



**ENVIRONMENT  
AGENCY**

**RADIOACTIVE SUBSTANCES ACT 1993**

**CERTIFICATE OF AUTHORISATION  
AND  
INTRODUCTORY NOTE**

**DISPOSAL OF RADIOACTIVE WASTE  
FROM**

**AWE plc**

**ATOMIC WEAPONS ESTABLISHMENT  
THE MEARINGS  
BURGHFIELD  
READING  
BERKSHIRE  
RG3 3PR**

**AUTHORISATION NUMBER BZ2028**

## INTRODUCTORY NOTE

- IN 1.** The following Certificate of Authorisation is issued by the Environment Agency under the provisions of Section 13 of the Radioactive Substances Act 1993 ("the Act"). The Authorisation permits the disposal of the specified radioactive wastes from the specified site, subject to limitations and conditions.
- IN 2.** The Act is concerned with the control of radioactive material and accumulation and disposal of radioactive waste. The requirements of the Act relating to control of radioactive material and accumulation of radioactive waste do not apply to sites Licensed under the Nuclear Installations Act 1965 because these matters are regulated under the terms of the site licence. However, the AWE Burghfield site consists of an area Licensed under the Nuclear Installations Act 1965 and a much larger area that is not Licensed under the Act, but where radioactive waste is accumulated and from which it is disposed of by transfer to other sites and by burning on site. The conditions attached to this Authorisation are, therefore, concerned with matters that relate to the disposal of radioactive waste from the Operator's Nuclear Site at Burghfield and the accumulation on and disposal of radioactive waste from the Operator's Non-Licensed Site at Burghfield.
- IN 3.** The certificate authorises the accumulation and disposal of solid and liquid radioactive wastes and the disposal of gaseous radioactive wastes by AWE plc from the premises of the Atomic Weapons Establishment (AWE) at Burghfield. The wastes are produced during the assembly, servicing and disassembly of nuclear warheads and decommissioning of redundant nuclear process plant. The radioactive wastes principally contain tritium, uranium-234, uranium-235 and uranium-238.
- IN 4.** The Certificate of Authorisation comprises a signed certificate together with 10 Schedules. Schedule 1 contains general conditions that are applicable to all authorised waste types. Schedule 2 specifies the categories of radioactive waste and the disposal routes and accumulations that are authorised. Schedules 3 to 8 include limitations and conditions on the radionuclides in the waste and the physical nature of the waste streams. Schedule 9 includes limitations and conditions relating to receipt of radioactive waste for disposal from other premises. Schedule 10 specifies information to be supplied and improvements to be carried out.
- IN 5.** Solid radioactive wastes arising from the dismantling of assembled nuclear weapons may be categorised as both "solid waste" for transfer to AWE plc at Aldermaston (before ultimate disposal by transfer to other recipients) or for direct transfer to the Low Level Waste Repository (LLWR) Site Operator at Drigg or may be categorised as "Warhead Waste" for disposal to the Site Operator at Foulness, Essex. Limits and conditions relating to "Warhead Waste" in the authorisation are primarily intended to prevent the disposal of other classes of "solid waste" to the Site Operator at Foulness, Essex.



**ENVIRONMENT  
AGENCY**

**RADIOACTIVE SUBSTANCES ACT 1993**

**Authorisation to Accumulate and Dispose of Radioactive Waste  
from the Premises of AWE plc at  
Burghfield**

**AWE plc  
Certificate Reference Number BZ2028**

This certifies that the Environment Agency in exercise of its powers under Sections 16(2), 16(8) and 17(2) of the Radioactive Substances Act 1993 ("the Act") has authorised

**AWE plc  
(Company Registration No 2763902)  
("the Operator")**

whose Registered Office is

**The Atomic Weapons Establishment  
Aldermaston, Reading, Berkshire, RG7 4PR**

- a. for the nuclear licensed site under Sections 13(1) and 13(3) of the Act to dispose of radioactive waste, and
- b. for the non-licensed site under sections 13(1), 13(3) and 14 of the Act, to accumulate the radioactive waste specified in paragraph 3 of Schedule 2 to this certificate on the premises (with a view to its subsequent disposal) and to dispose of the radioactive waste specified in paragraph 1 of Schedule 2 to this certificate,

from the premises which are on the AWE plc site at

**Burghfield in Berkshire**

subject to the limitations and conditions in the Schedules to this Certificate of Authorisation.

This Authorisation shall come into effect on 01/03/2007

Signed *Steve Chandler*

S D Chandler

Authorised to sign on behalf of the Environment Agency

Dated the 24<sup>th</sup> of January 2007

- IN 6.** The Authorisation allows the Agency to place requirements on the Operator to carry out various actions. Information concerning the name, function and operation of individual nuclear facilities at the Atomic Weapons Establishment is subject to National Security restrictions. Details of requirements placed on AWE and associated specifications and approvals are held by the Agency.
- IN 7** This note does not form part of the Certificate of Authorisation.

## Schedule 1

### GENERAL LIMITATIONS AND CONDITIONS

#### DISPOSAL

1. The Operator shall use the best practicable means to minimise the activity of radioactive waste produced on the site that will require disposal under this Authorisation.
2. The Operator shall use the best practicable means to:
  - (a) minimise the activity of gaseous and aqueous radioactive waste disposed of by discharge to the environment;
  - (b) minimise the volume of radioactive waste disposed of by transfer to other premises;
  - (c) subject to paragraph 5 in this Schedule, dispose of radioactive waste at times, in a form, and in a manner so as to minimise the radiological effects on the environment and members of the public;

where the relevant waste types and disposal routes are specified in the Table in Schedule 2.

3. The Operator shall maintain in good repair the systems and equipment provided:
  - (a) to meet the requirements of paragraphs 1 and 2 in this Schedule;
  - (b) for the disposal of radioactive waste.
4. The Operator shall check, at an appropriate frequency, the effectiveness of systems, equipment and procedures provided:
  - (a) to meet the requirements of paragraphs 1 and 2 in this Schedule;
  - (b) for the disposal of radioactive waste.
5. If required by the Agency, the Operator shall only dispose of radioactive waste at such times, in such a form and in such a manner as the Agency specifies.

#### MANAGEMENT

6. The Operator shall:
  - (a) have a management system, organisational structure and resources which

are sufficient to achieve compliance with the limitations and conditions of this Authorisation and which include:

- (i) written arrangements specifying how the Operator will achieve compliance with each limitation and condition of this authorisation, to include arrangements for control of modifications to the design and operation of systems and equipment;
  - (ii) provision for consultation with such suitable RPAs, or other such qualified experts approved by the Agency in writing, as are necessary for the purpose of advising the Operator as to compliance with the limitations and conditions of this Authorisation and, in particular, on the matters addressed in paragraphs 1, 2, 4, 12 and 13 in this Schedule;
  - (iii) written Environmental Operating Rules and operating instructions;
  - (iv) a written maintenance schedule and instructions;
  - (v) adequate supervision of the disposal of radioactive waste by suitably qualified and experienced persons, whose names shall be clearly displayed with each copy of the Certificate of Authorisation that is posted on the premises as required by Section 19 of the Act;
  - (vi) adequate supervision by suitably qualified and experienced persons of the operation and maintenance of the systems and equipment provided to meet the requirements of paragraphs 1 and 2 in this Schedule and for the disposal of radioactive waste;
  - (vii) internal audit and review of the Operator's management system;
- (b) inform the Agency in writing, at least 28 days or such shorter period agreed by the Agency before the first disposal of radioactive waste is made under the terms of this Authorisation, of the organisational structure and resources, together with such parts of the management system as the Agency specifies, provided to achieve compliance with the limitations and conditions of the Authorisation;
- (c) inform the Agency, at least 28 days in advance or, where this is not possible, without delay, of any change in the management system, organisational structure or resources, which might have, or might reasonably be seen to have, a significant impact on how compliance with the limitations and conditions of this Authorisation is achieved.

## **SAMPLING, MEASUREMENTS, TESTS, SURVEYS AND CALCULATIONS**

7. The Operator shall take samples and conduct measurements, tests, surveys, analyses and calculations to determine compliance with the limitations and conditions of this Authorisation.
8. The Operator shall use the best practicable means when taking samples and conducting measurements, tests, surveys, analyses and calculations to determine compliance with the limitations and conditions of this Authorisation, unless particular means are specified in this Authorisation.

9. If required by the Agency, the Operator shall take such samples and conduct such measurements, tests, surveys, analyses and calculations, including environmental measurements and assessments, at such times and using such methods and equipment as the Agency specifies.
10. If required by the Agency, the Operator shall, as the Agency specifies:
  - (a) keep samples;
  - (b) provide samples;
  - (c) dispatch samples for tests at a laboratory and ensure that the samples or residues thereof are collected from the laboratory within three months of receiving written notification that testing and repackaging in accordance with the appropriate transport regulations are complete.
11. The Operator shall maintain, in good repair, systems and equipment provided for:
  - (a) carrying out any monitoring and measurements necessary to determine compliance with the limitations and conditions of this Authorisation;
  - (b) measuring and assessing exposure of members of the public and radioactive contamination of the environment.
12. The Operator shall have and comply with appropriate criteria for the acceptance into service of systems, equipment and procedures for:
  - (a) carrying out any monitoring and measurements necessary to determine compliance with the limitations and conditions of this Authorisation;
  - (b) measuring and assessing exposure of members of the public and radioactive contamination of the environment.
13. The Operator shall carry out:
  - (a) regular calibration, at an appropriate frequency, of systems and equipment provided for:
    - (i) carrying out any monitoring and measurements necessary to determine compliance with the limitations and conditions of this Authorisation;
    - (ii) measuring and assessing exposure of members of the public and radioactive contamination of the environment;
  - (b) regular checking, at an appropriate frequency, that such systems and equipment are serviceable and correctly used.

## RECORDS

14. The Operator shall, subject to paragraph 18 in this Schedule:
- (a) make and retain records sufficient to demonstrate whether the limitations and conditions of this Authorisation are complied with;
  - (b) retain records made in accordance with any previous Authorisation issued to the Operator and related to the premises covered by this Authorisation;
  - (c) retain records transferred to the Operator by any predecessor operator which were made in accordance with any previous Authorisation related to the premises covered by this Authorisation.
15. The Operator, not later than 14 days after the end of each month or within such longer period as the Agency may approve in writing, shall in respect of all disposals of radioactive waste made during that month:
- (a) make a record of each measurement, analysis, test and survey conducted for the purpose of this Authorisation in relation to those disposals;
  - (b) make a record which shows clearly and legibly:
    - (i) the type of waste and the disposal route;
    - (ii) the name of each radionuclide or group of radionuclides, specified in the relevant Table in the relevant Schedule, which is present;
    - (iii) the activity of each such radionuclide or group of radionuclides per cubic metre of the waste, unless otherwise agreed in writing by the Agency;
    - (iv) for LLWR Waste, the activity of each such radionuclide or group of radionuclides per tonne of the waste, unless otherwise agreed in writing by the Agency;
    - (v) the total activity of each such radionuclide or group of radionuclides;
    - (vi) the total volume in cubic metres, unless otherwise agreed in writing by the Agency;
    - (vii) for LLWR Waste, the total mass in tonnes;
    - (viii) the date and time on which, or period during which, the disposal took place;
    - (ix) any other information the Agency may specify.



16. If the Operator amends any record made in accordance with this Authorisation it shall ensure that the original entry remains clear and legible.
17. The Operator shall keep the records referred to in paragraph 15 in this Schedule in a manner and place approved by the Agency.
18. The Operator shall retain the records referred to in paragraphs 14 and 15 in this Schedule until notified in writing by the Agency that the records no longer need to be retained.

## **PROVISION OF INFORMATION**

19. The Operator shall supply such information in such format and within such time as the Agency may specify.
20. The Operator shall inform the Agency in writing, at least 14 days before the first disposal of radioactive waste is made under the terms of this Authorisation, of the techniques being employed to determine the activity of radioactive waste disposals and shall inform the Agency in writing in advance of any modifications to those techniques.
21. The Operator shall inform the Agency without delay if the Operator has reason to believe that disposal of radioactive waste is occurring, has occurred or might occur which does not comply with the limitations and conditions of this Authorisation, and shall report the circumstances in writing to the Agency as soon as practicable thereafter.

## **INTERPRETATION**

22. (1) In this Certificate of Authorisation :
  - (a) except where otherwise specified, words and expressions defined in the Radioactive Substances Act 1993 shall have the same meanings when used in this Certificate of Authorisation as they have in that Act;  
  
"activity", expressed in becquerels, means the number of spontaneous nuclear transformations occurring in a period of one second;  
  
"the Agency" means the Environment Agency;  
  
"aqueous waste" means radioactive waste in the form of a continuous aqueous phase together with any entrained solids, gases and non-aqueous liquids;  
  
"Authorisation" means an authorisation issued under the Radioactive Substances Act 1993 or the Radioactive Substances Act 1960;

"best practicable environmental option" means the radioactive waste management option, for a given practice, that provides the most benefit or least damage to the environment as a whole in the long term as well as in the short term, taking into account operational doses and risks, and social and economic factors;

"Bq, kBq, MBq, GBq, TBq and PBq" are used as abbreviations meaning becquerels, kilobecquerels, megabecquerels, gigabecquerels, terabecquerels and petabecquerels respectively;

"calendar year" means a period of 12 consecutive months beginning on 1 January;

"consignment" means an individual shipment of radioactive waste not greater in volume than 40 cubic metres or such volume as specified in writing by the Agency;

"environment" means all, or any, of the media of air, water (to include sewers and drains) and land;

"Environmental Operating Rule" means a mandatory restriction on operation, established by the Operator, which is necessary to ensure compliance with this Authorisation;

"gaseous waste" means radioactive waste in the form of gases and associated mists and particulate matter;

"Low Level Waste Repository Operator" means the current holder of the licence issued under the Nuclear Installations Act 1965 for the Low Level Waste Repository at Drigg;

"Low Level Waste Repository Waste" means solid radioactive waste, including any immediate package, intended by the Operator for final disposal at the Low Level Waste Repository at Drigg;

"maintenance instructions" means instructions for carrying out any maintenance that may have an effect on compliance with this Authorisation;

"maintenance schedule" means a programme for maintenance of all systems and equipment that contribute to achieving compliance with this Authorisation;

"month" means calendar month (ie 1-31 January, 1-28/29 February, 1-31 March, etc.);

"operating instructions" means instructions for carrying out any operation that may have an effect on compliance with this Authorisation;

"organic liquid waste" means radioactive waste in the form of liquid, not being aqueous waste, containing one or more organic chemical compounds;

"package" includes any sack, drum, container or wrapping;

"quarter" means any period of three consecutive months;

"RPA" means a Radiation Protection Adviser appointed under Regulation 13 of the Ionising Radiations Regulations 1999;

"samples" includes samples that have been prepared or treated to enable measurements of activity to be made;

"Schedule" means a Schedule forming part of this Certificate of Authorisation;

"Sellafield Site Operator" means the current holder of the licence issued under the Nuclear Installations Act 1965 for the Sellafield Site;

"week" means a period of 7 consecutive days commencing at a day and time to be notified in writing to the Agency by the Operator at least 14 days before any disposal of radioactive waste is made under the terms of this Authorisation, any subsequent change being notified in writing to the Agency at least 7 days in advance;

"year" means any period of 12 consecutive months;

(b) Other Site Specific definitions;

"Burghfield Site" means those entire premises occupied by AWE plc at Burghfield in Berkshire and is known as the Atomic Weapons Establishment Burghfield;

"Foulness Site Operator, Essex" means the holder of an authorisation under Section 13 of the Radioactive Substances Act 1993 to dispose of radioactive waste of that description at Foulness, Essex.

"Warhead Waste" means radioactive waste in the form of a solid containing explosives, foams, plastics, rubbers, salts or metal arising from the dismantling of assembled nuclear warheads;

"Winfrith Nuclear Site" means the site at Winfrith, Dorset for which a licence has been issued under the Nuclear Installations Act 1965;

- (2) In this Certificate of Authorisation the Interpretation Act 1978 shall apply as it does to an Act of Parliament and in particular words in the singular include the plural and words in the plural include the singular.
- (3) (a) In determining whether particular means are the "best practicable" for the purposes of this Authorisation, the Operator shall not be required to incur expenditure whether in money, time or trouble which is, or is likely to be, grossly disproportionate to the benefits to be derived from, or likely to be derived from, or the efficacy of, or likely efficacy of, employing them, the benefits or results produced being, or likely to be, insignificant in relation to the expenditure.
- (b) Where reference is made to the use of "best practicable means" in this Certificate of Authorisation, the means to be employed shall include:
- (i) the provision, maintenance and manner of operation of any relevant plant, machinery or equipment;
  - (ii) the supervision of any relevant operation.

## Schedule 2

### **AUTHORISED RADIOACTIVE WASTE TYPES, ACCUMULATION AND DISPOSAL ROUTES**

1. Subject to paragraph 2 in this Schedule, the Operator is authorised to dispose only of the radioactive waste types identified in Table 1 in this Schedule and only by the relevant disposal route(s) specified in the Table.
2. The Operator may dispose of radioactive waste, not being waste otherwise authorised to be disposed of, which is collected as a result of the user's participation in the National Arrangements for Incidents involving Radioactivity provided that the Operator:
  - (a) transfers the waste to a person whom the Environment Agency has agreed in writing may receive that waste;
  - (b) as soon as practicable provides available details in writing of the nature of the radioactive waste, the radionuclides present, their activities and the manner and date of disposal.

**Table 1 – Authorised Waste Types and Disposal Routes**

<b>Radioactive waste type</b>	<b>Disposal Route</b>
Gaseous Waste	Discharge to the environment
Aqueous Waste	Transfer to AWE Aldermaston
Warhead Waste	Transfer to the Site Operator at Foulness, Essex for the purpose of security controlled disposal
Solid Waste	Transfer to AWE Aldermaston
	Transfer, for the purpose of treatment prior to final disposal at the LLWR at Drigg, to the person operating Complex B4 and Facilities A50 and A51 on the Winfrith Nuclear Site
	Transfer to the Sellafield Site Operator at Sellafield for the purpose of final disposal at the LLWR at Drigg
	Transfer to the LLWR Site Operator at Drigg for the purpose of final disposal at the site

3. The Operator is authorised to accumulate on the Non-Licensed Site only, the radioactive waste types identified in Table 2 in this Schedule.

**Table 2 – Authorised Accumulation Waste Types**

<b>Radioactive Waste Type</b>	<b>Accumulation</b>
Aqueous Waste	on the Non-Licensed Site
Solid Waste	on the Non-Licensed Site
Warhead Waste	on the Non-Licensed Site

### Schedule 3

#### LIMITATIONS AND CONDITIONS RELATING TO DISPOSAL OF RADIOACTIVE GASEOUS WASTE BY DISCHARGE TO THE ENVIRONMENT

1. The Operator shall
  - (a) only discharge radioactive gaseous waste to the environment by means of the outlets identified in Table 1 in this Schedule and such other outlets as the Agency may approve in writing.
  - (b) not discharge radioactive gaseous waste through any outlet identified in Table 1 in this Schedule that the Agency has notified in writing is not to be used.
2. The Operator shall not in any year discharge gaseous waste in which the activity of any radionuclide or group of radionuclides specified in Table 2 in this Schedule exceeds the relevant Annual Limit.
3. If, in any quarter, the activity in gaseous waste discharged of any radionuclide or group of radionuclides specified in Table 2 in this Schedule exceeds, or is likely to exceed, the relevant Quarterly Notification Level (where specified), the Operator shall provide the Agency with a written submission which includes:
  - (a) details of the occurrence;
  - (b) a description of the means used to minimise the activity of gaseous waste discharged;
  - (c) a review of those means having regard to paragraphs 1 and 2 in Schedule 1;not later than 14 days from making the record which demonstrates such excess.
4. For the purposes of demonstrating compliance with the limitations and conditions of this Authorisation relating to “beta-gamma emitting radionuclides associated with particulate matter” and “alpha-emitting radionuclides associated with particulate matter” in gaseous waste the Operator shall measure the gross beta and alpha activity of all particulate samples collected for these purposes, after an appropriate period for decay of radon daughters, by using suitable sample preparation methods and a suitable counting system which have been agreed in writing by the Agency.

**Table 1 – AWE Burghfield - Authorised Gaseous Discharge Outlets**

<b>Authorised gaseous discharge outlets</b>
<p>Group A: Such stacks or outlets as approved in writing beforehand by the Agency and associated with discharges from the minor facilities engaged completely or principally in operational work in buildings on the Nuclear Licensed Site.</p>
<p>Group B: Such stacks or outlets as approved in writing beforehand by the Agency and associated with discharges from the minor facilities engaged completely or principally in decommissioning work in buildings on the Non-Licensed Site.</p>
<p>Group C: Such stacks or outlets as approved in writing beforehand by the Agency and associated with discharges from the minor facilities engaged completely or principally in operational work in buildings or facilities on the Non-Licensed Site.</p>

**Table 2 – AWE Burghfield Site Gaseous Annual Activity and Quarterly Notification Levels**

<b>Building or Facility Group</b>	<b>Radionuclide or group of radionuclides</b>	<b>Annual Site Activity Limit</b>	<b>Site Quarterly Notification Level</b>
Group A	Alpha	5 kBq	NA
	Tritium	9 GBq	2 GBq
Group B	Alpha	1 kBq	NA
Group C	Tritium	1 GBq	NA



#### **Schedule 4**

### **LIMITATIONS AND CONDITIONS RELATING TO DISPOSAL OF RADIOACTIVE AQUEOUS WASTE BY DISCHARGE TO THE ENVIRONMENT**

1. Disposal of radioactive aqueous waste by discharge into the environment is not authorised.

## **Schedule 5**

### **LIMITATIONS AND CONDITIONS RELATING TO DISPOSAL OF RADIOACTIVE WASTE BY INCINERATION ON THE PREMISES**

1. Disposal of radioactive waste by incineration on the premises is not authorised.

## Schedule 6

### LIMITATIONS AND CONDITIONS RELATING TO THE DISPOSAL OF RADIOACTIVE WASTE BY TRANSFER FOR THE PURPOSE OF FINAL DISPOSAL AT THE LLWR AT DRIGG

1. The Operator shall not:
  - (a) transfer any consignment of LLWR Waste in which the activity of alpha emitting radionuclides exceeds 4 gigabecquerels per tonne or the activity of all other radionuclides exceeds 12 gigabecquerels per tonne;
  - (b) in any calendar year transfer LLWR Waste in which, in total, the activity of any radionuclide or group of radionuclides listed in Tables 1 and 3 in this Schedule exceeds the relevant Annual Limit;
  - (c) in any calendar year transfer LLWR Waste in which, in total, the volume of the waste exceeds the Annual Limit specified in Tables 2 and 4 in this Schedule.
  
2. The Operator shall not transfer LLWR Waste:
  - (a) unless it has been treated or packaged in such a way as to render it, so far as is reasonably practicable, insoluble in water and not readily flammable;
  - (b) which contains any of the following materials, unless otherwise agreed in writing by the Agency:
    - (i) metals and other materials which readily react either with water or air with the evolution of heat or flammable gases;
    - (ii) explosive materials;
    - (iii) liquids with flashpoint less than 21 °C absorbed on solid materials;
    - (iv) strong oxidising agents;
    - (v) pressurised gas cylinders or pressurised aerosol containers;
    - (vi) materials which generate or are capable of generating toxic gases, vapours or fumes harmful to persons handling the waste;
    - (vii) chemical complexing or chelating agents.
  
3. The Operator shall ensure that the transfer of LLWR Waste is in accordance with the directions of the person to whom the waste is transferred.

4. The Operator shall:
  - (a) ensure that the person to whom LLWR Waste is transferred receives, at the time of transfer of each consignment, a clear and legible note signed on the Operator's behalf stating:
    - (i) that the activity of alpha-emitting radionuclides in the consignment does not exceed 4 gigabecquerels per tonne and that the activity of all other radionuclides does not exceed 12 gigabecquerels per tonne;
    - (ii) the total activity in the consignment of each radionuclide or group of radionuclides listed in Tables 1 and 3 in this Schedule;
  - (b) obtain a record signed on behalf of the person to whom LLWR Waste is transferred, at the time of transfer, stating that the transfer has taken place.
5. If required by the Agency, the Operator shall ensure that any consignment or part of any consignment of LLWR Waste found, following transfer, not to be in accordance with the limitations and conditions of this Authorisation:
  - (a) is packaged in accordance with the appropriate transport regulations;
  - (b) is returned as soon as is reasonably practicable to the Burghfield site.

**Table 1 – AWE Aldermaston or the Low Level Waste Repository at Drigg:  
Disposal Activity from the Nuclear Licensed Site**

<b>Radionuclide or group of radionuclides</b>	<b>Annual limit</b>
Uranium	1.5 GBq
Radium-226 plus Thorium-232	0.0 GBq
Other alpha emitters <sup>1</sup>	0 GBq
Carbon-14	0 GBq
Iodine-129	0 MBq
Tritium	1.6 GBq
Cobalt-60	0 GBq
Other radionuclides <sup>2</sup>	0 GBq

- 1 "other alpha emitters" means alpha-emitting radionuclides with half-lives greater than three months excluding uranium, radium-226 and thorium-232
- 2 "other radionuclides" means:
- (a) iron-55 and beta-emitting radionuclides with half-lives greater than three months unless individually specified in this Table and
  - (b) any other radionuclides specified in writing by the Agency

**Table 2 – Annual Limit AWE Aldermaston or the Low Level Waste Repository at  
Drigg:**

**Volume Limit from the Nuclear Licensed Site**

<b>Annual limit, cubic metres</b>
600

**Table 3 – AWE Aldermaston or the Low Level Waste Repository at Drigg:  
Disposal Activity Limits from the Non-Licensed Site**

<b>Radionuclide or group of radionuclides</b>	<b>Annual limit</b>
Uranium	0.9 GBq
Radium-226 plus Thorium-232	0.1 GBq
Other alpha emitters <sup>1</sup>	0 GBq
Carbon-14	0 GBq
Iodine-129	0 MBq
Tritium	5 GBq
Cobalt-60	0 GBq
Other radionuclides <sup>2</sup>	1 GBq

1 "other alpha emitters" means alpha-emitting radionuclides with half-lives greater than three months excluding uranium, radium-226 and thorium-232

2 "other radionuclides" means:

- (a) iron-55 and beta-emitting radionuclides with half-lives greater than three months unless individually specified in this Table and
- (b) any other radionuclides specified in writing by the Agency

**Table 4 – Annual Limit AWE Aldermaston or the Low Level Waste Repository  
at Drigg: Volume Limit from the Non-Licensed Site**

Annual limit, cubic metres
200

## Schedule 7

### LIMITATIONS AND CONDITIONS RELATING TO DISPOSAL OF RADIOACTIVE WASTE BY TRANSFER TO OTHER PREMISES

1. The Operator shall not in any calendar year transfer radioactive waste to a person specified in Tables 1 to 3 in this Schedule in which, in total:
  - (a) the activity of any relevant radionuclide or group of radionuclides exceeds the relevant Annual Activity Limit; or
  - (b) the volume of the waste and where appropriate its immediate packaging exceeds the relevant Annual Volume Limit.
2. The Operator shall ensure that the transfer of radioactive waste is in accordance with the directions of the person to whom the waste is transferred.
3. The Operator shall:
  - (a) ensure that the person to whom waste is transferred receives at the time of transfer of each consignment a clear and legible note signed on the Operator's behalf stating the total activity in the consignment of each relevant radionuclide or group of radionuclides listed in Tables 1 to 3 in this Schedule;
  - (b) obtain a record signed on behalf of the person to whom waste is transferred, at the time of transfer, stating that the transfer has taken place.
4. If required by the Agency, the Operator shall ensure that any consignment or part of any consignment of waste found, following transfer, not to be in accordance with the limitations and conditions of this Authorisation:
  - (a) is packaged in accordance with the appropriate transport regulations;
  - (b) is returned as soon as is reasonably practicable to the AWE Burghfield Site.

**Table 1 – Disposal of Aqueous Wastes by Transfer to AWE Aldermaston from the AWE Burghfield Nuclear Licensed Site**

<b>Radionuclide</b>	<b>Annual Limit</b>	<b>Volume Limit</b>
Uranium	5 MBq	300 m <sup>3</sup>
Beta/Gamma Emitters	1 MBq	
Tritium	1 GBq	

**Table 2 – Disposal of Aqueous Wastes by Transfer to AWE Aldermaston from the AWE Burghfield Non-Licensed Site**

<b>Radionuclide</b>	<b>Annual Limit</b>	<b>Volume Limit</b>
Alpha Emitters	1 MBq	200 m <sup>3</sup>
Beta/Gamma Emitters	1 MBq	
Tritium	0.5 GBq	

**Table 3 – Transfer of Warhead Waste From AWE Burghfield to the Site Operator, Foulness, Essex**

<b>Radionuclide</b>	<b>Annual Limit</b>	<b>Volume Limit</b>
Tritium	6 MBq	50 m <sup>3</sup>



**Schedule 8**

**ACCUMULATION OF SOLID AND AQUEOUS WASTE ON THE AWE  
BURGHFIELD NON-LICENSED SITE**

1. The user may only accumulate aqueous waste on the Non-Licensed Site at AWE Burghfield if -
  - a. it is disposed of as soon as reasonably practicable;
  - b. the activity of any radionuclide or group of radionuclides in the waste listed in Column 1 of Table 1 does not exceed the maximum annual activity limit specified in Column 2 of Table 1 nor shall it exceed the maximum 3 month accumulated activity limit in Column 4 of Table 1;
  - c. it contains only the radionuclides listed in Column 1 of Table 1 other than decay products in amounts which could be present through radioactive decay of a listed radionuclide in the waste;
  - d. its maximum annual volume does not exceed that specified in Column 3 in Table 1 nor shall its maximum 3 month volume limit exceed that specified in Column 6 in Table 1; and
  - e. the period of accumulation does not exceed that specified in Column 5 in Table 1.

**Table 1 – Accumulation of Aqueous Waste on the AWE Burghfield  
Non-Licensed Site**

<b>Column 1 Radionuclide or group of radionuclides</b>	<b>Column 2 Annual Activity Limit</b>	<b>Column 3 Annual Volume Limit (m<sup>3</sup>)</b>	<b>Column 4 3 month Accumulated Activity Limit</b>	<b>Column 5 Accumulation Period</b>	<b>Column 6 Volume Limit (m<sup>3</sup>)</b>
Alpha emitters	1 MBq		0.25 MBq		
Beta/gamma emitters	1 MBq	200	0.25 MBq	3 months	50
Tritium	0.5 GBq		0.15 GBq		

2. The user may only accumulate solid waste on the Non-Licensed Site at AWE Burghfield if -

- a. it is disposed of as soon as reasonably practicable;
- b. the activity of any radionuclide or group of radionuclides in the waste listed in Column 1 of Table 2 does not exceed the relevant limit specified in Column 2 of Table 2;
- c. it contains only the radionuclides listed in Column 1 of Table 2 other than decay products in amounts which could be present through radioactive decay of a listed radionuclide in the waste;
- d. its volume does not exceed that specified in Table 3 ; and
- e. the period of accumulation does not exceed that specified in Table 4.

**Table 2- Accumulation of Solid Waste on the  
AWE Burghfield Non-Licensed Site**

<b>Column 1 Radionuclides</b>	<b>Column 2 Activity Limit</b>
Alpha Emitters	1 GBq
Beta/Gamma Emitters	1 GBq
Tritium	5 GBq

**Table 3 - Maximum Volume of Accumulated Solid Waste on the  
AWE Burghfield Non-Licensed Site**

200 m <sup>3</sup>
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**Table 4 - Maximum Period of Accumulation of Solid Waste  
on the AWE Burghfield Non-Licensed Site**

24 months
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## Schedule 9

### LIMITATIONS AND CONDITIONS RELATING TO RECEIPT OF RADIOACTIVE WASTE FOR DISPOSAL FROM OTHER PREMISES

1. The operator shall not receive radioactive waste from premises other than those specified in this Schedule.

**Table**

<b>Premises from which radioactive waste may be received</b>
AWE plc Atomic Weapons Establishment Aldermaston
The Site Operator, Foulness, Essex
Other premises approved in advance by the Agency

## Schedule 10

### IMPROVEMENT AND ADDITIONAL INFORMATION REQUIREMENTS

1. The Operator shall complete the requirements specified in the Table in this Schedule by the relevant completion date and, where relevant, shall notify the Agency, in writing, within 14 days of the completion of each of these requirements.

<b>Requirement</b>	<b>Completion Date</b>
1. The Operator shall provide the Agency with a full report of a comprehensive review of whether the current disposal routes continue to represent the best practicable environmental option for waste disposal from the site, together with a programme for carrying out any necessary changes identified by the review.	3 years from the effective date of this Authorisation and at such intervals thereafter as the Agency specifies in writing.
2. The Operator shall provide the Agency with a full report of a comprehensive review of national and international developments in best practice for minimising all waste disposals, together with a strategy for achieving reductions in discharges.	3 years from the effective date of this Authorisation and at such intervals thereafter as the Agency specifies in writing.
3. The Operator shall provide the Agency with a full report of a comprehensive review of the means used to assess the activity of radionuclides in disposals and to determine compliance with this Authorisation including consideration of national and international developments in best practice.	3 years from the effective date of this Authorisation and at such intervals thereafter as the Agency specifies in writing.