



HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT SITE CLOSURE DIRECTOR

DECEMBER 2018

HUNTERSTON A SITE CLOSURE DIRECTOR'S REPORT TO THE SITE STAKEHOLDER GROUP DECEMBER 2018

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

Safety Review Performance

Safety performance at Hunterston A Site continues to be excellent. It is now 54 months since the last Lost Time Accident (LTA) occurring on site. The Total Recordable Incident Rate (TRIR) & Day Away Case Rate (DACR) are Zero. This safety performance demonstrates that the focus is on safety and reflects the ongoing engagement with staff and contractors to reinforce the behaviours required to achieve the required safety standards and expectations.

Reinforcement of safety awareness and performance continues via the Company-led "Target Zero" campaign. The last three monthly topics have been Chemical Safety (September), Display Screen Equipment (October) and Quality (November). These topics are designed to stimulate discussions, questions, promote awareness and hopefully prevent or reduce unwanted events with the desired output being Zero Accidents, Zero Incidents and Zero Harm. In addition, as a result of several events that had the potential to be more serious there was a particular focus on emphasising the expectations on Site for 'Control of Work' at a Quarterly stand-down brief and also in the Monthly Team Brief. The intent was to clarify the standards required and further embed safe working practise.

A series of Safety Culture workshops were held in October 2018. There was a good contribution from attendees which enabled the Site Management to obtain honest and constructive feedback via a facilitator. An action plan is being developed to address a number of the points raised. The site also continues to encourage individuals, both Magnox employees and from our contract partners, to become Safety Representatives. There has been an increase in numbers and 2 of the Safety Representatives are also training as Mental Health First Aiders.

The site continues to receive a healthy number of event reports each month via the 'Q-Pulse' reporting system. There has been an increase in the number of fire doors reported that have been found not to be closing properly. It is pleasing that people are recognising this fault and by promptly reporting it allows the doors to be repaired without delay, where required recognising that other external factors can affect functionality.

The site has experienced some high winds during this period and inevitable there has been some minor damage to buildings e.g tiles blown off. However, site personnel were proactive and ensured that where possible potential wind-blown items were moved to inside buildings or adequately weighted down. In addition, access was restricted to the site during the high winds to prevent people putting themselves at risk.

2 EMERGENCY PREPAREDNESS

Previous reporting periods have described the introduction of the revised 'Site Contingency and Emergency Arrangements' which were successfully implemented in April 2017 and subsequently regularly exercised. A further phase was implemented on 24 September 2018 with changes to reduce the requirement for the full time on-site presence of specific response team members and introduce an alternative on-call rota. The changes reflect the reduced hazard on the Site with the arrangements receiving Licenced Instrument approval from ONR and being successfully demonstrated as part of the implementation.

The Site and Contractors continue with a regular programme of exercises to ensure that the arrangements remain embedded and that we remain in a state of readiness to respond to any foreseeable event.

3 DECOMMISSIONING PROGRESS

3.1 Solid Active Waste Bunker Retrieval (SAWBR) Project

During the period September – November the facility has enjoyed a period of steady operation as it progresses towards completion of Bunker 2 clearance. Total waste recovered from Bunker 2 is now at >90% with around 15-20 packages left to clear. Completion of Bunker 2 is forecast by early December 2018 and remains well ahead of schedule.

During this reporting period the plant came off line to allow Planned Maintenance. After completion of the maintenance shutdown SAWBR returned to service on Monday 12 November 2018.

As of Monday 19 November 2018, the SAWBR team has recovered 266 of the expected 285 packages worth of waste from Bunker 2. This provides an overall figure of 881 packages of solid ILW recovered to date. This equates to ~1,854 tonnes of solid HAW waste safely recovered from the bunkers and placed in the ILW Store.

(see picture opposite of overhead view of Bunker 2 solid waste retrieval).



3.2 Wet Intermediate Waste Retrieval & Encapsulation Plant (WILWREP)

Significant progress on recovering sludge within the WILWREP facility has been achieved during this reporting period. On Thursday 4 October the last Drum from SRT3 was encapsulated and exported to the ILWS with a with a cumulative drum outturn of 61 3m³ drums. Progress was then made on removing 30m³ of supernatant from SRT2 as well as transferring the sludge retrieval equipment from SRT3 to SRT2. Retrievals within SRT2 have to date progressed satisfactorily with a further 4 drums being produced from the facility prior to stopping for a planned maintenance shutdown that commence week commencing 5 November. The plant was returned to service week commencing 19 November and at time of writing is processing Drums 69 and 70 through the facility.

The facility has to date exported 68 3m³ Drums to the ILW store with a total of 6528Kg of Sludge and 3839Kg of Resin safely recovered and encapsulated to date.

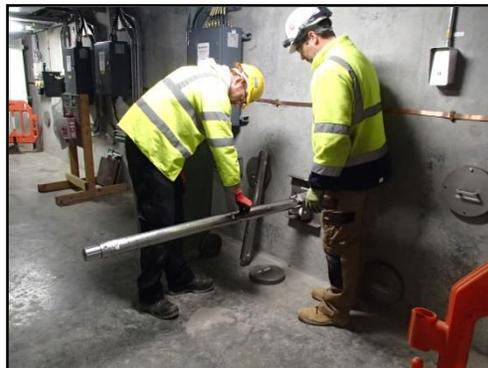
(picture opposite shows completion of Bulk Sludge retrievals in SRT3)



3.3 Solid Intermediate Level Waste Encapsulation (SILWE) Project

SILWE continues with the setting to work phase of the project and have identified and addressed various issues along the way. The Colcrete mixing skids are now fully integrated into the grout plant and currently undergoing dry commissioning.

Package recovery demonstrations have taken place on each and every available recovery penetration throughout the facility and fault observations have been raised for those which are unmanageable.



Package recovery demonstration



Grout plant mixing skid installation

The next major milestone is the completion of inactive commissioning, although Factory Acceptance Testing (FAT) of the Remediation Cell robot remains outstanding.

3.4 Hunterston Reactors Project

Reactor Cladding

The Contractor is advancing the permanent and temporary works designs. There are a number of engineering challenges that are currently being addressed in relation to the design; relevant technical expertise has been engaged in order to expedite a resolution.

As part of the Magnox Ltd project quality assurance activities to assess the capability of C Spencer Ltd to act as a Principal Contractor (PC), a site surveillance of a C Spencer PC controlled site at the Forth Road Bridge was carried out. The scope concentrated on the PC's general responsibilities on the site, including site set up, contractor management, training and documentation - it also included a site safety walk round.

The visit to the C Spencer site on the Forth Road Bridge was very useful and informative. The individuals that were engaged were able to demonstrate a thorough understanding of the requirements of the contract, the customer's requirements and Spencer's procedures relating to the contract in particular CDM compliance. It was particularly useful to meet with individuals from the construction team who will be working on the Weather Envelope Project at Hunterston A - this gave confidence that the same standards will be applied when working at our site.



This photograph illustrates a temporary works suspended access platform underneath the road bearing surface of the Forth Road Bridge at a height of circa 70m. During the visit C Spencer demonstrated fit for purpose management systems for controlling access to the temporary works.

Risk Based De-planting

Risk based de-planting assessments are ongoing with support from Exova and Mott MacDonald.

The forecast date for starting the de-planting works is June 2019.

The photograph opposite shows the desiccant towers that are a good example of typical plant that is encountered within the reactor buildings during the risk based de-planting assessments.



3.5 Ponds Programme

The Pond Team's main focus is now the decontamination of the Blockhouses and Stoplog Harbours. Preparation and setting up works at the B-Blockhouse have been completed and UHP operations are currently ongoing at the shaft and tunnel.

In the CCP Working Area, the large scaffold laydown platform over the Dry Bays was dismantled and safe access installed into the three bays. An initial clean-up was carried out and the redundant plant equipment was deplanted and packaged for the Waste Team. The Scrubbing bay has been grid marked and surveys are currently being conducted within the three floor levels.

Elsewhere in the Pond Enclosure, the Demin Water Storage Tank deplanting is now complete. The tank has been size reduced and the waste packaged for disposal.



B-Blockhouse Shaft



Working Area Scrubbing Bay

4 PEOPLE

4.1 Site HR

The organisational changes to reduce our shift operations teams have now been implemented and the revised structure associated with this change is in place. The individuals released from these operational positions have valuable transferrable skills and have been successfully redeployed, into Health Physics Monitor Day position and Shift Security Guard positions, meeting both business needs and individual aspirations.

We are currently now in consultation with the Trade Unions on impending organisational changes to the Waste Projects structure. This is required following completion of the Wet Intermediate Level Waste Encapsulation Plant (WILWREP) Project) system design and build, Phase 1 of the Acid Storage Facility, involvement of the Solid Intermediate Level Waste Encapsulation (SILWE) project and commencement of Pond Purge Sump project . We have a pathway for the small number of employees directly affected by this change and also have sought to retain supply workers with valuable skills knowledge and experience that can be utilised in other positions to support business requirements. These types of transitions to reduce and increase resources and skill requirements will be ongoing as we progress our programme towards Care and Maintenance

Our Company-wide Equality, Diversity and Inclusion (EDI) Improvement Plan has now been launched along with a supporting video in which volunteers from the workforce took part to further explain what our expectations are around EDI. We have also supported National Anti-Bullying Week where we have been sharing information and support available. These initiatives continue to highlight the Company's ongoing commitment to 'Respect and Inclusion' within our workforce.

4.2 Occupational Health

Our short term sickness levels remain good. Our long term sickness rate is reducing month by month with now only 3 long term sickness cases ongoing.

We continue to promote and support workforce health. Our health and wellbeing intranet pages have a wealth of information for employees and line manager on topics such as Seasonal Affective Disorder, Stress etc. with signposts to both internal and external support and information available. We have also highlighted and supported initiatives such as World Mental Health Awareness Day.

5 ENVIRONMENT (November 2017 to October 2018)

5.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 74.09 m³ of LLW was disposed of during the twelve month period from **November 2017** to **October 2018**. 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 decommissioned plant, equipment, and materials generated during decommissioning operations.

Liquid

The main sources of liquid radioactive discharges during the period **November 2017 to October 2018** was desludging of the cartridge cooling ponds, active commissioning of the new WILWREP facility and routine waste water arisings from the site active drain system.

Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (Nov 17 to Oct 18)
Tritium	30 GBq	0.13 GBq
Caesium-137	160 GBq	0.22 GBq
Plutonium-241	2 GBq	0.08 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	0.72 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 (Nov 17 to Oct 18)
All authorised outlets taken together.	Tritium	100 MBq	56.4 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.61 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	594.46 MBq
	Carbon-14	200 MBq	63.25 MBq

5.2 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 independent off-site laboratory analysis verify that the sewage treatment works reed beds continue to work efficiently to maintain good quality effluent.

Monitoring and trending of data for resources such as water, electricity and fuel continues to determine where use can be minimised, in line with the site Environmental

Management System. Over the period **November 2017 to October 2018** the site used 21.43 Terra Joules (Tj) of energy, 20.13 Tj attributed to electricity consumption and 1.30 Tj attributed to fuel use in site vehicles, equipment, and generators. This equates to a fuel consumption volume of 33.79 m³. In the same 12 month period the site water consumption was 16,302 m³.

Over the period **October 2017 to September 2018**, **100%** of the non-radioactive hazardous waste, 99.6% 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 2.03 tonnes of waste was disposed to landfill during that period.

5.3 Environmental Events

Following a programme of inspections against the requirements of the Radioactive Substances Act 1993 (RSA93) Authorisation held by Magnox Ltd for the Hunterston A Site; SEPA have assessed the site as **“Excellent”** with regards to compliance with the sites RSA93 Authorisation.

There were no significant environmental events in the period **November 2017 to October 2018**.

6 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 2018, to the end of September, are as follows;

- *Approximately 151 employees received a total collective dose of 5.580 man.mSv between them*
- *Approximately 436 contractors received a total collective dose of 60.013 man.mSv between them*
- *The highest individual dose received by an employee was 1.696 mSv*
- *The highest individual dose received by a contractor was 4.526 mSv*

The majority of dose accrued in 2018 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.

7 MAGNOX SOCIO-ECONOMIC SCHEME

To date in 2018/19 there has been a total of **13** applications submitted to the Magnox Socio-Economic Scheme. There is one application pending.

Please see the table below listing the **12** applications to date that have been successful in receiving awards from the Magnox Socio-Economic Scheme this financial year.

MAGNOX SOCIO-ECONOMIC SCHEME 2018/19 - HUNTERSTON AWARDS		
APPLICANT	DETAIL	AWARD
Cunninghame 2003 Youth FC	Football Training Equipment	£312
Street Beatz Dance Crew	Kit Bags for Junior Team Explozion	£451
Irvine Meadow 2011 Youth FC	Gazebos for Football Tournaments	£160
West Kilbride Improvement Group	2018 Scarecrow Festival	£500
Largs Viking Festival	Largs Viking Festival 2018	£1,000
Fairlie Community Association	Trolley and Tables for Largs Village Hall	£500
Kenshin Shukokai Karate	Equipment for Club in Irvine	£290
West Kilbride Yuletide Group	New Santa's Grotto	£250
West Kilbride Delta's 2008 FC	Set of Goalposts	£500
Cumrae Community Gardens	Water Heater, Awning and Television	£1,289
West Kilbride Community Initiative	Artists Mentoring Programme	£37,000
West Kilbride Village Hall	Replacement of Stage Lighting	£1,000
TOTAL		£43,252

8 SITE VISITS AND KEY DATES

Hunterston A Site continues to attract the right kind of interest through our good safety and business performance. Below is a selection of visitors / key dates during the period.

DATE	EVENT / VISIT
6 September	Hunterston Site Stakeholder Group (SSG) Quarterly Meeting
6 September	Brian Robinson – Magnox Technical Director
13 September	Magnox Women's Network Celebration Event - Birmingham
10 -14 September	LRQA Surveillance Audit
19 September	Hunterston Site Joint Council
19 September	Site Closure Director - Magnox Executive Quarterly Briefs
20 September	Site Closure Director Decommissioning Update with SSG Vice Chair, Stuart McGhie and Socio-Economic Local Review Panel Meeting
26 - 27 September	Annual Regional Review of Safety Security and Environment
2-3 October	Safety Culture Workshops
22-26 October	ONR Inspection – Bill Kings Principal Inspector - Nuclear Safety
30 October	Magnox Transition Stand Downs – Nigel Lowe, NDA
14 -15 November	ONR Inspection – Bill Kings Principal Inspector - Nuclear Safety
22 November	Site Closure Director Decommissioning Update with SSG Chair, Rita Holmes and Socio-Economic Local Review Panel Meeting
27-28 November	Safety Representatives Conference - Birmingham
5 December	Japanese visitors to site