



# Environment, Safety & Health Quarterly Performance Report



Reporting period: 1 July to 30 September 2016

Welcome to AWE's third quarterly performance report for 2016. This document is designed to inform you – the local and wider public – of our management of the environment, safety and health at our sites in Aldermaston and Burghfield. The safety of our employees, our community and the protection of our environment is and will always be our highest priority.

## New electrical intake completed to meet future demand

To meet increasing electrical load requirements and to protect long-term site resilience at our Aldermaston site, a new 400m<sup>2</sup> intake substation has been built – ahead of schedule and under budget.

AWE project manager, Dean Jerrom, said: "During the site clearance phase, we adopted an innovative approach to reuse as much of the previous buildings' foundations as possible.

"As the foundations were removed, they were crushed on site and used as fill material for the new building. In total we crushed and reused around 2000m<sup>3</sup> of concrete, plus a further 3000m<sup>3</sup> of spoil was reused for landscaping, and 2100m<sup>3</sup> of soil and stones reused for ground works. Overall, in excess of 50% of the waste material generated during construction phase was reused on or off site, and 99.9% of waste was diverted from landfill, which is a fantastic demonstration of working sustainably."

In addition to the internal high voltage fit out and associated building services, there were a number of external works needed, including ducts and cabling, external landscaping, roads, footpaths and services. A Sustainable Urban Drainage scheme was also put in place to manage the surface water in the area and satisfy West Berkshire Council planning requirements.

"This has been a great example of collaborative and cross-team working, employing construction best practice at AWE by undertaking both the Principal Designer and Principal Contractor role under the CDM Regulations 2015," adds Dean. The project involved 94,000 man hours, all without a lost-time incident.

Following completion of the construction works, the project team is now working with contractors, designers and the Utilities Facility to ensure all of the handover documentation is in place in order to assist with through-life management and operation of the facility.



# Public dose data

AWE monitors discharges of radioactive material from its sites and assesses the impact these could have on the local environment and the public.

The table below shows the rolling annual dose to members of the public from Aldermaston and Burghfield discharges. The calculated doses represent minute fractions of the dose constraint set by the Environment Agency of 500 µSv per year for a nuclear site. The assessment concludes that there is no hazard to the public.

Public Dose Assessment					
Discharge	Aldermaston		Burghfield		Guidance Levels
	Q3 2016	Oct 2015 to Sept 2016	Q3 2016	Oct 2015 to Sept 2016	
Atmosphere	0.04 µSv	0.14 µSv	Less than 0.0001 µSv	Less than 0.0001 µSv	500 µSv
Trade Effluent	0.004 µSv	0.013 µSv	N/A	N/A	500 µSv
Aldermaston Stream	Less Than 0.0001 µSv	0.0003 µSv	N/A	N/A	500 µSv

Refer to list of definitions of units of measurement at the end of this report.

Putting doses into context	Dose in microsieverts
135g bag of Brazil nuts if eaten	5 µSv
Chest x-ray	20 µSv
Transatlantic flight	70 µSv
CT scan of the head	1400 µSv
UK average annual radiation dose	2700 µSv
AWE Key Performance Indicator for Maximum Individual Dose	4000 µSv
CT scan of the chest	6600 µSv
Average annual radon dose living in Cornwall	7800 µSv
AWE Company Annual Dose Limit	10000 µSv
Whole body CT scan	10000 µSv
UK Annual Dose Limit for Nuclear Workers	20000 µSv

## How we report incidents on our sites

It is important that we know when things do not go to plan so that we can investigate and put things right. Anyone working on AWE sites or carrying out company business off site are required to capture incidents on a dedicated reporting system. These incidents are referred to as 'Abnormal Events.'

We believe that lessons can be learnt from even the most minor incidents and those lessons can help prevent more occurrences from happening in the future. With this in mind, we also have a system called Assurance Observation Reports which allow people to engage and capture conversations around safety on a daily basis.

# How we report on our industrial safety performance

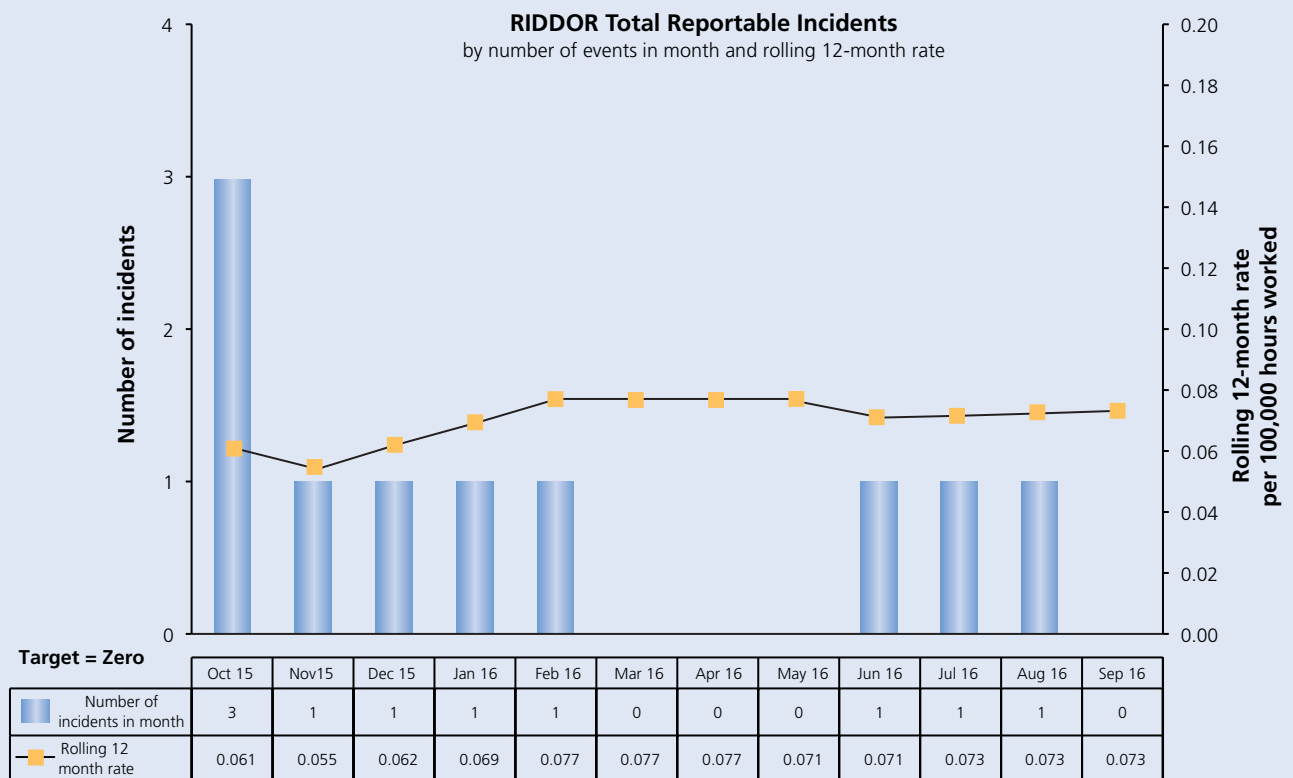
Certain Abnormal Events are automatically reported to the Health and Safety Executive (HSE) under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR).

RIDDOR is the statutory legislation that requires employers, and other people who are in control of work premises, to keep records of certain Abnormal Events.

The table under shows the breakdown of RIDDOR reportable events that have occurred on AWE sites during this quarter. The number of RIDDOR events reported during the preceding 12-month period appears in the chart below.

<b>July 2016</b>
Whilst an AWE staff member was closing a cargo door they were struck by a moving manual pallet truck causing bruising to the ankle. Reportable as an absence greater than seven days.
<b>August 2016</b>
A motorcyclist sustained injuries when the tyres had lost traction due to a layer of grit on the road. Reportable as an absence greater than seven days.
<b>September 2016</b>
No reportable events occurred.

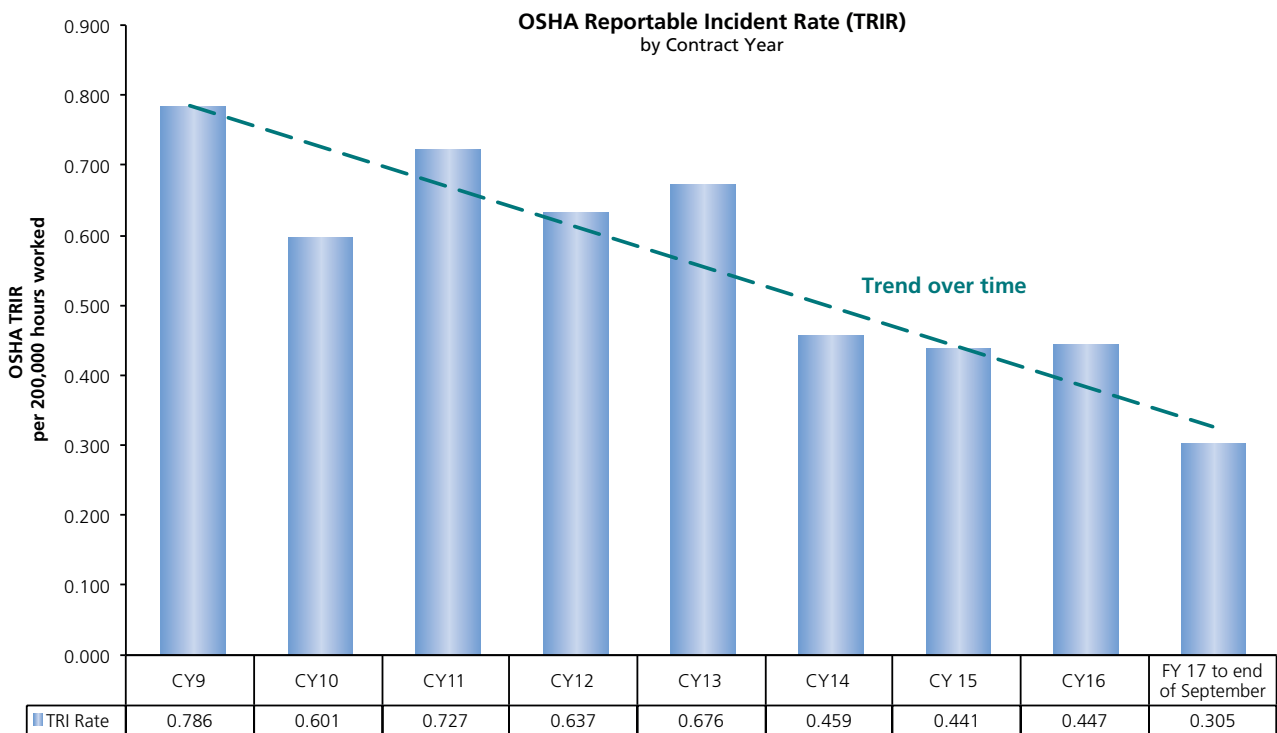
These events have been fully investigated and actions taken to help prevent recurrence.



# How we drive improvement in our performance

AWE is committed to a continuous programme of improvement, and as part of further learning we also use the United States Occupational Safety and Health Administration (OSHA) system when applying a classification code to injury and illness related Abnormal Events.

The chart below shows AWE’s performance for all OSHA recordable events occurring since 1st April 2008’.



# How we report on our nuclear safety performance

In addition to reporting events to the HSE under the RIDDOR regulations, as a nuclear licensed site, AWE has also set criteria for which incidents must be reported to its nuclear regulator, the Office for Nuclear Regulation (ONR). Events reported to the ONR during the current reporting period are listed in the table on page 5. Where applicable, an indication of the International Nuclear and Radiological Events Scale (INES) rating, given to the event, is also listed.

The INES scale is used by nuclear operators to give a common international standard for comparison of nuclear events; these events are rated on a scale of one to seven. Those coded as ‘zero’ are deemed below the scale and to have had no safety significance.

<b>ABNORMAL EVENT</b> All events occurred at AWE Aldermaston unless specified otherwise	<b>Initial/ Provisional INES Rating</b>	<b>Final INES Rating</b>
<b>July 2016</b>		
When an accounting system was in training mode it did not respond as expected by the users.	0	0
During maintenance activities within a glovebox the maintainer noticed damage to the glove.	1	1
<b>August 2016</b>		
During a review, it became apparent that design change arrangements relating to the construction of a floor had not been followed.	1	TBC
<b>September 2016</b>		
A cable was damaged during removal of a concrete gantry base. The damage resulted in loss of power to the building.	0	TBC
When examining the unexpected response of the accounting system in training mode (see July event) an additional anomaly was identified.	0	0

## Protecting our environment

In order for AWE to operate our sites and perform our role in national defence, we are required to hold a number of permits, authorisations, registrations, licences and consents. We have to apply to the appropriate regulators in order to be granted these permits, authorisations, registrations, licences and consents (jointly termed permits).

### Environmental events notified to the Environment Agency

All events occurred at AWE Aldermaston unless specified otherwise.

<b>July 2016</b>
AWE notified the Environment Agency (EA) that we proposed to change our environmental monitoring programme following the reporting and internal review of radioactivity results in soil and vegetation. The review had considered the EA's guidance and made recommendations to reduce the number of sampling locations. The EA supported our recommendations and agreed the change.

<b>August 2016</b>
AWE notified the EA of our intention to make another change to our environmental monitoring programme. Following consultation with the EA, sampling from one of the boreholes in AWE's environmental monitoring programme was altered such that collection frequency was changed from quarterly to annually. A report detailing the reasoning and justification for this change (mainly due to the low recharge rate of groundwater) was provided to the EA. The EA agreed with our findings and approved the change in collection frequency.

<b>September 2016</b>
No notifications made.

# Waste minimisation

As part of AWE's commitment to protecting the environment, we have a long-term vision to become a zero-controlled waste-to-landfill organisation, details of which are given in the AWE Sustainability Review 2013-15 (available on AWE's website). To that end, there is a drive towards minimising waste and avoiding landfill wherever possible. AWE monitors diversion from landfill, for which a target of 80% has been set for Controlled, and Construction and Demolition waste.

## Controlled Waste

Normal operational waste but excluding radioactive (RA), Explosive, and Construction and Demolition

## Construction and Demolition Waste

Commonly rubble and soil but excludes Controlled, RA and Explosive waste

## Reused

An item to be reused on site, or resold to be reused in its original condition

## Recycled

An item that can be broken down and made into something else

## Recovered

Where waste is burnt and energy recovered, or waste is used in land remediation

## Disposed

Where waste is not reused, recycled or recovered

Below are the performance statistics for this quarter.

	Diverted from Landfill			% Total diverted from landfill	% Disposed
	% Reused	% Recycled	% Recovered		
Controlled	3.9%	56%	31%	90.9%	9.1%
Construction	0%	88.7%	9.6%	98.3%	1.7%

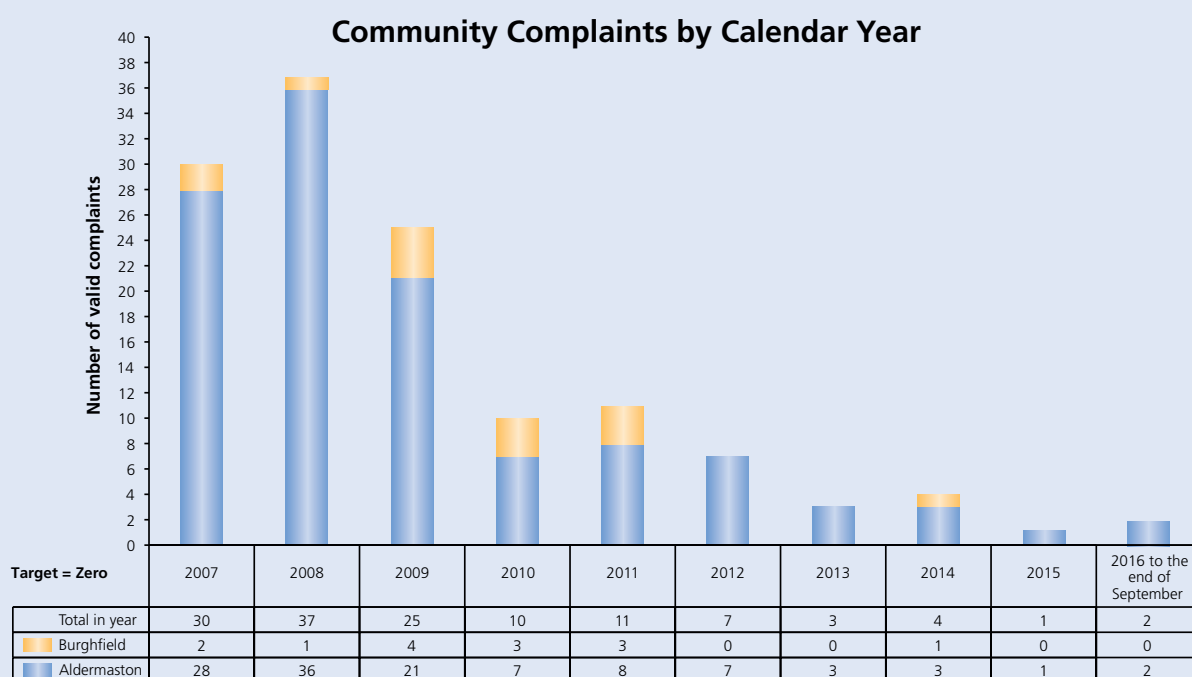
# Community concerns

At AWE, we believe in being a good neighbour. It is important to us that people living near our sites have the utmost trust in our organisation.

AWE's process for handling community concerns requires us to respond to them effectively and appropriately on a 24/7 basis. Any concerns raised broadly fall into six main categories: noise, traffic, light, water, pollution and other. A community concern is initially assessed in terms of criteria such as severity, safety implication, complexity, impact, and the need and possibility of immediate action. This includes an assessment to determine whether the concern is a complaint and whether it is associated with AWE operations or not. A community complaint is defined as an expression of dissatisfaction with AWE, however expressed, whether justified or not.

We are proud of the strong relationships we continue to build with the community, and are currently supporting a number of local projects including the Tadley First Responders, and Basingstoke's Shop-mobility. The majority of our circa 6,000 staff and contractors, who are themselves part of the local community, live within a 10-mile radius of AWE.

No corporate complaints were received in the reporting period.



For more information, contact: [enquiries@awe.co.uk](mailto:enquiries@awe.co.uk)

## List of acronyms and definitions of scientific terms:

AWE:	Atomic Weapons Establishment
Sievert:	A measure of radiation dose received by a person
millisievert (mSv):	One thousandth of a Sievert
microsievert (µSv):	One millionth of a Sievert
CY:	Contract Year; the period from 1 April to 31 March
FY:	Fiscal Year 17; the period from 1 April 2016 to 31 March 2017



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