



**HUNTERSTON A**

**STAKEHOLDER REPORT FROM  
SITE CLOSURE DIRECTOR**

**DECEMBER 2016**

**HUNTERSTON A  
SITE CLOSURE DIRECTOR'S REPORT TO THE SITE STAKEHOLDER GROUP  
THURSDAY 1 DECEMBER 2016**

**Hunterston A continues to make good progress on our programme of work to Care and Maintenance. We continue to be adequately funded by the NDA and remain committed to addressing the nuclear liabilities at Hunterston A in a safe, secure manner with care for the environment.**

## **1 SAFETY OVERVIEW**

### **1.1 Safety Review Performance**

It is now 30 months since the last Lost Time Accident (LTA) on site and both the Total Recordable Incident Rate (TRIR) and Day Away Case Rate (DACR) for site remain at zero. We have however, had three first aid case injuries on site. This is the same number as last quarter and again the injuries were minor in nature. All three injuries were minor cuts to finger/thumb.

The "Target Zero" campaign continues to be implemented on site and across the whole Magnox fleet. Over the past three months the focus has been on Situational Awareness (September), Health (October) and now the focus is on Driving Safety (November). The topic focus point changes weekly over the course of the month and is discussed at all meetings held on site. Target Zero posters are displayed at prominent locations on site to ensure it is well communicated to the workforce in support of the Company and Site Safety Improvement Plans.

The site Safety Representatives continue to meet fortnightly and provide valuable support and feedback to management regarding safety and welfare concerns on site. The Safety Representatives attended the Magnox Safety Conference at Heathrow in November. The Safety Representatives are well supported on site and a further two new Safety Representatives have volunteered to join the site team. The Site HESAC meets bi-monthly and is chaired by Site Closure Director and the EHSS&Q Manager to discuss relevant topics including safety performance with the Safety Representatives.

The annual regional review of safety security and environment attended by ONR was carried out at Chapelcross, covering both Chapelcross and Hunterston A's performance for year to April 2016. Magnox Limited now report on a regional basis and was the first one of these events for the Scottish region. The annual review was considered to be of good quality with adequate reporting of the position of the Hunterston site and the work going forward.

## 2 DECOMMISSIONING PROGRESS

### 2.1 Clean and Drain Pond Project

Floor decontamination work is ongoing in the Pond, with Bays 1, 2 & 3 complete. The majority of the concrete surfaces in Bays 4 & 5 have been shaved. Bays 6 & 7 have been dredged using the sludge dredge system. Bay 8, the largest of the 8 bays, is currently being drained. Any remaining material in this area will be processed to the Pond Purge Sump (PPS). Once all water and sludge has been cleared from the Bay, the contaminated surfaces will be removed in the same manner as the other bays.

Work is also continuing to clean the contaminated surfaces in the West Blockhouse Tunnel. This is being carried out remotely using an Ultra High Pressure (UHP) jetting system.

- 560m<sup>2</sup> of 1078m<sup>2</sup> of concrete surfaces have been shaved.
- Approximately 200m<sup>3</sup> of water remaining in Pond.
- 1530 of 1626 pontoons have been removed.



*UHP jetting in Blockhouse A tunnel*



*Concrete shaving in Bay 4*

## 2.2 Solid Active Waste Bunker Retrieval (SAWBR) Project

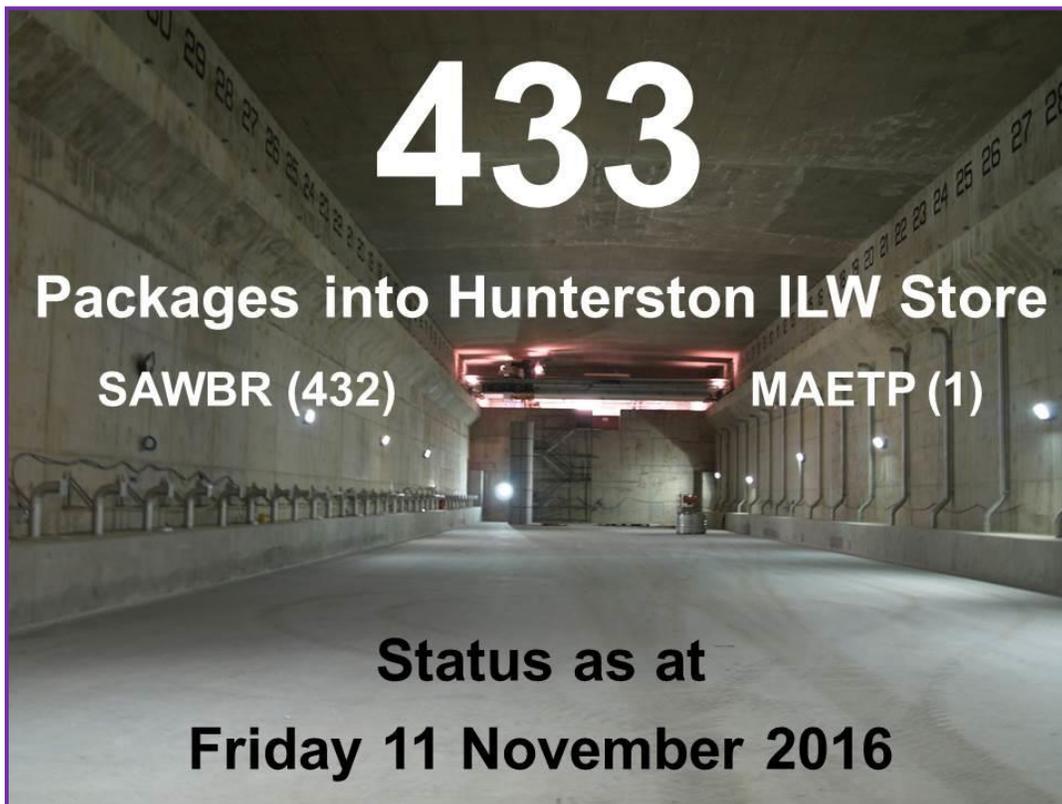
Following replacement of the SABWR crane ropes identified during its statutory inspection the facility returned to operations in early September 2016. During this quarter the project has suffered reliability issues across the installed plant and equipment which have impacted on expected waste retrieval numbers.

Issues have been encountered on the Brokk Remote Operated Vehicles (used to remotely recover the waste) electrical systems which proved diagnostically challenging to identify. This was in addition to the expected failures on hydraulic components common to operating machines of this type in an arduous environment.

Further issues were also encountered on the robotically driven nut runner which suspended operations until resolved. SAWBR has recovered from these setbacks and has since returned to steady state operations.

Despite these significant challenges to the delivery team the total number of packages recovered from the SAWB bunkers stands at 433 which is an increase of 63 packages since the last quarterly update.

The SAWB waste retrieval operations are currently three months ahead of the planned schedule and represents excellent progress against the sites hazard reduction mission.

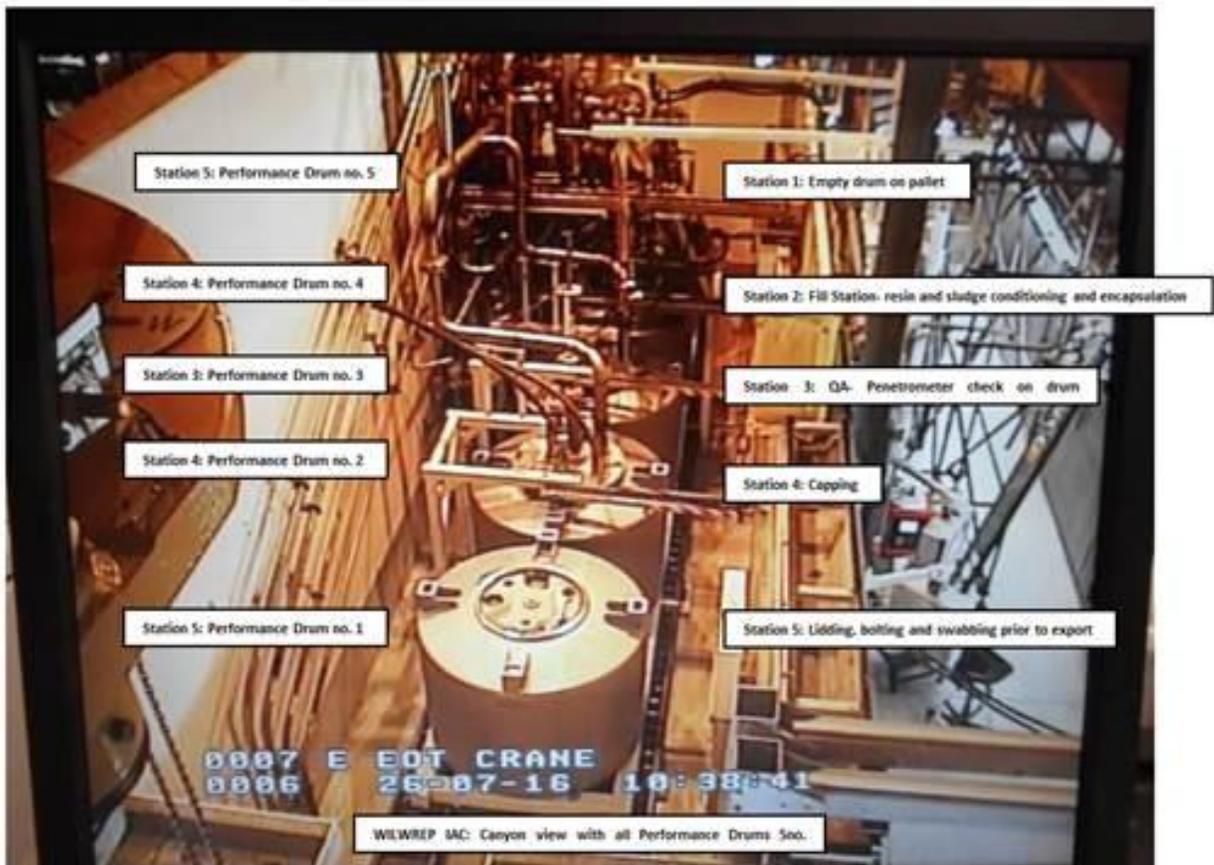


### 2.3 Wet Intermediate Waste Retrieval & Encapsulation Plant (WILWREP)

Permission to commence the ventilation active commissioning was granted and the ventilation active commissioning was successfully completed.

Having a fully commissioned ventilation system is the key step in the process of actively commissioning the WILWREP facility. The programme will continue with active commissioning on the retrieval pump manipulator equipment working toward the delivery of the first drum of encapsulated active waste by the end of the year.

The objective of the project remains to progress to active commissioning in a safe and effective manner delivering compliant encapsulated packages for storage in the Intermediate Level Waste (ILW) Store.



## 2.4 Solid Intermediate Level Waste Encapsulation (SILWE) Project

The overbuilding structural steelwork is substantially complete and the PVC cover installation started in November 2016.

The site is now very busy with the mobilisation of various sub-contractors to paint the structural concrete walls and floors, install the electrical equipment, install the ventilation plant and equipment and install the shielded windows.

At the offsite testing facility all mechanical and electrical installation work (including the motor control centres and the programmable logic control cubicles) has been successfully completed and the Principal Contractor anticipates starting setting to work integrated testing activities at the offsite facility by the end of the year. The Principal Contractor continues to maintain a good standard of safety performance on the project.



*Overbuilding Installation*



*PVC Sheeting installation on the Overbuilding*



**MCC & PLC Panel Installation at Offsite Facility**



**Conveyor Assembly at Offsite Facility.**

### **3 PEOPLE**

#### **3.1 Site HR & Occupational Health**

We are now at the final stages of closing out the transition to the new organisation with only a small handful of individuals yet to be fully transitioned to their new roles.

New entrants over the previous months have included two employee transfers from other Magnox sites where individuals have taken up employment opportunities through vacancies here at Hunterston. This has been a win-win situation for both the site who required suitably experienced operators and the individuals who were looking for ongoing employment within Scotland. Other entrants secured have been through the supply chain, in most cases from the local area. As with any change there are inevitably always some improvements that arise as the structure was embedded. These have been minor changes and engagement with both Trade Unions and workforce, as appropriate, has been ongoing to ensure the change was managed effectively to avoid unnecessary concerns from the workforce.

In terms of the health of our workforce, the overall health of the workforce remains good with short term sickness below the Company target. However, we do have a small number of long term cases which along with other long term cases from earlier this year have resulted in our overall sickness levels increasing and remaining above our Company target. We are confident that all cases are being managed effectively and employees fully supported when unfortunately their health has resulted in them being unfit for work.

### **4 ENVIRONMENT (October 2015 to September 2016)**

#### **4.1 Radioactive Discharges**

##### Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 114 m<sup>3</sup> of LLW was disposed of during the twelve month period from October 2015 to September 2016. There is no limit on the volume or radioactivity content of LLW being disposed of under the site RSA authorisation. The main contribution to these waste consignments was redundant plant and equipment generated during decommissioning operations.

##### Liquid

The main sources of liquid radioactive discharges during the period October 2015 to September 2016 was dewatering of the pond and routine waste water arisings from the site active drain system.

Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (July 2015 to June 2016)
Tritium	30 GBq	0.36 GBq
Caesium-137	160 GBq	0.28 GBq
Plutonium-241	2 GBq	0.17 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.46 GBq
All non alpha emitting radionuclides not specifically listed taken together	60 GBq	1.17 GBq

### Gaseous

The main contributions to gaseous radioactive discharges were ventilation systems operating in contamination controlled areas and reactor vessel 'breathing'.

Authorised Outlet, Group of Outlets or other discharge route	Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (July 2015 to June 2016)
All authorised outlets taken together.	Tritium	100 MBq	56.4 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.94 MBq
Discharges made as a consequence of reactor breathing	Tritium	3 GBq	0.65 GBq
	Carbon-14	200 MBq	56.3 MBq

## 4.2 Non-radiological Environmental update

Surveillance and analysis of the sewage treatment works effluent continues to ensure compliance with the discharge licence. Treated sewage effluent from the plant continues to be independently assessed by SEPA throughout the year. Results from SEPA and an off-site independent laboratory verify that the sewage treatment works reed beds continue to work efficiently to maintain good quality effluent.

Monitoring of resources such as water, electricity and fuel continues to determine where use can be minimised. Site objectives and targets for resource use are being monitored and reviewed and any actions are being completed as planned.

Over the period October 2015 to September 2016 100% of the non-radioactive hazardous waste, 99% of the non-radioactive non-hazardous waste, and 100% of the non-radioactive inert waste produced at Hunterston A was sent for re-use or recycling. Only 2.6 tonnes of waste was disposed to landfill during that period.

## 4.3 Environmental Events

There were no environmental events in the period October 2015 to September 2016.

## 5 RADIOLOGICAL SAFETY

Explanatory note: The maximum permissible dose to a radiation worker in the UK is 20mSv (milliSieverts) in a calendar year. The average annual radiation dose to the UK population from all sources is 2.6mSv. Collective dose is usually measured in man.milliSieverts. For example, if ten people were each to receive 0.1milliSieverts during a particular task, then the collective dose for the task would be 10 people x 0.1mSv each = 1 man.milliSievert.

Doses for the calendar year 2016, to the end of September, are as follows;

- Approximately 176 employees received a total collective dose of 13.378 man.mSv between them
- Approximately 446 contractors received a total collective dose of 91.011 man.mSv between them
- The highest individual dose received by an employee was 3.345 mSv
- The highest individual dose received by a contractor was 5.908 mSv

The majority of dose accrued in 2016 has been from a combination of the pond decommissioning project and other site projects. All doses in these projects have been prior-assessed, planned and are tracked throughout the project duration to ensure that no limits are exceeded and that doses are kept as low as reasonably practicable.

### 5.1 Radiological Events

There was one minor radiological event in the period from August to October 2016.

An individual was splashed with a small amount of pond water during the changeover of a hose in the Cartridge Cooling Pond. The individual's radiological personal protective equipment was removed and the individual was monitored and found to be free from personal contamination. An investigation is currently being conducted into the event.

Meanwhile, the site continues to action its Health Physics Improvement Plan.

## **6 EMERGENCY PREPAREDNESS**

The site's drive towards adopting Contingency Arrangements continues with a series of local contingency exercises being undertaken. Several of the site's term contractors have demonstrated their specific contingency arrangements to the site assessors. Other areas of the site are preparing for the ONR-witnessed exercise to be held on Wednesday 23 November 2016.

The site has submitted the relevant documentation to ONR for a License Instrument to permission the adoption of the new arrangements which are expected to come into force early in the 2017 calendar year.

With a busy site, the planning and training for the new arrangements provides a continuing challenge. The number of personnel involved in the exercising of these arrangements occasionally leads to the decommissioning process being interrupted. Staff and contractor buy in, however, remains strong.

Following the conclusion of the ONR-witnessed exercise, the exercise programme will continue through into January 2017 to ensure all plant areas and working groups are covered.

The site also continues to exercise the existing Emergency Response Teams as there is still a requirement for the site to maintain these until the new arrangements come into play.

The Contingency Arrangements, with command and control coming from the Site Control Room are a more proportionate response to the type of 'emergencies' the site is likely to face in the future and through these exercises the site has proven that a faster reaction to the situation is provided without having to wait for the ECC and ACP to be set up.

The exercises always provide valuable learning opportunities, with, for example, a high concentration of actions in the Control Room being recently observed. This learning will be taken forward into future exercises and will inform the final implementation of the contingency arrangements, including any learning points being fed back to the Magnox central Emergency Preparedness team.

## 7 SOCIO-ECONOMIC AWARDS

There has been a total of **11** applications to date in 2016/17 (**8 successful, 2 rejected and 1 cancelled**).

Please see below the table of applications that have been successful in receiving awards so far this year:

MAGNOX SOCIO-ECONOMIC SCHEME 2016/17 - HUNTERSTON AWARDS		
APPLICANT	DETAIL	AWARD
Largs Rotary Club ( <i>£300 Award Returned</i> )	Dragon Boat Charity Race – Youth Boat	0
Street Beatz Dance School ( <i>see picture below</i> )	Holdalls - Dancers for Competition Events	£450
Largs Events	Schools Kites Project – Largs Event 2016	£500
St Andrews Congregation	Bosendorfer Piano Restoration Project	£500
West Kilbride Out of School Care	Children's Learning Equipment	£253
Maritime Volunteer Service Ardrossan Unit	Safety Equipment for Motorboat	£903
Friends of Portencross Castle	Toilet and Sceptic Tank Project	£10,000
Largs Colts Football Club	Largs Youth Teams Training Kits	£540
West Kilbride Festival Committee	West Kilbride Christmas Lights 2016	£250
<b>TOTAL</b>		<b>£13,396</b>



## 8 SITE VISITS AND KEY DATES

Hunterston A Site continues to attract the right kind of interest through our good safety and business performance. A selection of visitors and key dates during the period included:-

DATE	EVENT / VISIT
1 September	Hunterston Quarterly SSG Meeting, Lauriston Hotel, Ardrossan
13 September	Hunterston SJC Meeting
19 September	Hunterston Site Review by Magnox Executive
20 September	ONR Site Inspection – Event Reporting / Investigations
22 September	Hunterston Annual Review of Safety
26 / 27 Sept	Infrastructure Managers Peer Group (IMPG) Peer Group Meeting
27 September	Site Standowns – ‘Being Magnox Values’
28 September	Focus Group Sessions – ‘Being Magnox Values’
29 September	Scottish Nuclear Sites Meeting, Victoria Quay, Edinburgh
6 October	Annual Counter Terrorism witnessed Exercise
27 October	Site Closure Director Update to SSG Chair, Rita Holmes and SSG Vice-Chair, John Lamb & Magnox Socio-Economic Local Review Panel Meeting
31 Oct – 2 Nov	Mark Raffle, Ian Doyle, David Davidson - NDA
31 Oct – 4 Nov	Chris Savage - Magnox Risk Assurance Lead
1/2 November	NDA Familiarisation visit - Mark Raffle David Davidson Ian Doyle
7 November	Paul Heath - Magnox Technical Director
14/18 November	Chris Savage - Magnox Risk Assurance Lead
17 November	Closure Director Quarterly Magnox Executive Stand downs
17 November	Tony Wratten – Magnox EHSS&Q Director
21/25 November	Peter Donnelly and Rob Eales – ONR
22/23 November	Adam Stackhouse – SEPA
23 November	Annual ONR Exercise
29/30 November	NDA Site Assessment Group (SAG) Review - Mark Raffle, Laura Baker, Gill Thomas