



HUNTERSTON A

**STAKEHOLDER REPORT FROM
SITE CLOSURE DIRECTOR**

SEPTEMBER 2016

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

Safety performance on site is very good: the site has now worked 27 months since the last Lost Time Accident (LTA). Both the Total Recordable Incident Rate (TRIR) and Day Away Case Rate (DACR) for site remain at 0.00.

Since the last SSG meeting, there have been three First Aid Case injuries on site which were minor in nature: a Site Engineer Received a minor injury to his calf whilst undertaking office housekeeping, a scaffolder received a wasp sting to his neck and a joiner received a puncture wound (from a nail) to one of his fingers whilst he was removing a piece of plywood shutter. The first two injuries were very minor though the latter required the joiner to attend A&E for check-up. No tetanus injection was required and the joiner returned to work. These injuries are a reminder that we are fallible and we must ensure we remain focussed on the tasks we undertake each day. By implementing the Human Performance error avoidance tools two of the above injuries may have been prevented.

Magnox has introduced a new campaign titled "Target Zero", which is in support of the company safety improvement plan. Target zero's goals are Zero accidents, Zero Incidents & Zero harm. A rolling plan has been produced which identifies specific topics/areas of focus each month and to date the topics have been Office Safety, Human Performance and the current topic Asbestos. The idea of Target Zero is proactively improving awareness, creating discussion and focus point from manager level to the shop floor level resulting in raised awareness and likelihood of error reduced, therefore continuous safety improvement over all Magnox Decommissioning sites.

Maintaining "Management" visibility and engagement on site is really important and demonstrates commitment from top level management to the workforce and encourages two way communications. Task observations are carried out by Site Closure Director, lead team members and line managers and involve looking at a task to ensure procedural adherence, identify improvements or error traps that may be present. The task observations have proved to be a valuable tool which has captured good learning and opportunities for improvements.

The site Safety Representatives including contractors, continue to meet fortnightly to discuss safety issues/concerns, suggested improvements and safety performance. The local safety forum is attended by the site EHSS&Q Manager, Head of Safety & Operational Experience Feedback Engineer (OEFE). Any issues identified are discussed and managed locally and some topics are added to the HESAC agenda for higher level discussion and resolution if appropriate.

2 DECOMMISSIONING PROGRESS

2.1 Clean and Drain Pond Project

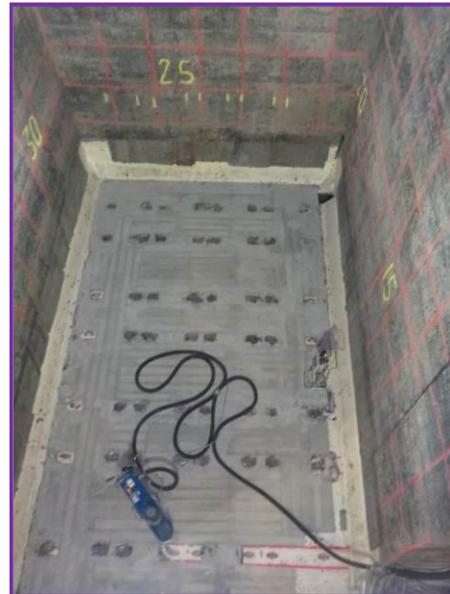
Floor decontamination work is ongoing in the Pond, with Bays 1, 2 & 3 complete. Bays 4 & 5 have been drained, cleared of sludge and the walls cleared using the remote Ultra High Pressure (UHP) jetting system. The majority of the floor in Bay 5 has been cleaned by means of concrete shaving. This process will also be used to clear the floor in Bay 4.

Transfer of sludge from Bay 8 to the Pond Purge Sump (PPS) is ongoing and is approximately 50% complete. This sludge is transferred in batches from the PPS to Sludge Retention Tank 1 (SRT 1). The current figures for the floor decontamination process are:

- *466m² of 1078m² of concrete surfaces have been shaved.*
- *454m³ of 675m³ of pond water has been drained.*
- *1354 of 1626 pontoons have been removed.*



Bay 5 During Clean Up.



Bay 5 currently

2.2 Solid Active Waste Bunker Retrieval (SAWBR) Project

On 22 June 2016 the SAWBR team successfully completed breakthrough from Bunker 4 into Bunker 3.

This challenging work involving the removal of a 2.5m thick reinforced concrete wall to gain access to the waste within Bunker 3 was delivered safely and ahead of schedule. Creating the openings in the bunkers, 2.4m high and 2.1m wide, was achieved using a technique of coring a series of 162mm diameter “enabling” holes using a Wet diamond Core Drilling rig attached to a custom built frame fixed to the bunker wall. If laid end to end these cores alone would stretch a total of 71 meters, this gives some idea of how much concrete has been removed – all in C3 conditions - to achieve the breakthrough. During this time the Programme recently installed extra cameras within the bunker areas to aid the movements of the Remote Operated Vehicle that retrieves the waste (see picture on right of Bunker 3 breakthrough).



Waste retrievals then commenced with the recovery of 34 packages from Bunker 3 prior to a plant shutdown for statutory maintenance. This takes the total of packages recovered to 370 overall and represents 1/3 of the overall inventory.

After completion of operations on Friday 22 July, the SAWBR facility and ILW Store were shut-down to carry out planned general and statutory plant maintenance. This shutdown was scheduled to take 3 weeks.

As part of the SAWBR statutory crane inspection an issue was identified with the crane ropes. These have now been replaced and the crane re-commissioned for a return to service.

The Programme is targeting a return to service early in week commencing 22 August.



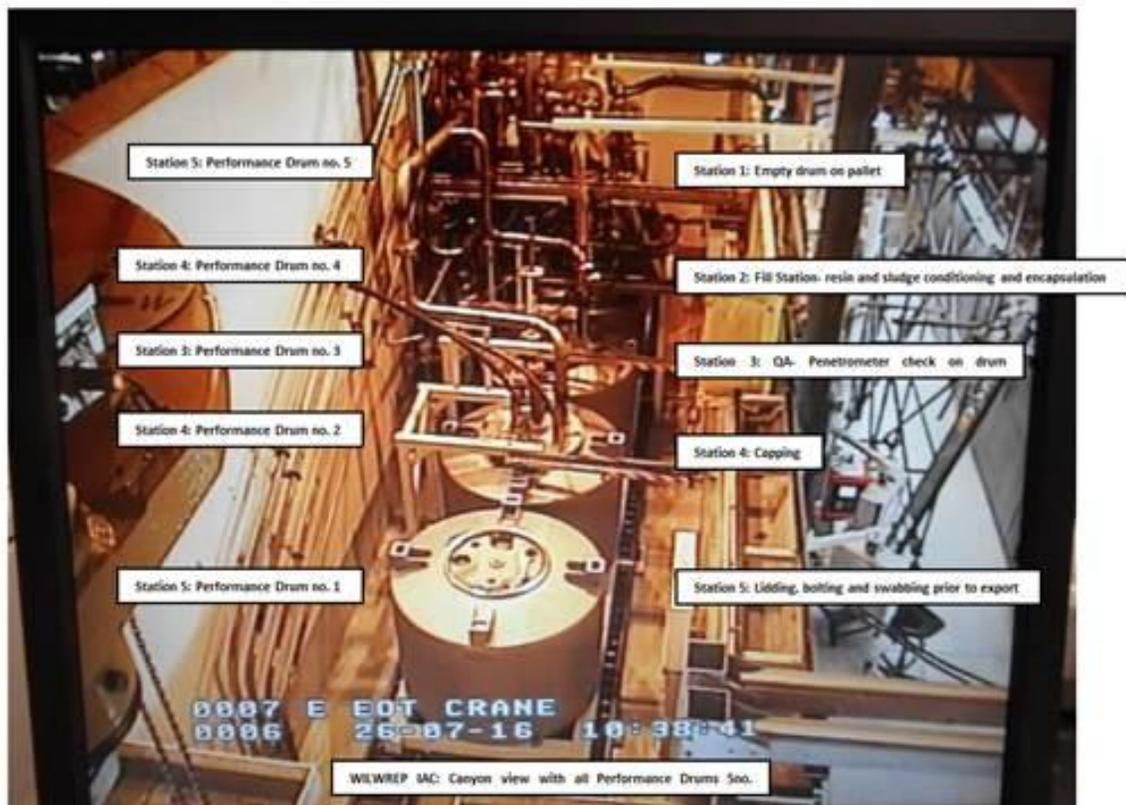
2.3 Wet Intermediate Waste Retrieval & Encapsulation Plant (WILWREP)

The Inactive Drum Performance Demonstration has been completed satisfactorily and Inactive commissioning is now substantially complete and the project is requesting internally permission to start the active ventilation system commissioning.

The start of the ventilation system active commissioning is the first step in the process of actively commissioning the WILWREP facility. The programme will continue with active commissioning and deliver the first drum of active waste by the end of the year.

The Office for Nuclear Regulation (ONR) completed a Readiness Inspection on the facility in June 2016. The ONR inspection concluded the facility ready to start active commissioning.

The objective of the project remains to progress to active commissioning a safe and effective manner.



2.4 Solid Intermediate Level Waste Encapsulation (SILWE) Project

All structural concrete has been poured and completed with the exception of the construction opening on the west elevation of the SILWE facility. The main crane has been installed and good progress has been made on the ancillary buildings. The overbuilding installation of structural steelwork started in July 2016. At the offsite testing facility mechanical completion of the conveyor assemblies, the grout plant and the recovery cell equipment has been achieved. The motor control centres (MCC) have been installed and cabling, glanding and termination has commenced and is progressing well. It is expected that the main programmable logic control (PLC) cubicles will be delivered in August 2016 to complete the installation and fit out and start offsite integrated testing by the end of the year. The Principal Contractor continues to maintain a good standard of safety performance on the project.



Offsite Test Facility Conveyor Assemblies and Electrical Installation August 2016



Site Progress on the Ancillary Buildings July 2016



Main Crane installation June 2016

3 PEOPLE

3.1 Site HR & Occupational Health

Progress with transition to the new structure continues with the majority of individuals now embedded in their roles, albeit there is still enabling activities ongoing such as training in new skills, managed reduction of work activities, and transfer of responsibilities to other work groups through agreed handover.

All remaining positions not filled by Magnox employees have all been advertised internally within the Company to enable the opportunity for career development. Very few applications have been forthcoming for these roles as individuals either do not have the skills to undertake these posts or are content within their current position. We do however have two Magnox employees who are in the process of transferring from other Magnox sites which is encouraging and an effective transfer of skills. These remaining positions will continue to be resourced by the Supply Chain workers already in post (Agency/Contract Supplied Workers or Contractors). There are a small number of vacancies that are unfilled by a current incumbent, in the areas such as Production Technicians, Maintenance Technicians, Security Guard, etc and recruitment is currently underway to fill these through the Supply Chain, ideally from the local area. Individuals who have aspired to leave on voluntary severance terms are all scheduled to leave by the end of September 2016.

The UK Government has advised that it intends to introduce an Apprentice Levy which will impact on all Government funded organisations, including Magnox. The requirement is that 2.3% of the workforce we will support through an apprentice scheme. This requirement based on current manpower equates to potentially around 40 in the first year. We are awaiting further guidance on how this will be introduced, options on how the Company will meet the requirement, and what geographical locations they will be allocated to. At this point therefore, we are unaware if these apprenticeships will be directly employed by Magnox or through some sponsorship scheme.

In terms of the health of our workforce, many of the long term sickness cases related to either serious illness or planned operations have been supported back to work and absence rates have improved. Pro-active health continues with a Companywide health campaign planned for October around '*Take Control of your Health*'. This will focus on three areas of Mind, Body and Occupational Health Services (fitness for work). We will also be promoting the Employee Assistance Programme and our private health provision, as there is various useful information and services available through both of these company's websites that are not used to their full capacity.

4 ENVIRONMENT

4.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 127 m³ of LLW was disposed of during the twelve month period from July 2015 to June 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 July 2015 to June 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	0.39 GBq
Caesium-137	160 GBq	0.30 GBq
Plutonium-241	2 GBq	0.16 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.45 GBq
All non alpha emitting radionuclides not specifically listed taken together	60 GBq	1.20 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	0.83 MBq
Discharges made as a consequence of reactor breathing	Tritium	3 GBq	0.62 GBq
	Carbon-14	200 MBq	56.4 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 July 2015 to June 2016 over 95% of the non-radioactive hazardous waste, 98% 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 5.3 tonnes of waste was disposed to landfill during that period.

4.3 Environmental Events

There were no environmental events in the period July 2015 to June 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 July, are as follows;

- Approximately 165 employees received a total collective dose of 10.656 man.mSv between them
- Approximately 397 contractors received a total collective dose of 68.883 man.mSv between them
- The highest individual dose received by an employee was 2.517 mSv
- The highest individual dose received by a contractor was 4.724 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.

Pond doses over the next 12 months are expected to be higher compared with the last couple of years as the project team decontaminate the floor. The radiation doses will be carefully managed to ensure they remain as low as reasonably practicable.

5.1 Radiological Events

The investigation into the one radiological event reported in the previous report where a small piece of Low Level Radioactive graphite, approximately the size of a ten pence piece, was found out with the Nuclear Licensed Site but within the Hunterston A site has been concluded. The actions from the investigation have been completed and a clearance monitoring improvement plan has been developed and is being implemented to reduce the risk of a repeat event.

There was one minor radiological event in the period from May 2016 to July 2016. An individual was found to have a single radioactive particle in the back pocket of their coveralls which had transferred from a document wallet. All persons are required to be monitored by a final exit monitoring instrument before they leave the Controlled Area and it was during this monitoring that the radioactivity was detected. An investigation has been concluded and actions implemented to reduce the risk of a repeat event.

6 EMERGENCY PREPAREDNESS

Work continues on the move towards site contingency arrangements with Exercise Castlerigg being held on Thursday 7 July 2016. This exercise differed from previous exercises in being the first of a series of exercises that do not include the participation of the Emergency Control Centre (ECC) at the L & D Centre and the Advance Control Point (ACP) at Reactor 1 ground floor. This shows how the site's contingency response will be co-ordinated in the future, without the main site command and control centres. This arrangement, with command and control coming from the Site Control Room is a more proportional response to the type of 'emergencies' the site is likely to face in the future and should provide a faster reaction to the emergency without having to wait for the ECC and ACP to be set up.

The exercise, as usual provided some valuable learning opportunities, with, for example, a high concentration of actions in the Control Room. This learning will be taken forwards into future exercises which will be run along the same lines.

Other work is on-going to bring the site term contractors into the process, with the aim of their contingency teams demonstrating their own arrangements in the next few months, along with demonstrations from the larger self-perform Programmes areas, e.g. Ponds, SAWBR and WILWREP.

7 SOCIO-ECONOMIC AWARDS

There has been a total of **10** applications to date in 2016/17 (**7 successful, 1 rejected and 2 pending**).

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	Dragon Boat Charity Race – Youth Boat	300
Street Beatz Dance School	Holdalls - Dancers for Competition Events	450
Largs Events <i>(see picture below)</i>	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
TOTAL		12,906



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
24 June	Standards & Expectations Workshop
28/29 June	ONR Peter Donnelly -WILWREP Readiness Review
29 June	Cavendish Fluor Partnership Board visit
30 June	Site Closure Director Update to SSG Chair, Rita Holmes and SSG Vice-Chair, John Lamb & Magnox Socio-Economic Local Review Panel Meeting
21 July	Visit from Mihara-sensei Japanese MP and delegation (SSG Chair, Rita Holmes and SSG Vice-Chair, John Lamb were in attendance)
25 July	Paul Heath – Magnox Limited Engineering Director
27 July	Site Closure Director Update to SSG Chair, Rita Holmes and SSG Vice-Chair, John Lamb & Magnox Socio-Economic Local Review Panel Meeting
9/10 August	Asbestos Review - NDA
10 August	HAW Workshop – Mary Rodriguez, Magnox Waste Operations Programme Manager
16 August	WILWREP SCENATE
18-23 August	Tony Wratten, Magnox Executive Site Sponsor
23 August	Filming by Marick of Magnox Values and Achievements Video – Kenny Douglas, Magnox Managing Director and Pete Knollmeyer, Magnox Deputy Managing Director
24 August	Visit by NDA - Laura Baker / Mark Raffle
24 August	Visit from Cavendish - Mark Rouse / Chris Carter / G Brunel
24 August	Site Closure Director Update to SSG Chair, Rita Holmes and SSG Vice-Chair, John Lamb (including site tour of SAWBR Control Room and WILWREP) & Magnox Socio-Economic Local Review Panel Meeting