

# 11 Requirements for the Transfer (including Return to Stores), Sale, Loan and Gifting of Radioactive Materials and Radioactively Contaminated Items

## Scope

1. This chapter covers the radiological safety requirements and arrangements to be followed for the transfer (including transfer within MOD and external to MOD), sale, loan and gifting of radioactive materials and radioactively contaminated items. The accumulation and disposal of radioactive waste is described in Chapter 12. This chapter should be read in conjunction with the Defence Logistics Framework and JSP 462 (Financial Management and Charging Policy Manual).
2. This chapter does not cover the requirements for the transfer or sale of contaminated, or potentially contaminated, land which is described in Chapter 13.
3. This chapter does not cover the requirements for transport of radioactive or contaminated items. The Dangerous Goods Manual covers the requirements for transport of excepted packages by land, sea, and air – in all other cases the Dangerous Goods Safety Adviser or RPA is to be consulted. Chapter 10 gives the radiation protection requirements for movement and transport.

## Statutory Requirements

4. In addition to the general requirements of the Health and Safety at Work etc Act 1974 and the Management of Health and Safety at Work Regulations 1999, the following specific legislation applies directly or is applied indirectly through parallel arrangements designed to achieve equivalent standards:
  - a. Ionising Radiations Regulations 2017 (IRR17) (apply directly);
  - b. the Environmental Permitting (England and Wales) Regulations 2016 (EPR16) (as amended) (parallel arrangements);
  - c. Environmental Authorisations (Scotland) Regulations 2018 (EASR18) (parallel arrangements);
  - d. Radioactive Substances Act (Northern Ireland) 1993 (RSA93) (as amended); and
  - e. High Activity Sealed Radioactive Sources and Orphan Sources Regulations 2005 (HASS) (Northern Ireland) (parallel arrangements).

## Duties

5. Duties as detailed in Chapter 39 apply.

## Return of Radioactive Items to the Stores or Transfer to another MOD Holder

6. The return of radioactive items to stores or transfer to another MOD holder does not generally require regulatory approval provided that, where appropriate, the receiving site holds an appropriate approval. This does not, however, relieve the supplier of such items from their statutory obligation to ensure that the recipient is provided with all relevant health and safety information. Specific requirements do apply and are detailed in paragraph 11.

7. Items incorporating radioactive substances that are returned to the store's organisation are not to be designated as radioactive scrap or waste but can be called "redundant", "unserviceable" or "legacy" items. Such items may include radioactive valves, smoke detectors, equipments containing GTLSs and GTLDs, luminised (tritium or radium) items, sealed or closed sources, and equipments containing radioactive check sources.

8. Redundant or unserviceable items are normally returned to the stores organisation and arrangements made for repair or disposal through an approved route. The stores organisation is to be contacted before despatch to ensure that the items can be accepted and to obtain specific details on conditions of acceptance for items.

9. Legacy items are normally found in a museum or can be items no longer supported by a Project Team. These items should only be returned to DE&S Donnington with prior approval from the KNDG RSO at Donnington. Annex A details the process for returning radioactive material to DE&S Donnington.

10. Contaminated items including those contaminated, or potentially contaminated, as a result of the Naval Nuclear Propulsion Programme (NNPP) are excluded from these arrangements. Unless an established arrangement exists, should any such items be identified, outside the NNPP, advice is to be sought from the RPA or a Radioactive Waste Adviser (RWA) on their transfer or disposal (also refer to Chapter 12). Items already specifically identified as radioactive waste are also excluded from these arrangements.

11. It is essential that:

- a. the receiving site (consignee) has an EPR16/EASR18/RSA93 approval from the relevant regulatory authority to hold and / or dispose of prescribed radioactive substances, unless the articles are exempt from the requirement for an approval. Advice on which radioactive items can be accepted must be sought from the consignee in advance;
- b. the sender (consignor) of the radioactive items informs the consignee of the intention to forward radioactive materials, describes them appropriately and obtains the agreement of the consignee that the radioactive items will be accepted. A valid consignor's certificate for radioactive material must also accompany each consignment. The items must NOT be described as radioactive waste; and
- c. the appropriate transport requirements are followed in accordance with Dangerous Goods Manual and Chapter 10. Where a carrier is used, the carrier of the radioactive items must be informed of the radioactive content of the items, be given adequate instruction by the consignor and appropriate documentation. The driver must also possess the appropriate ADR licence.

12. Items which fall into the following categories are not to be accepted by the consignee and are to be returned to the consignor where practicable, unless an alternative means to rectify the situation can be immediately identified and agreed:

- a. radioactive items that originate from the NNPP (contaminated, activated / irradiated or containing radioactive sources) unless the consignee has specific approvals in place to receive such items and has agreed to each consignment in advance;
- b. items which are consigned without prior arrangements made with the consignee;
- c. items which will breach the site's approved limits from the relevant environmental regulator; and
- d. items which on receipt are proven by the consignee not to be properly described in the consignor's certificate.

13. High activity sealed radioactive sources (see Chapter 3) are subject to additional requirements as outlined later.

## **Sale and Gifting of Radioactive and Contaminated Items**

14. The Defence Equipment Sales Authority (DESA) is responsible for the disposal by sale of all MOD surplus equipment. All surplus items identified as containing radioactive components or material should be notified to the DESA by the organisation (unit, stores or equipment manager as appropriate) proposing them for sale – the Defence Logistics Framework details the process for the declaration of material for disposal.

15. Items containing radium-226 must not be offered for sale to the public. Only in exceptional circumstances are they to be offered to potential resale or collector's outlets. Further advice must be sought from the RPA or RWA.

16. It is not generally acceptable to sell or gift contaminated items. All items suspected of being contaminated should be decontaminated to remove, so far as is reasonably practicable, any contamination and may then only be released for sale or gifting once a radiological clearance certificate (see below) has been produced. It is MOD policy not to sell or gift contaminated items to private museums, private citizens, companies or charities. The organisation wishing to dispose of the items is to supply DESA with the following details of the hazards associated with these items:

- a. a full description of the items, including relevant NATO Stock Numbers and any other unique identification information;
- b. a clear indication of whether the items are to be sold as a "going concern" or for residual scrap value;
- c. details of the components containing radioactive material and their location within the equipment;
- d. details of radionuclides and activity, or estimates if not known;
- e. details of contamination levels (advice is to be obtained from an RPA or RWA if contaminated items are to be sold);

- f. details of any requirement for the eventual recipient to hold a permit (or approval in the case of a MOD owner) from the appropriate environmental regulator, or to provide a notification to HSE;
- g. details of any exemptions to permitting (or approval for a MOD owner) together with any limiting conditions under which the exemptions would apply;
- h. description of the hazards associated with the items;
- i. any other risks involved;
- j. any other information that may be deemed relevant; and
- k. **Clearance Certificates.** Where clearance certificates are issued with items or materials (i.e. following the removal of radioactive components from equipment), they should include the following features:
  - (1) unique identification (as far as practicable) of the item or material cleared;
  - (2) identification of the documentation which supports the certificate;
  - (3) identification of the legislation with which it is compliant;
  - (4) a statement of caveats where applicable (e.g. radioactivity not detectable by the measurement systems used; presence of other toxic substances etc);
  - (5) authorisation by and signature of the owner of the item or material;
  - (6) a date of issue and period of validity of the certificate;
  - (7) a statement of responsibilities for keeping the documentation and certificate;
  - (8) a signed confirmation of release and date; and
  - (9) the statement 'For all regulatory and control purposes, this material is not radioactive'.

17. It is vital that the unit declaring the disposal provides the information above to DESA, taking advice from the RPA and / or RWA if necessary.

18. Although the disposal of items by sale does not require regulatory approval before agreeing to the sale DESA must obtain confirmation that a buyer has any necessary EPR16 / EASR18 permit or authorisation in place (assuming the buyer is not part of defence) or that an exemption applies. DESA must also check that the prospective buyer has carried out any necessary IRR17 HSE notifications). Where items are to be sold to overseas purchasers, advice is always to be sought from the TLB Safety Authority (e.g. CESO for the TLB area) and the RPA or RWA as to specific requirements of the recipient State, as to any restrictions or requirements on the shipment of items and as to the appropriate level of information and cooperation required by UK statute.

19. Items containing radium-226 must not be offered for sale to the public and only in exceptional circumstances are they to be offered to potential resale or collector's outlets. Further advice should be sought from the RPA or RWA before any commitment is made.

20. Once DESA has received comprehensive information from the declaring unit and advice from the RPA/RWA, then DESA will be in a position to decide if the items are suitable for sale and if it is appropriate for any radioactive components / material are to be left in position. In this case DESA is to issue all prospective buyers of the items with details of the radioactive hazards associated with them, statutory requirements that have to be met and make them aware of any potential future liabilities (such as disposal costs). The agreement to sell radioactive items must clearly identify the point at which title (and associated liability) for the material transfers – this may, for example for a contractor collecting the equipment, be at the point at which the contractor's vehicle leaves the MOD site.

21. Regardless of the obligations on DESA, detailed above, the unit transferring or despatching the items, whether part of the store's organisation or otherwise, also has responsibilities and must comply with its environmental regulator's terms and conditions relating to the sale or supply of the radioactive material. In particular, before consigning the items, the despatching unit must be satisfied in the following respects:

- a. that the recipient holds an EPR16 / EASR18 permit or authorisation (approval for a MOD recipient) appropriate for the items being consigned – DESA should confirm that this is the case;
- b. that the recipient has been provided with any necessary safety information relating to the items including the description of the radioactive material – DESA should confirm that this is the case;
- c. that the recipient has agreed to receive the consignment – DESA should normally confirm that this is the case; and
- d. that the item(s) are marked and labelled to show that they are, or contain, radioactive material.

22. If items or equipment cannot be sold for the purpose they were originally designed (that is, they are no longer a "going concern"), advice should be sought from DESA and the RPA or RWA on the way forward. Where reasonably practicable the radioactive component/material can be removed (see also the next paragraph) and returned to the store's organisation for separate disposal action at a later date. The remaining non-radioactive items can then be sold for scrap after they have been monitored for contamination. If the remaining items are uncontaminated, radiation warning signs are to be removed prior to the sale. Following segregation and monitoring the sale of any resulting uncontaminated scrap metal should follow the requirements of JSP 418 Part 2 Leaflet 3 and duty of care processes.

23. Removal of radioactive components from equipment is likely to be a specialised activity requiring specialised skills and equipment. RPA and / or RWA advice is to be sought as to the requirements for this work to be carried out in a designated area and as to the training and supervision needed for the work. Equipment containing radioactive components falling into this category are:

- a. smoke-detection systems, radiation-monitoring equipment; and some targets and drogues;
- b. luminised equipment e.g. control dials, luminised markers and some gauges;
- c. components containing GTLSs;

- d. aircraft counter-balance weights containing depleted uranium.

24. A statement of recommendations by and signature of a nominated suitably qualified and experienced person (SQEP) concerning compliance with legislation and future use or disposal (see JSP 392, Chapter 12) will be required.

## **Sale of Ships**

25. Disposal of any HM ships placed on the Commercial List (also known as the Disposal List) except those handed over to other Governments from the active fleet is to follow the procedures given in the Disposal Reserve Ship Manual Volume 1. Copies of this manual are available from Disposal and Reserve Ships Organisation, Portsmouth (DARSO). It is MOD policy that all ships are monitored for radioactive items prior to disposal. Records are to be retained by DARSO.

## **Gifting of Radioactive Equipment**

26. Surplus radioactive items may only be gifted with the approval of the equipment manager. It is MOD policy not to gift to private museums, private citizens, companies or charities.

27. In addition to meeting the financial policy on gifting (see JSP 462 - Financial Policy and Charging Manual), surplus radioactive items may only be gifted or donated if the recipient organisation holds the appropriate EPR16/EASR18 permit or authorisation (approval for a MOD recipient). In supplying the item(s), the final MOD holder must comply with the appropriate environmental regulator's terms and conditions and follow the same procedures detailed above for the sale of items, including seeking the advice of an RPA, and RWA where appropriate. In particular, arrangements regarding transfer of title must be clearly stated and agreed.

28. Further details on gifts of radioactive equipment to museums are covered in Chapter 31.

## **Arrangements for Receipt of Articles Gifted or Loaned by Members of the Public, MOD or elsewhere**

29. Establishments are to put in place arrangements for dealing with articles that are gifted or loaned by members of the public. As a general rule no item should be formally accepted until its radioactive content has been determined. Items that are suspected of containing radioactive material should, as a minimum, be quarantined by sealing them in a polythene bag if practicable, and locking them in a cabinet or store (not containing other hazardous materials) until they can be investigated. RPA advice is to be sought early on. Such arrangements are to be included in Radiation Safety Orders.

30. Whenever practicable, before articles containing radioactive material are accepted establishments should request as much information on the radioactive and other hazardous materials as possible from the providers, preferably in the form of Safety Data Sheet(s) or radiation risk assessments. Where the establishment's policy for accepting radioactive materials permits the receipt of such items, the information from Safety Data Sheets can be used to determine whether they can meet statutory and MOD requirements and safely handle, store, display and, if necessary, work on and dispose of these articles. Such datasheets will form part of the basis of decision making when accepting or declining these items.

31. It should be noted that the receiving establishment is responsible for ensuring that the information gathered about the item is correct. Where articles of a similar nature are held then a generic datasheet may be used. Assistance in obtaining or producing Safety Data Sheets may be obtained from the RPA.

## **Transfer of High-Activity Sealed Radioactive Sources**

32. Strict terms and conditions are applied to holders of high activity sealed radioactive sources (HASS) (see Chapters 3 and 9). These terms and conditions, which must be complied with, include requirements for transfer of HASS as follows:

- a. before a HASS may be transferred (regardless of whether this is a sale, lease or transfer within or external to MOD), the holder must first ascertain that the recipient holds the appropriate HASS permit, authorisation or approval from the relevant environmental regulator or, in the case of transfer to a nuclear site that the recipient holds the appropriate authorisation from the nuclear regulator. Written confirmation that this is the case must be obtained;
- b. the transfer of title and liability for safe management and disposal of the source when it becomes disused must be established and agreed in writing prior to transfer of the source;
- c. the source must be supplied to the recipient accompanied by written information and photographs, its identification number, how it is marked, details of the radioactive content and, where appropriate, the identification number of the source container;
- d. containers must be marked with the container identification number, the source identification number, the name and activity of each radionuclide contained in the source at the date of receipt and the word radioactive and the ionising radiation symbol;
- e. holders must amend the HASS record to show the date of transfer, the name of the recipient, the address of the recipient, the type of recipient (e.g. manufacturer, supplier, next user, short or long-term storage, disposal site etc) and the recipient's permission number;
- f. within 14 days (40 days for Licenced or defence Authorised sites) following the transfer, the holder must send a copy of the record showing the transfer details to the appropriate environmental regulator (DNSR for Defence Authorised sites, ONR for Licenced sites). If the transfer is to a nuclear site, then the holder must also send to the appropriate regulator a copy of the acknowledgement of receipt of the HASS; and
- g. transport of the source must be carried out in accordance with the appropriate transport regulations and radiation protection requirements (see Chapter 10). Where a carrier is used to transfer the source, the carrier is not considered to be a holder and therefore the HASS record is to show details of transfer to the new holder and not the carrier.

## **Loan or Hire of Radioactive Items**

33. When radioactive items are loaned or hired, the supplying MOD custodian must comply with the previous requirements and procedures for sale, donation or transfer of equipment as appropriate. In addition, the MOD custodian must retain any relevant environmental regulator's approvals or HSE notification to hold the radioactive material and retain the



appropriate facilities, safety and environmental management arrangements and qualified staff to ensure safe and effective storage and control of the item(s) on their return.

## **Records**

34. Radioactive source lists, records of leak tests and registers of unsealed radioactive substances are to be retained by the ship, unit or establishment indefinitely following the disposal, gifting or transfer of the item. However, if the item is transferred to another MOD establishment, the period is 2 years (from the transfer date) for radioactive source lists, records of leak test and registers of unsealed radioactive substances. Source lists and source registers from ships that have been decommissioned and establishments that have closed should be archived in accordance with MOD policy described in Chapter 3. Records of items on loan must be kept throughout the period of loan by both those receiving and despatching loaned items.

35. Radioactive items returned to stores or transferred (sale or gifting) to another establishment or organisation should be included on the Disposals page of the Annual Holdings Return (see Chapter 9).



## **RETURN OF EQUIPMENT CONTAINING RADIOACTIVE MATERIAL TO DE&S DONNINGTON**

1. This annex details the process to be followed by Project Teams (in service equipment) and museums / units (legacy items) for returning to DE&S Donnington.
2. Note: This process does not apply to routine return and replacement of in-service equipment.

### **Process**

3. Project Teams (PTs) and others responsible for in-service equipment containing radioactive material should note that there is limited centralised storage available for these hazardous items and that the Radiation Safety Officer (RSO) at Donnington KNDG must be contacted before equipment is returned.
4. In accordance with Defence Logistics Framework, PTs must carry out annual reviews to determine whether there is a justified need for MOD to continue to hold such items and should advise the DESA and RSO at Donnington KNDG as soon as items can be released for sale or disposal. PTs must also carry out and advise the RSO of the outcome of any review which the RSO may request if an item appears surplus to requirement by virtue of long-term storage with no stock rotation.
5. Museums and units that have legacy equipment for disposal are to contact the RSO at Donnington KNMG who will decide if the equipment can be accepted.
6. Delivery Teams, Museums and Units. Before any item containing radioactive material is sent to Donnington, the RSO must be provided with the information listed below. DESA must also be provided with this information when items are released for sale or disposal:
  - a. description and NSN of the equipment;
  - b. photograph of the item;
  - c. dimensions of the item (length, width, height and weight);
  - d. number of items; and
  - e. type and quantity of radioactive material in the item (e.g. radium-226 0.6 kBq).
7. Delivery Teams, museums and units should contact their Radiation Protection Adviser for assistance if the type and quantity of radioactive material in an item is not known.

### **Contacts**

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