



Research Sites
Restoration Ltd

Harwell and Winfrith

Annual Sites Review 2010–2011



Continuing to rise

by Alan Neal, RSRL Managing Director

2010/11 has been another year of achievement for RSRL, with many landmark successes. In little more than two years, we have shown ourselves able to deliver our programme of work safely and efficiently, as well as making real progress towards our long-term mission.

“We have done this... while... meeting 100% of the targets set for us by the NDA.”

Underlining our constant commitment to safety, we are extremely proud this year to have been awarded a RoSPA Gold Award. We have done this while carrying out a busy and demanding schedule at both Harwell and Winfrith and meeting 100% of the targets set for us by the Nuclear Decommissioning Authority (NDA).

Achievements during the year

RSRL successes in 2010/11:



- Building 462 waste processing exceeded target.
- Completed the remediation of part of the eastern end of the Harwell site, opening up land for delicensing and de-designation.
- Emptied, decontaminated and began decommissioning of the External Active Sludge Tanks (EAST) for the Steam Generating Water Reactor at Winfrith.
- Carried out the post operational clean out of the Active Handling Plant at Harwell, prior to moving the facility into care and maintenance.
- Began preparing the Waste Encapsulation Treatment Plant (WETP) at Winfrith for demolition, its mission now complete and more than 1,000 drums processed.

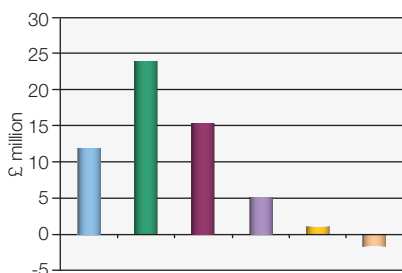
to the challenges







At Harwell, the site landscape has changed almost beyond recognition. As a visible sign of our success, we have been able to move the site fence and reduce the size of the secure site by 15%. This land has been delicensed and readied for release for future development. At Winfrith, a considerable programme of work has been undertaken to prepare the Dragon and Steam Generating Heavy Water reactors for a period of care and maintenance.

I have no doubt that the coming year will be just as busy and that the people at RSRL – managers, employees, trade unions and contractors alike – will continue to rise to the many challenges presented to them.



Major Areas of Expenditure 2010/11



	Decommissioning & Termination	£12M
	Waste & Nuclear Materials Management	£23.9M
	Site Support	£15.3M
	Support Services	£5.1M
	Stakeholder Support	£1.1M
	New Construction	-£1.3M

Message from the NDA

By Brian Burnett, NDA Programme Director RSRL



It is good to see the progress made by RSRL in the few years since it was created in 2009.

Performance targets for this year have been met, while safety performance has been first-class. The economic climate remains constrained, but the prospects for NDA funding next year are encouraging. I look forward to another year of securing even greater value from the planned activities and continued improvement. Congratulations to everyone at RSRL on a job well done and best wishes for the future.

Safety, Security and Envir

RSRL has pledged to prevent accidents, harm to people, and damage to the environment, while restoring its sites safely and securely.

Safety performance

Safety award

In 2011 RSRL was awarded a Royal Society for the Prevention of Accidents (RoSPA) Gold Award. RoSPA Gold Award winners show a high level of performance in occupational health and safety management, outstanding control of risk and very low levels of error, harm and loss.

Rewards scheme

The Safety and Environment rewards and recognition scheme continues to act as an effective motivator for the reporting of near misses and unusual occurrence incidents. During the year, as part of this scheme, RSRL donated over £1700 to local charities.

SSHE briefings

Monthly safety, security, health and environment briefs were issued to staff throughout the year. Topics ranged from a company-wide musculo-skeletal survey and RSRL occupational health arrangements to office safety awareness and the role of the Civil Nuclear Constabulary in the protection of nuclear sites.

Processes and compliances

We have undertaken a comprehensive review of our business processes to ensure that RSRL fulfils its regulatory and contractual obligations as efficiently as possible. This project was completed in March 2011. As a consequence, a number of processes have been revised and the changes implemented. Further improvements have also been identified for delivery during FY 2011/12.

RSRL's management system complies with national and international quality standards, including ISO 9001, ISO 14001 and BS OHSAS 18001.

Security

Emergency planning and site exercises

Emergency planning and site exercises were held during the year at both sites.

In all cases, observing regulators were satisfied that the counter-terrorism and level 1 site emergency exercises staged were acceptable demonstrations of RSRL's planning and response arrangements.

Site security

High levels of security at our sites resulted in no breaches involving nuclear materials in storage or transit, or marked information.



RSRL Key Safety Indicators 2010/2011

	RSRL	Harwell	Winfrith
RIDDOR Reportable Lost Time Accidents	3	1	2
Other Events	0	0	0
International Nuclear Event Scale Incidents	0	0	0
Total Reportable Incident Rate (rolling 12 month at end March 2011)	0.47	0.22	1.15
Average Radiation Dose to RSRL and Contractor Workers (Calendar Year to end December 2010)	-	0.08mSv	0.15mSv
Maximum Radiation Dose to RSRL and Contractor Workers (Calendar Year to end December 2010)	-	1.81mSv	1.69mSv

Priorities

onment

Environment

Environmental management

Both Harwell and Winfrith are sites of ecological importance and are subject to legislative requirements.

The heathland at Winfrith is a site of special scientific interest and Harwell acts as a significant wildlife corridor.

RSRL operates a company-wide environmental management system with a corporate biodiversity action plan to ensure a common approach across both sites while taking into account their different features and requirements.

We set ourselves demanding internal environmental targets, with specific campaigns being carried out throughout the year. During this reporting period, the target of a 5% reduction in utilities was achieved.

Environmental monitoring

In accordance with statutory requirements, RSRL carried out regular environmental monitoring at both sites. Levels of radioactivity found were very low and well within authorised limits.



Winfrith Performance Data



Winfrith Utilities 2010/11

Electricity	3,518,721 kWh
Gas	2,172,680 kWh
Water	1,1495m ³

Winfrith Radiological Discharges

	Alpha	Beta	Tritium
Gaseous	0.16%	0.45%	0.05%
Liquid	<0.5%	0.64%	<2.17%
Solid	2332 MBq	312 GBq	436 GBq

% of the authorised annual discharge limit

Harwell Performance Data



Harwell Utilities 2010/11

Electricity	8,336,237 kWh
Gas	14,643,094 kWh
Water	19,084m ³

Harwell Radiological Discharges

	Alpha	Beta	Tritium
Gaseous	4.71%	2.04%	3.48%
Liquid	4.93%	3.01%	0.23%
Solid	71 GBq	850 GBq	260 GBq

% of the authorised annual discharge limit

Delicensing and demolitions

At Harwell, the emphasis is on decommissioning, demolition and clean-up.

Site transformation

Eastern area

Part of the Eastern area has now been delicensed by the Office for Nuclear Regulation (ONR) and is awaiting de-designation by the Nuclear Decommissioning Authority, providing tangible evidence of the strides RSRL is making towards its long-term vision of releasing the site from nuclear licence.

Prior to this, an ambitious programme of demolitions of disused facilities had taken place, including the removal of the former Critical Assembly building, an Electro-plating and Pickling shop, and the last remaining part of a Post-Irradiation Examination (PIE) facility.

Main gate, north gate and security building

In May 2010, the Harwell security fence was reconfigured and a new entrance gate opened.

In the same month, a new security building was opened, bringing together the Civil Nuclear Constabulary and the Emergency Response Team, replacing the previous police headquarters and fire station.

Following the relocation of the Civil Nuclear Constabulary and the Emergency Response Team to their new building, the old Main gate and North gate entrances were demolished.



Clean-up

Groundwater remediation

As part of the programme to manage chemical contamination of groundwater at Harwell, eight new boreholes were completed at three sites near Chilton. The boreholes, up to 90 metres deep, help to provide information on the geology and distribution of contaminants. The groundwater containment plant at the Western Storage Area continues to operate effectively.

Drains

Work to survey, wash and grout the trade drains system over the whole Harwell site has been completed. In all, some 12,000 metres of drain were decommissioned.

Care and maintenance

The DIDO, PLUTO and BEPO research reactors are currently in a period of care and maintenance. A post operational clear out of the Active Handling Plant has been carried out, enabling the facility to move into care and maintenance. It will be re-categorised and remain in service under a reduced scope.



Waste operations

Waste handling

Operations in the High Activity Handling facility included the size-reduction and repackaging of former National Disposal Service (NDS) sources stored in shielded containers.

The last consignment of radioactive waste which belonged to the Ministry of Defence, stored on site since the 1980s, has been transported to the Low Level Waste Repository.



Radiochemistry building

During 2010/11, the B220 radiochemistry team processed 45 radium cans through the facility, achieving their stretch target.

LETP

The final drums of sludge from the Liquid Effluent Treatment Plant (LETP) have been encapsulated, bringing the total during the year to 29. The pump house has been demolished down to the base slab and 200 concrete shielding blocks have been disposed of.

Solid waste storage

The 2010/2011 stretch target of processing 660 cans of remote handled waste through the B462 Solid Waste Storage facility was achieved and, furthermore, efficiency savings enabled progress beyond this target.

The active commissioning of Retrieval Machine 2 (RM2) was completed to programme and extended commissioning commenced.



Care and maintenance

At Winfrith, work to clean-up and restore the site is pressing ahead, with the main focus on the care and maintenance of facilities.

The next phase

SGHWR and Dragon

In order to prepare the facilities to enter a period of care and maintenance, the team responsible for the Steam Generating Heavy Water Reactor (SGHWR) and Dragon research reactor (the last reactors on site) has had to undertake a substantial programme of preparatory work, some of which is continuing.

Work has included the decommissioning of 597 fission chambers in the Dragon complex and the first 12 of 17 Dragon reactor tanks, which have been size reduced and treated in the Winfrith Abrasive Cleaning Machine (WACM).

Decommissioning of the Dragon fission product delay bed is proceeding, as is the processing of waste from the first containers from the Active Handling Building, prior to repacking and disposal.

Assessment work on the SGHWR building has begun.

WETP

Processing of exempt waste through the Waste Encapsulation Treatment Plant (WETP) is continuing. Meanwhile, with the plant's main mission, the encapsulation of sludges from SGHWR, now complete, and more than 1,000 sludge drums processed, a survey of the process area has begun, in preparation for the eventual demolition of the plant.

ALES

Refurbishment work on Winfrith's Active Liquid Effluent System (ALES) has been undertaken. A lamella inclined plate clarifier has been installed, which will allow the majority of entrained solids to be removed from incoming waste effluents on the Winfrith site. A filtration unit has also been fitted to remove finer solids.

These modifications will enable RSRL to fulfil its obligation to exclude entrained solids from radioactive aqueous waste, prior to discharge to the environment.



EAST

For the first time in more than 40 years, man access to Winfrith's External Active Sludge Tanks (EAST) has been possible. With the sludge from the four tanks now transferred and encapsulated, and the tanks decontaminated, final decommissioning of EAST is going ahead. Diamond wire cutting techniques are being used to cut the tanks in readiness for removal.

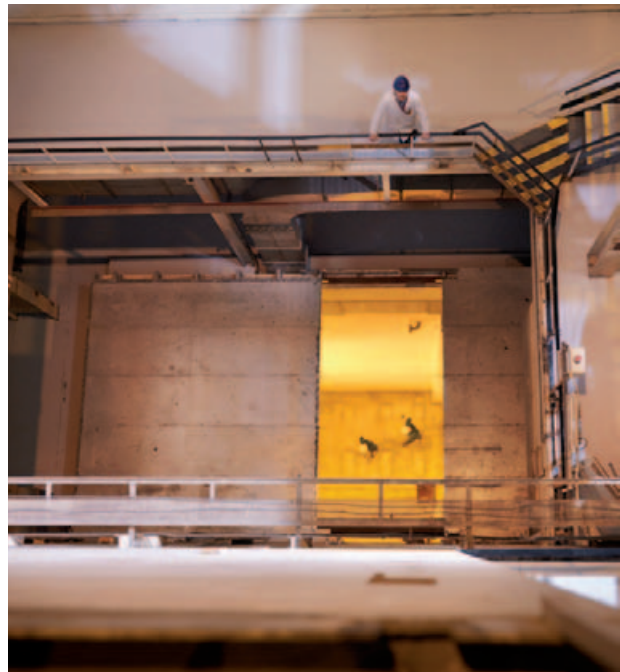
Waste management

VLLW

Some 300 cubic metres of very low level waste (VLLW) – mostly rubble and soil – has been consigned from the site, completing the disposal campaign for the year.

Historic waste review

Following a review, a new detailed programme of 2,500 activities has been drawn up to deal with historic wastes.



In the community

RSRL works hard to inform and consult interested parties about its operations and policies.

External engagement

Stakeholder meetings

Harwell-Chilton Campus local stakeholder group and Winfrith site stakeholder group meetings are held regularly.

Visitors

RSRL is proud of its achievements. During this reporting period the sites have played host to a range of visitors.

Among many other visitors, Harwell and Winfrith welcomed from the NDA, CEO Tony Fountain, Programme Director Brian Burnett, Safety Assurance Manager Steve Blakeway, Commercial Manager Peter Welch and Lead Site Programme Manager Stephen Barker; and from Babcock International Group, Managing Director of the Nuclear Business Unit Roger

Hardy, Nuclear Operations Director Tony Moore and Business Development Manager Celeste Pendlebury.

In addition, they have been pleased to host many other visits including those from the Managing Directors of Magnox North and South, Neil Baldwin and Mark Lesinski; a party from the Shared Services Alliance Analytical Sub-group; and an engineer with the Japanese Atomic Energy Authority, who worked alongside the team at SGHWR for a period.

After touring the site, one of Harwell's guests, Minister for Culture, Communications and Creative Industries and local MP Ed Vaizey, said he was impressed with RSRL's progress in cleaning up the site and looked forward to the site's release.



Sponsorships, donations and fundraising

RSRL continues to support local organisations and charities. During the year several donations have been made to help groups with particular projects and staff have participated in a variety of fundraising activities.

Much of the company's community support is focused on the younger generation. During the year RSRL has provided safety education books to local primary schools in Oxfordshire and Dorset; sponsored a programme of health education in schools surrounding the two sites; donated high visibility vests to a number of local primary schools to promote road safety; funded part of an interactive, outdoor science base at Chilton School; and sponsored kit and equipment for local football and cricket teams.

In addition, public-spirited RSRL staff have walked, run, cycled, baked, 'dressed down' – and more – all in support

of good causes ranging from Children in Need, and Comic Relief to Jeans for Genes and Macmillan Coffee Mornings.

Their commitment, ingenuity and energy is to be applauded.



For further information

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