

# Explanatory Document

To accompany:

- (i) **Application by AWE plc for a variation to their Radioactive Substances Act Authorisation.**
- (ii) **Further information provided by AWE plc to support their application.**
- (iii) **Draft Variation Notice produced by the Environment Agency to assist consultation.**

## **1. Introduction**

The Atomic Weapons Establishment (AWE) provides and maintains the warheads for the UK's nuclear deterrent at their sites at Aldermaston and Burghfield in Berkshire. Radioactive waste is generated during this work and requires disposal. AWE holds authorisations issued by the Environment Agency that set out the limits and conditions we have placed on radioactive waste disposals from their sites.

Nuclear site operators, such as AWE can apply to the Environment Agency for a variation to their authorisation at any time. We have received an application from AWE, asking us to make changes to their authorisation for Aldermaston so that they can dispose of certain radioactive wastes.

We look carefully at any such application to consider whether or not the proposed changes are appropriate. However, before we reach any decision on such an application, we also consider the views of other relevant organisations. In some cases this consultation is a legal requirement. This document is provided to help such consultation. It summarises AWE's application, explains how we are considering it and gives our views so far. It also makes a proposal and plans for dealing with the application based on our views to-date.

More detailed information on the process we use and the matters we take into account when considering such applications are provided in the following two documents which are available on the Environment Agency web-site:

A) The Environment Agency's Process and Information Document for Applications for New Authorisations, Applications for Variations of Existing Authorisations, and Reviews of Existing Authorisations issued under the Radioactive Substances Act 1993 to Nuclear Sites in England and Wales. This document can be found on our website:

<http://www.environment-agency.gov.uk/business/444304/945835/1064129/?version=1&lang=e>

B) The Environment Agency's Considerations for Radioactive Substances Regulation under the Radioactive Substances Act 1993 at Nuclear Sites in England and Wales, which can also be found on our website: <http://www.environment-agency.gov.uk/business/444304/945835/1064129/?version=1&lang=e>

## **2. AWE plc's application**

AWE has applied to vary their current authorisation by adding a route to transfer radioactive waste from AWE Aldermaston to another nuclear licensed site (see Table 1 below). This would permit the limited transfer of oils and metal cutting fluids contaminated with uranium, which have been created through normal operations, to be transferred to the nuclear licensed site at Springfields in Lancashire for treatment. The treatment will extract the uranium from the oil and allow the uranium to be re-used in the nuclear fuel cycle. Once the uranium has been removed, the residual oils, fluids and washings can be disposed of as non-radioactive waste.

**Table 1 – AWE Aldermaston – Transfer of Waste Oils, Cutting Fluids and Aqueous Acid Washings**

<b>Person to whom the waste may be transferred</b>	<b>Radionuclide</b>	<b>Annual Activity Limit</b>	<b>Annual Volume Limit (cubic metres)</b>
Transfer, for the purpose of treatment, to the Springfields Nuclear Site	Uranium	15 GBq	10

The requested change involves the transfer of radioactive waste from AWE Aldermaston to another nuclear licensed site. AWE has not requested any changes to limits on their discharges to the environment. The site receiving the waste as a result of the requested change does not need to vary its current Radioactive Substances Act authorisation so that they can receive the wastes and process or dispose of them.

## **3. How we are dealing with the application**

We received the application from AWE on 16 June 2008 and sent copies to our statutory consultees: the Health and Safety Executive (HSE) and the Food Standards Agency (FSA). We also sent copies to the relevant Environment Agency and local authority Public Registers, and to Defra and the Department of Health.

Having examined AWE's application, we asked them for more information and received this on 16 September 2008.

Based on AWE's application and extra information, we have prepared this Explanatory Document and a draft varied authorisation that includes the change requested by AWE. We have done this to assist our consultation, and will not make any final decisions until we have carefully considered all of the responses to the consultation.

We are consulting our statutory consultees (HSE and FSA as above) and the local authority in the Aldermaston area: West Berkshire Council. We are also consulting with Fylde Borough Council and Lancashire County Council, who are the local authorities for the Springfields nuclear licensed site. We are also sending copies of the consultation documents to Defra and the Department of Health.

As no changes to environmental discharge limits are involved in AWE's application or in our draft variation notice, we are not consulting more widely; with the public for example.

Anyone who wishes to respond to this consultation should contact us by 17 October 2008. If you wish to respond there are contact details at the end of this document.

#### **4. What we considered**

In their application AWE identified that the acid washing treatment process used at the Springfields Nuclear sites represents the Best Practicable Environmental Option (BPEO) for the disposal of oily wastes contaminated with uranium. By considering the waste hierarchy, AWE has applied to use a treatment process that has proven to be successful in removing uranium and allowing it to be reused. The Environment Agency is aware of this treatment process and that it has been successfully used by another nuclear operator to recover uranium from oily wastes.

AWE's current authorisation requires them to use Best Practicable Means (BPM) to minimise the creation of radioactive waste, the activity of waste discharged to the environment and the volume disposed of by transfer to other premises. We consider that AWE's requests in this application appropriately address these requirements. The limits AWE have applied for take into account future arisings of waste as well as quantities of waste that have accumulated at Aldermaston before this disposal route became available.

We note that AWE's application does not include any requests to change the limits on their discharges to the environment. The receiving site would not need to change its own environmental discharge limits, or any aspect of their Radioactive Substances Act authorisation, so that it could receive the wastes and process them. As a result, the considerations we would normally give to changes to discharge limits – such as radiation doses to the public, impacts of discharges on the environment and wildlife, international commitments, etc – are not relevant here.

Any wastes that cannot be successfully treated at Springfields would be safely re-packaged and transported back to AWE.

We also consider that AWE's requests take adequate account of the Government policy for the management of radioactive wastes in that its requirements such as the waste hierarchy and the proximity principle have been addressed. We support AWE's intention to remove waste from the Aldermaston site and treat it appropriately, by established routes and methods. In particular, we support AWE's intention to dispose of wastes that previously had no defined disposal route and within the context of a clearly defined Integrated Waste Strategy.

#### **Consultation Responses**

The Food Standards Agency responded to the copy of AWE's application on 9 July 2008 by stating that:

“Given that there are no proposed changes to discharges directly to the environment in this variation there will be no unacceptable effects on the food chain. Therefore the Food Standards Agency has no objection on the grounds of food safety or the potential impact on fisheries or agriculture.”

The Department of Health responded to AWE's application on 10 July 2008 and stated that:

“The expected doses of up to 0.5mSv for a worker is significant but below regulatory limits so as long as ALARA is applied then there should be no long term concern especially as the doses are likely to be highest in the short term

when removing the legacy waste and then decrease in the future as the amount of oil sent to Springfields decreases.

We recognise that doses to members of the public are reported to be small and no increase in existing discharge authorisations are expected to occur.”

The Nuclear Installations Inspectorate also responded on 4 July 2008, but had no comment to AWE’s application.

## **5. Our proposal and plans**

We note AWE’s application for a variation to their authorisation, requesting the change as outlined above and as detailed in their application. Our initial considerations have not identified any objections in principle to AWE’s requests. Therefore, we have proposed a variation notice to amend the current authorisation for Aldermaston based upon AWE’s application.

This variation notice includes the addition of a transfer route for oily wastes and cutting fluids contaminated with uranium to be taken to the nuclear licensed site at Springfields, Lancashire for treatment. The treatment will allow the uranium to be recovered and reused in the manufacture of nuclear fuel.

## **6. Responding to this Consultation**

If you wish to comment on this proposal to vary AWE’s authorisation, you can write to us at:

Nuclear Regulation Group (South)  
Environment Agency  
Red Kite House  
Howbery Park  
Wallingford  
OX10 8BD

Or you can e-mail us at [nrgsouth@environment-agency.gov.uk](mailto:nrgsouth@environment-agency.gov.uk).

The consultation period ends on Friday 17 October and any submissions made to us before then will be taken into account when we determine this application.

Once we have completed our determination process, we will send the consultees a Decision Document that details our responses to their comments and details any changes we have made to our proposed varied authorisation. Subject to any final comments from consultees we will then issue a revised authorisation to AWE and agree a date for the varied authorisation to become effective.