p> <p>c) ONR</p> <p>d) ONR, as this is clearly linked to transport.</p> <p>e) Most likely to be HSE as transport concludes at the point the material is received at its destination, and doses to the consignee at that point are unlikely to have been significant.</p> | <p>CAA has enforcement responsibility in relation to occupational exposure of crew and overall flight safety. [HSE/HSENI/CAA MoU and associated guidance CAP1484 describes this.] The non-CAA role for IRR17 transport enforcement includes ground handling operations, and public exposure of passengers and ONR will have responsibility for this given that ONR and HSE have agreed that transport through a restricted area (airside)</p> <p>Note: ONR is unlikely to have an enforcement remit in relation to CDG airside.</p> |
| <p><b>10.1 In connection with airports and sea ports</b><br/>                     10.1.4 Cargo received at a sea port</p>   |   |   |
| <p>Bulk ore (zircon sands) arriving at UK port by sea for onward transport to manufacturing plant for use</p>   | <p>Enforcement for IRR17 transport would rest with ONR (assuming material was 'radioactive material' as defined )</p>   | <p>HSE and ONR have agreed that ONR will generally have enforcement responsibility for the entirety of land-based civil transport of radioactive material where that transport involves an element of transport by public road in GB. This means that ONR will be the enforcing authority for transfer through a restricted access location i.e. dockside, and onwards to the final destination (and vice-versa).</p>   |

**Table 10.1 (continued)**

| Identifier & scenario   | Likely enforcement lead | Basis of understanding/supplementary information  |
|---|-------------------------|---|
| <p><b>10.1 In connection with airports and sea ports</b><br/>           10.1.4 Cargo received at a sea port</p> |                         |   |
|   |                         | <p>Inspectors should be mindful of requirements of the Dangerous Goods in Harbour Areas Regulations 2016 (DGHAR16). HSE and Harbour Authorities have enforcement responsibilities in relation to DGHAR16.</p> <p>The Harbour Authority may need to regulate the movement of radioactive material within the harbour area where this creates a risk to health and safety. This may mean that IRR17 applies to these limited circumstances within an access restricted area, and given there may be no journey by public road associated with the party moving the load at this time i.e. a berth operator, HSE would enforce in relation to IRR17 and this movement.</p> |

**Table 10.2 Operational scenarios typically relating to hospitals, universities and research establishments**

| Identifier & scenario  | Likely enforcement lead   | Basis of understanding/supplementary information  |
|--|---|---|
| <p><b>10.2 In connection with hospitals, universities and research establishments</b><br/> <b>10.2.1 Routine inter-departmental transfer</b></p>   |   |   |
| <p>a) Where a package is prepared for transport, and subsequently placed on a vehicle and taken on access restricted roads (on a campus) then on public roads</p> <p>b) where radioactive material is transferred between two Departments, and this takes place by vehicle on access restricted roads</p> <p>c) where a pedestrian transfers a package containing radioactive material between two University buildings through a public place with or without use of a conveyance</p> | <p>a) ONR will lead.</p> <p>b) this constitutes movement not transport and HSE enforce IRR17 in relation to movement on non-nuclear premises.</p> <p>c) HSE will lead in relation to IRR17 and transport.</p> | <p>A package containing radioactive material taken through a public place, whether on a conveyance or not, constitutes transport. ONR enforce in relation to civil transport of radioactive material by road, rail and inland waterway only. ‘Road’ is defined in EAR.</p> <p>Movement relates to access restricted places which could be on company premises, or on a University campus. HSE enforce in relation to movement on non-nuclear premises.</p> <p>HSE and ONR have agreed that where part of the intended journey was by public road and part on access restricted roads (which could be case within a University campus), then ONR will lead for the entirety. This is the case even if the journey does not progress as anticipated. This pragmatic approach avoids switching between regulators given the questionable status of some roads, particularly on campus.</p> <p>HSE enforce in relation to IRR17 and transport where radioactive material is transferred by a pedestrian.</p> <p><b>Note: Inspectors should be aware that guidance in para 597 of ‘Work with ionising radiation’ (L121, 2<sup>nd</sup> edition) reads:</b></p> <p><i>“597 If a site is open to the public, such as a hospital or University, movements of radioactive substances by vehicle within the site are defined as transport.”</i></p> <p>HSE and ONR have agreed that para 597 will not be used as working guidance on this matter.</p> |

**Table 10.2 (continued)**

| Identifier & scenario   | Likely enforcement lead   | Basis of understanding/supplementary information   |
|---|---|--|
| <p><b>10.2 In connection with hospitals, universities and research establishments</b></p>   |   |  |
| <p>10.2.2 Routine Radiopharmacy inspection</p>  |   |  |
| <p>Where preparing patient doses/vials and hence the package for :</p> <p>a) movement to other areas of the same hospital on the same premises</p> <p>b) transport to local hospitals/vets</p>  | <p>In relation to IRR17,</p> <p>a) preparation of the package and associated movement will be enforced by HSE</p> <p>b) preparation of the package and associated transport will be enforced by ONR</p>   | <p>Note: Medical Exposures aspects of IRR17 moved to Department of Health and Devolved Administrations in relation to enforcement.</p>   |
| <p>10.2.3 Specific Radiopharmacy adverse events</p>   |   |  |
| <p>a) Failure in QA procedures e.g. dose calibrator fails, which has dose consequences for employees during preparation, employees that are subsequent drivers/carriers when material moved by road, or 3<sup>rd</sup> party carriers</p> | <p>Both ONR and ONR likely to have enforcing remit here.</p> <p>HSE enforcing remit covers occupational exposure consequences for workers in the Radiopharmacy.</p> <p>ONR remit includes preparatory process relating to subsequent transport.</p> <p>Dose consequences for carriers/drivers (3<sup>rd</sup> party or otherwise) could fall to either, but most obviously transport related so most likely to be ONR that lead in this area.</p> | <p>HSE and ONR have agreed that preparation of vial contents could be an appropriate starting point for the 'transport' practice, as this marks the start of preparation of packaging however a range of tasks within the range of radiopharmacy operations could readily be considered as practices as well i.e. handling, storage of generator for instance. A task may not be just one practice in isolation. Both HSE and ONR will have a legitimate enforcement interest in these circumstances. To try to establish an absolute boundary between what HSE and ONR enforce here will result in unhelpful operational constraints.</p> |

**Table 10.2 (continued)**

| Identifier & scenario   | Likely enforcement lead   | Basis of understanding/supplementary information   |
|---|---|--|
| <p><b>10.2 In connection with hospitals, universities and research establishments</b><br/> <b>10.2.3 Specific Radiopharmacy adverse events</b></p>  |   |  |
| <p>b) A patient dose/vial is prepared for transport but the journey does not start and material is subsequently decay stored instead pending disposal</p>   | <p>HSE take the IRR17 lead in relation to this temporary storage.</p>   | <p>This is not in-transit storage, so is not transport, as the package now has no planned transport associated with its preparation.</p>   |
| <p><b>10.2.4 Decommissioning of medical equipment and transport of associated sources</b></p>   |   |  |
| <p>Decommissioning a teletherapy unit, source transport and disposal project – shielding plug found to be missing after road transport to disposal facility.</p>  | <p>ONR is the most likely enforcing authority for IRR17 and transport here given that the central issue surrounds inappropriate preparation of packaging.</p>               | <p>Transport begins with any preparatory process (such as packaging) and ends with the package being unloaded at its destination in accordance with EAR.</p> <p>ONR would also consider CDG obligations which are highly relevant.</p> <p>Note: There could be scope for Health and Safety at Work etc Act 1974 Section 6 enforcement action to be taken by HSE depending on the facts of the case.</p>  |
| <p><b>10.2.5 Collection of radioactive waste / spent generators</b></p>   |   |  |
| <p>a) Radioactive waste collected by a carrier from hospitals, and according to transport documentation, consignee (with incinerator) located elsewhere. Carrier storing collected waste on own site for reasons unknown for protracted period.</p> <p>b) Carrier deliberately decay storing radiation generators at request of supplier to enable bulk transport of excepted packages or exempt material</p> | <p>The reason the carrier is storing the waste needs to be understood, and until this time HSE and ONR should work together in any associated investigation.</p> <p>HSE</p> | <p>If this is deemed in-transit storage then IRR17 applies to the carrier when material is being transported from hospital, any in-transit storage and through to destination. ONR will have enforcement responsibility of IRR17 and transport.</p> <p>If the waste is being decay stored, or stored pending transport elsewhere for incineration, then this may not be in-transit storage, and HSE may be the relevant enforcing authority.</p> <p>See 10.5.3 below</p> |

**Table 10.3 Operational scenarios relating to radioactive material in the public domain**

| Identifier & scenario   | Likely enforcement lead  | Basis of understanding/supplementary information  |
|---|--|---|
| <b>10.3 In connection with events in the public domain</b>  |  |   |
| 10.3.1 Package left in public place   |  |   |
| <p>Package containing radioactive material left in public place as a consequence of (failed) in-transit transfer of packages between 3<sup>rd</sup> party carrier vehicles</p>  | <p>ONR are most appropriate enforcing authority to lead investigation as this is transport, even though there has been an unintentional pause.</p>   | <p>All in-transit storage or any pause remains “transport, and therefore ONR is the enforcing authority.</p> <p>Note: Event would likely be notifiable to HSE as the “appropriate authority” and this would need to be shared with ONR as the enforcing authority. Similarly it would likely be notifiable to ONR (by virtue of CDG obligations) and information similarly shared with HSE.</p> |
| 10.3.2 Package stolen   |  |   |
| <p>Package stolen from vehicle parked in a private driveway.</p>  | <p>ONR are most appropriate enforcing authority as this is transport. The package was yet to be unloaded at its’ destination.</p>  | <p>All in-transit storage or any pause remains “transport”, and therefore ONR is the enforcing authority.</p> <p>Note: Event would likely be notifiable to HSE as the “appropriate authority” and this would need to be shared with ONR as the enforcing authority. Similarly it would likely be notifiable to ONR (by virtue of CDG obligations) and would need similarly shared with HSE.</p> |
| 10.3.3 Orphan sources   |  |   |
| <p>In circumstances where an ‘orphan’ source is :-</p> <p>a) transported unknowingly within GB</p> <p>b) identified at metal recycling plant and subsequently transported elsewhere</p> <p>c) identified at metal recycling plant and retained for safe storage pending further enquiries</p> | <p>a) IRR17 applies during transport, and ONR will lead.</p> <p>b) IRR17 applies during transport, and ONR will lead.</p> <p>c) Temporary storage where HSE lead in relation to IRR17.</p> | <p>a) IRR17 applies to radioactive material being transported even if the presence of material has not been appropriately declared in a consignment.</p> <p>c) Storage is considered temporary storage rather than in-transit storage (as the item has no current destination, and has not just paused in its’ journey) so HSE will lead in relation to IRR17 at this time.</p>                 |

**Table 10.3 (continued)**

| Identifier & scenario   | Likely enforcement lead  | Basis of understanding/supplementary information   |
|---|--|--|
| <p><b>10.3 In connection with events in the public domain</b><br/> <b>10.3.3 Orphan sources</b></p>                         |  |  |
| <p>In circumstances where an 'orphan' source is :-</p> <p>d) identified in the public domain and is subsequently stored</p> | <p>d) Where an item needs to be transported by road for secure storage pending appropriate disposal etc, ONR will lead in relation to IRR17 transport.</p> <p>Assuming temporary storage follows until appropriate disposal route/transport plan identified, HSE will lead in relation to IRR17.</p> | <p>d) Storage is considered temporary storage rather than in-transit storage (as the item has no current destination, and has not just paused in its' journey) so HSE will lead in relation to IRR17 in relation to the 'storage' component.</p> |

**Table 10.4 Operational scenarios involving industrial applications**

| Identifier & scenario   | Likely enforcement lead  | Basis of understanding/supplementary information   |
|---|--|--|
| <p><b>4 Industrial applications</b><br/> <b>4.1 Nuclear density gauge</b></p>   |  |  |
| <p>a) normal use</p> <p>b) Reactive response to NDG stolen from a temporary storage site.</p> <p>c) Theft of a NDG which remains in a parked vehicle in a company depot that has a dedicated materials store.</p> <p>d) Loss of NDG somewhere following use, and not discovered for 3 months.</p> | <p>ONR has enforcement responsibility for IRR17 transport, and HSE has enforcement responsibility for gauge use.</p> <p>b) HSE has the enforcement responsibility in relation to IRR17.</p> <p>c) HSE likely to take enforcement lead where a gauge remains loaded on a vehicle (at the end of use) and there has been no preparation for transport for next use. Although technically the last transport has not ended i.e. the gauge has not been unloaded at its' destination, the greater failing is likely to be inappropriate storage.</p> <p>d) HSE likely to take enforcement lead</p> | <p>Where a gauge is returned to its' transport case, it may not be being prepared for transport, and may just be returned temporarily for shielding purposes. This will influence the enforcement lead. [ONR lead in relation for preparation of packaging connected with transport. HSE will lead where a gauge is returned to its' packaging for shielding purposes and is not being prepared for transport.]</p> <p>Temporary storage is not the same as storage in transit. A temporary storage site is used when it is intended that a particular facility will provide suitable storage between periods of use of a gauge. Where material is described as being in In-transit storage at a warehouse or depot or similar, this means the journey the radioactive material is taking is paused, along the route to its' destination. In-transit storage is transport.</p> <p>Note: Likely that Environment Agencies regulatory interest would be significant in relation to (b).</p> <p>d) Failure in source accountancy is likely to be the most significant issue so this sits most appropriately with HSE.</p> |

**Table 10.4 (continued)**



| Identifier & scenario  | Likely enforcement lead  | Basis of understanding/supplementary information  |
|--|--|---|
| <b>10.4 Industrial applications</b><br>10.4.2 Site radiography (for civil purposes)  |  |   |
| <p>a) Package not consigned properly e.g. industrial radiography source not fully retracted once site work completed, then transported by road in GB resulting in excess dose while packing up equipment, during transport for driver/crew, and once unloaded back at base until issue discovered.</p> <p>b) Source disconnects from wind-out mechanism during site radiography, and subsequent retrieval operations</p> | <p>a) Both ONR and HSE likely to be involved, taking forward enforcement action jointly. ONR would take enforcement responsibility for transport, with HSE taking enforcement responsibility for other relevant work practices.</p> <p>b) ONR has enforcement responsibility for preparation of packaging i.e. an emergency source container being loaded with the retrieved source that the dutyholder intends to transport by public road. HSE has enforcement responsibility for IRR17 in relation to the source retrieval.</p> | <p>a) ONR may lead based on failure to prepare the package or HSE may lead enforcement action based on the inappropriate work practices towards the end of site radiography. There could be scope for identifying the bigger failing if appropriate but clearly there is scope to consider taking forward joint enforcement action.</p> <p>b) ONR will have an enforcement responsibility from around the point the source is free to be transferred to the emergency packaging, assuming there is an associated journey to be made by public road.</p>   |
| <b>10.4.3 Site radiography (for defence purposes)</b>  |  |   |
| <p>Site radiography carried out at a defence site , or for defence purposes</p>  | <p>During pro-active site inspection work , HSE is likely to gather information relating to IRR17 transport issues, and pass this to ONR. This is a pragmatic approach to avoid vires issues.</p> <p>Care is required in reactive cases. HSE and ONR will liaise till the most appropriate enforcing authority becomes evident.</p>  | <p>Where an incident involves a source being prepared for transport, where that takes place will dictate the IRR17 transport enforcing authority. HSE has the remit for enforcing conventional health and safety, IRR17 and REPPiR on Crown sites so preparation of a package for transport at these locations would fall within HSE's IRR17 transport remit.</p> <p>ONR is responsible for enforcing conventional health and safety, IRR17 and REPPiR on nuclear licensed and defence authorised sites so preparation of a package for transport at these locations would fall within ONR's IRR17 transport remit.</p> |

**Table 10.5 Operational scenarios - miscellaneous**

| Identifier & scenario   | Likely enforcement lead  | Basis of understanding/supplementary information   |
|---|--|--|
| <b>10.5 Miscellaneous</b>   |  |  |
| 10.5.1 Rail transport   |  |  |
| <p>a) Rail transport of radioactive material associated with facilities/waste/disposal, typically relating to nuclear materials</p> <p>b) Installed tritium dials on train</p>  | <p>a) ONR is the enforcing authority for ‘railways’ <u>except</u> in relation to defence where HSE are the enforcing authority.</p> <p>b) Installed dials form an integral part of conveyance so are not considered to be transport as defined in IRR17 regulation 2(1).</p> | <p>Enforcement responsibility passed from ORR to ONR by virtue of amendment to the Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006. This includes tramways.</p> <p>Note: ORR has no enforcement responsibility for IRR17.</p> <p>In relation to defence transport generally, please refer to section 10.6</p> |
| 10.5.2 On access restricted premises  |  |  |
| <p>a) Radioactive material, for purposes other than defence, re-located between areas on nuclear premises</p> <p>b) Radioactive material for purposes other than defence re-located between areas on non-nuclear premises</p> | <p>a) ONR, as on nuclear premises.</p> <p>b) HSE</p>   | <p>This does not constitute transport – it is movement.</p>  |

**Table 10.5 (continued)**

| Identifier & scenario   | Likely enforcement lead | Basis of understanding/supplementary information                                   |
|---|-------------------------|--|
| 10.5.3 Carrier engaged in deliberate decay storage  |                         |  |
| Carrier deliberately decay storing radioactive material i.e. radiation generators, for extended period to allow them to be bulk transported as excepted packages (or exempt from CDG) | HSE                     | This is not a pause in the journey. This is temporary storage for another purpose. |

**Table 10.6 Operational scenarios in relation to defence**

| Identifier & scenario  | Likely enforcement lead   | Basis of understanding/supplementary information  |
|--|---|---|
| 10.6 Defence   |   |   |
| <p>Note:</p> <p>HSE has the enforcing responsibility in relation to IRR17 and transport by road, rail and inland waterway, including in-transit storage, that is undertaken for defence purposes. It is the purpose of the transport that is key, and not the item that is being transported.</p> <p>In relation to CDG, ONR undertakes a limited enforcement role in relation to defence, principally in relation to industrial items used by MoD. The Defence Nuclear Safety Regulator (DNSR) has the main role in ensuring that in relation to instruments of war and associated manufacturing, research and production facilities, CDG obligations are met.</p> <p>It is important to note that DNSR has no enforcing role to play in relation to IRR17 and defence transport.</p> <p>MoD use radioactive material spanning a range of civil and military applications. Gaseous tritium items (GTLs and GTLDs), compasses, and items such as thorium coated lenses and thoriated engine components, are common. Smoke detectors, site radiography and nuclear density gauges also feature. MoD publication JSP 392 contains more details of a range of uses of ionising radiation. Defence transport could relate to MoD, MoD contractors or third party carriers transporting any of these items (and others) for MoD’s defence purposes.</p> <p><u>It is not possible to indicate here how far removed from MoD transport can be before it stops being ‘for defence purposes’. It will depend on the facts of the case, and ONR and HSE inspectors will be expected to liaise and work together and seek legal advice as necessary until the position becomes clear.</u></p> |   |   |
| 10.6.1 Carriers  |   |   |
| <p>a) A third party carrier transporting radioactive material for MoD i.e. GTLs or waste</p> <p>b) Third party carrier transporting radioactive material for delivery to a “defence establishment” and a University (with no connection to defence.)</p>   | <p>a) HSE is likely to be the enforcing authority</p> <p>b) HSE has enforcing responsibility for the defence aspect, and ONR has the responsibility for the civil (University ) aspect.</p> | <p>a) Care is required to establish the circumstances, particularly associated with waste and whether there is any transfer of ownership of that waste associated with the service provided by a defence contractor.</p> <p>b) It is important at pro-active inspections of carriers to identify the scope of their work (are there links to defence transport?) and be aware of them, highlighting vires to the dutyholder. It is more likely that ONR will routinely encounter these dutyholders given their CDG enforcement remit.</p> |

**Table 10.6 (continued)**

| Identifier & scenario  | Likely enforcement lead  | Basis of understanding/supplementary information  |
|--|--|---|
| <p><b>10.6 Defence</b><br/>10.6.1 Carriers</p>   |  |   |
|  | <p>Care is required in relation to reactive cases so HSE and ONR will liaise and work together until the most appropriate enforcing authority becomes evident.</p>   | <p>For investigation purposes, ONR likely to be involved in any case in relation to an incident from a CDG perspective but ONR and HSE may need to closely liaise over IRR17 transport until facts of case established.</p>   |
| <p>10.6.2. Site radiography for defence purposes</p>   |  |   |
| <p>Site radiography carried out by contractor at a defence site, or for defence purposes</p> | <p>During a pro-active inspection of site radiography, HSE is likely to gather information relating to IRR17 transport issues, and pass this to ONR in cases where contractors also undertake site radiography in the civilian sector.</p> <p>Where an incident involves a source being prepared for transport, where that takes place will dictate the IRR17 transport enforcing authority.</p> | <p>This is a pragmatic approach adopted to avoid any vires issues.</p> <p>HSE has the remit for enforcing conventional health and safety, IRR17 and REPPiR on Crown sites so preparation of a package for transport at these locations would fall within HSE's IRR17 transport remit.</p> <p>ONR is responsible for enforcing conventional health and safety, IRR17 and REPPiR on nuclear licensed and defence authorised sites so preparation of a package for transport at these locations would fall within ONR's IRR17 transport remit.</p> |
| <p>10.6.3 Military surplus</p>   |  |   |
| <p>a) Items such as military watches, compasses etc sold by surplus stores</p>               | <p>a) ONR is likely to have the enforcing responsibility for IRR17 and transport by the purchaser.</p>   | <p>b) Once sold, the item has changed ownership and any transport is unlikely to be linked to a defence purpose thereafter.</p>   |

**Table 10.6 (continued)**

| Identifier & scenario   | Likely enforcement lead                            | Basis of understanding/supplementary information  |
|---|--|---|
| <b>10.6 Defence</b><br>10.6.3 Military surplus  |  |   |
| b) Re-purposed military helicopter (containing radioactive sources as part of in-blade monitoring system) | b) Enforcing authority for IRR17 transport is ONR. | b) Had the helicopter been in its' original condition, and operating, then IRR17 would not have applied as ' <i>...a substance is not considered as being transported if.....it forms an integral part of a conveyance and is used in connection with the operation of that conveyance</i> '<br><br>However given the conveyance had been decommissioned and re-purposed, IRR17 does apply. |

## APPENDIX 10.2: Exchange of information

This document provides working level detail in support of the broader Memorandum of Understanding (MoU) that both ONR and HSE have concerning effective regulation of the Ionising Radiations Regulations 2017 (IRR17) in relation to the transport of radioactive material.

HSE and ONR agree to exchange information as indicated in the MoU to facilitate effective regulation of IRR17, and in line with obligations placed on both organisations by The Regulators Code, and data protection legislation.

HSE and ONR have an Information Sharing Agreement in place in relation to duty holders of mutual interest that transport of radioactive material. The Agreement can be found at CM 2018/385625

### In summary

#### ONR will:-

- ensure relevant information received via proactive or reactive inspections, concern raised etc is reviewed in relation to IRR17 by a competent person, and forwarded in a timely manner as appropriate to HSE,
- ensure that information notified in relation to ONR's processes which relates to CDG obligations placed on transport duty holders is reviewed in relation to IRR17 by a competent person and shared in a timely manner with HSE as appropriate,

given HSE is the "appropriate authority" in relation to IRR17 and transport in most instances and HSE is an enforcing authority for IRR17.

**Timescale:** forthwith  
**Route:** ONR Operational Inspectors to email HSE Operational leads (and copy to [irrnot@hse.gov.uk](mailto:irrnot@hse.gov.uk))

#### HSE will:-

- ensure that relevant graded approach data (as specified by ONR) that has been collected from relevant IRR17 duty holders is shared with ONR periodically as agreed,
- relevant information received via any route (proactive, reactive inspection, concern etc) is reviewed by a competent person in relation to IRR17, and forwarded in a timely manner as appropriate to ONR

given ONR is an enforcing authority in relation to IRR17.

**Timescale:** forthwith  
**Route:** HSE Radiation Specialist Inspector to email ONR Operational leads

Any issues relating to Subject Access Request, Freedom of Information requests, queries or complaints that also involves the other party will be brought to the attention of the other via the Operational Liaison forum or otherwise depending on timescales, and proposed responses relevant to IRR17 and transport will be discussed and shared. Both ONR and HSE have protocols for managing these types of requests which will be adhered to.