HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT
SITE CLOSURE DIRECTOR

JUNE 2018

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SITE CLOSURE DIRECTOR'S REPORT TO THE SITE STAKEHOLDER GROUP
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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 continues to improve - it has now been 48 months since the last Lost Time Accident (LTA) on site, and both the Total Recordable Incident Rate (TRIR) & the Day Away Case Rate (DACR) for the site are zero. This is an excellent achievement and one that everyone on site should be proud to have contributed towards whilst delivering the safe decommissioning of Hunterston A Site.

The "Target Zero" campaign continues to raise hazard/topic awareness and is seen to be a proactive process expected to reduce the likelihood of unwanted events occurring on site relating to specific hazards/topics, in support of our company goal of Zero Accidents, Zero Incidents and Zero Harm. The topics for the last three months have been *'Risk Assessment'* (February), *'Construction Safety'* (March) and '*PPE'* (April). May 2018 topic is '*Lifting Safety'.*

Our reporting culture remains strong and we continually receive high numbers of event reports via our Q-Pulse reporting process on both opportunities for learning and positive reinforcement of good behaviours.

Magnox Limited has also issued the 2018/19 "Continuous Safety Improvement Plan" (CSIP) and the site is ready to support the implementation of this plan.

<u>Safety Representatives</u>

Safety Representative numbers are growing and the site now has a healthy number of workers undertaking the function of a Safety Representative. The Magnox & Contractor Safety Representatives are working well together and provide collaborative support when discussing and raising any issues on site. The Safety Representatives are delivering awareness sessions with departments on site focussing on Safety Culture using "Remember Charlie" DVD and discussion sessions. These are well received and are a proactive method of nurturing our already strong safety culture

The Safety representatives continually meet fortnightly for their Local Safety Forum and bi-monthly for the site HESAC meeting. Both meetings are well supported by site management and lead team. The Safety Representatives also play an active role in the quarterly Site Contractors Safety Forum, the latest of which was held on the Tuesday 17 April 2018.

Magnox and Contractor Safety Representatives continue to work well on site and assist in raising concerns, safety issues or areas requiring improvement and meet fortnightly with site management at the Local Safety Forum. Issues raised are discussed, actioned and may even be raised to a topic on the agenda for the HESAC meetings which take place every two months.

2 EMERGENCY PREPAREDNESS

The site has developed its 2018 contingency exercise programme and as part of this programme it continues to carry out regular training exercises for the Site Contingency Teams. A variety of scenarios have been developed which are representative of reasonably foreseeable events that could occur during the normal working day. Such scenarios have focussed on responses to first aid events, electric shock incidents and chemical spills, etc. As with all such exercises, areas for improvement are identified and serve to enhance the site's emergency response capabilities.

As the site regularly consigns radioactive materials shipments by road, it continues to be a member of the RADSAFE organisation. To maintain readiness for potential events, a series of RADSAFE desk-top exercises has been carried out. These exercises are designed to reinforce and refresh key personnel's knowledge of the RADSAFE system and to ensure an appropriate site response would be available in a timely manner if it were required.

The site will continue with the programme of exercises throughout the year to ensure that the arrangements remain embedded and the site remains in a state of readiness to respond to any foreseeable event.

3 DECOMMISSIONING PROGRESS

3.1 Wet Intermediate Waste Retrieval & Encapsulation Plant (WILWREP)

During April 2018 planned maintenance and project enhancement work on the WILWREP plant was completed successfully.

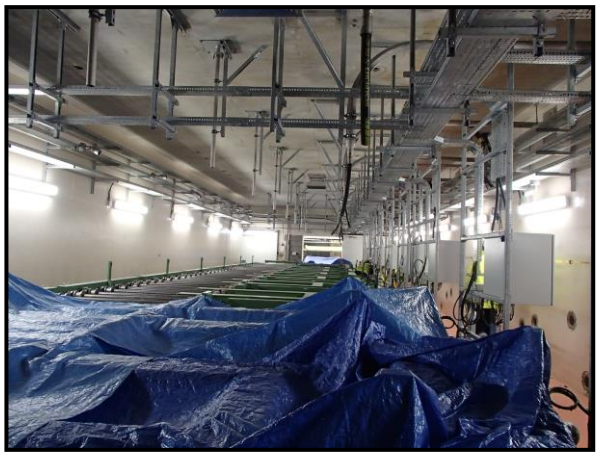
Since this outage, the performance of the retrieval systems has improved vastly. Consistent levels of resin and sludge are being retrieved into each drum. Drum 40 is the latest to be filled and has achieved the highest mass of sludge to date when using the direct feed system.

40 drums worth of Wet Higher activity waste has now been recovered safely as the plant nears the completion of its active commissioning period – this is an increase on the previously reported 25 drums completed in calendar year 2017.

Work to ensure the process is running as efficiently as possible is also being undertaken and once realised will ensure the optimum level of waste is transferred to each drum as safely and efficiently as possible, thereby facilitating further hazard reduction on the Hunterston A site as the plant moves towards full operational status.

3.2 Solid Intermediate Level Waste Encapsulation (SILWE) Project

SILWE achieved a significant milestone recently when the electrical supply was energised by 24 April 2018. This now allows for permanent lighting circuits to have their final inspections and brought on line. Temporary lighting circuits have mostly been stripped from site apart from areas where temporary scaffold structures are still in place.



With setting to work and inactive commissioning activities looming, the priority is to complete, inspect and bring all motor and junction box circuits on line to facilitate this.

The final wall pour to enclose the process cell also took place in April. This again was a great achievement and closes out the main civil elements of the SILWE construction. Rubb overbuilding completion, snagging and minor civil tasks in support of Chubb are all that remain.

3.3 Solid Active Waste Bunker Retrieval (SAWBR) Project

Waste retrievals from Bunker 2 continue to progress well and as of Monday 14 May 2018, the SAWBR team has recovered 162 of the expected 321 packages worth of waste from Bunker 2. This provides an overall figure of 777 packages of solid ILW recovered to date.

The plant came off line to allow Routine Planned Maintenance in SAWBR and this also provided an opportunity to take care of some minor Brokk maintenance and housekeeping within the process area. Work in SAWBR restarted Friday 04th May with removal of the Up Stand in Bunker 3 and to breakout Bunker 2 Wall to allow waste flow.

Work to progress Bunker 1 Safety Case and the Fuel Detection System (FDS) is progressing well and all contracts placed for the Deployment System, Probes and Software. The FAT for the FDS is scheduled for September 2018.

Work on bringing XST2 (Cross Site Transporter) into service has also been progressing and significant progress has been made. A number of modifications have been required to each facility to permit XST2 and XST1 to operate in parallel and these are now being progressed.

3.4 Clean and Drain Pond

The Pond project is focused on completing decontamination work in order to achieve the Licence Condition 35 milestone. Shaving work is largely complete, with the exception of one small area in the corner of Bay 8. A previously used vacuum system was repurposed in order to help clear this area. The remaining redundant equipment is being processed as waste and the area being cleared to allow final floor shaving to be completed.

Final surveys and clean-up work are ongoing throughout the 8 Bays *(see picture opposite of Bay 5 of the Pond after final surveys).* This involves surveying all the accessible surfaces. Good progress has been made on this with only a small proportion of the surfaces surveyed requiring further remediation (vacuum cleaning and some minor concrete shaving).

The remainder of the work will focus on removing the last of the equipment in the Pond and completing surveys ahead of the milestone.

- *1046m^2 of 1078m^2 of concrete surfaces have been cleaned.*

3.5 Hunterston Reactors Project

Reactor Cladding

In August 2017, Magnox issued the Invitation to Tender (ITT) for a project to clad the reactor buildings as part of the preparations for Care and Maintenance (C&M). Early design work is now underway for both the temporary and permanent works. The project scope of work involves the installation of an aluminium standing seam system, similar to the existing Intermediate Level Waste (ILW) Store at Hunterston A. At the Planning Meeting of North Ayrshire Council held on Wednesday 23 May 2018, approval was given for the proposed cladding material, including colour for the Reactor weather envelope. Construction activities are scheduled to start in April 2019.

Risk Based De-planting

This package of work will produce a plan that highlights the items of plant that need to be removed from the reactor buildings. The scope also includes the removal of the plant items during the execution phase, prior to entry into Care and Maintenance (C&M). The initial assessments within the trial area have been completed and the project is currently developing a scope of work to support de-planting activities.

4 PEOPLE

4.1 Site HR & Occupational Health

The organisational changes to reduce our shift operations teams have been progressing. We are currently in the process of preparing to release a small number of skilled and experienced staff from these shift positions around July/August 2018 to fill vacant posts on days to either progressing decommissioning work or increase our security guarding resilience. All staff will be redeployed to these other positions with the exception of one anticipated voluntary redundancy.

Focus remains on our EDI (Equality, Diversity and Inclusion) strategy with EDI Focus groups having been held at each site to gain further clarification of the recent survey results. Constructive and open dialogue was evident with a cross section of the workforce at the session at Hunterston, and their feedback will assist in developing the Company EDI Improvement plan further. Promoting healthy living to improve workforce physical and mental wellbeing is another focus area and a variety of initiatives are planned to support this through our Continuous Safety Improvement Plan. Recently, as part of Mental Health Awareness Week our Mental Health First Aiders organised a 'Curry & Chaat' event in the Site Canteen with various curries being served and to encourage the workforce to go along and have a 'chaat' about mental health, with information available on some tips to look after your Mental Health.

Work has been ongoing to prepare for the General Data Protection Regulations that come into force on 25 May 2018. We are currently reviewing what data we hold, how we control and use it and how long we are required to retain it, to ensure the company comply with this 'step change' in legislation.

In May, the site hosted four S3/S4 pupils on work experience from local secondary schools who have a keen interest in careers within Engineering and Finance. They spent four days on site and it is hoped that by continuing to support such work placements we will encourage more young people to pursue careers within Science, Technology, Engineering and Maths (STEM) in the nuclear industry.

5 MAGNOX SOCIO-ECONOMIC SCHEME

In 2018/19 there are a total of **3** applications and the table below shows the successful applications receiving awards from the Magnox Socio-Economic Scheme this year.

MAGNOX SOCIO-ECONOMIC SCHEME 2018/19 - HUNTERSTON AWARDS		
APPLICANT	**DETAIL**	**AWARD**
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
TOTAL		**£1,790**

6 ENVIRONMENT (April 2017 to March 2018)

6.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 212.13m^3 of LLW was disposed of during the twelve month period from **April 2017** to **March 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 redundant plant and equipment generated during decommissioning operations.

Liquid

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

Radionuclide or Group of Radionuclides	**Annual Limit**	**Activity discharged (April 17 to March 18)**
Tritium	30 GBq	0.21 GBq
Caesium-137	160 GBq	0.21 GBq
Plutonium-241	2 GBq	0.04 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.12 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.37 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 (April 17 to March 18)**
All authorised outlets taken together.	Tritium	100 MBq	56.4 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.85 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	565.3 MBq
	Carbon-14	200 MBq	59.48 MBq

6.2 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 of resources such as water, electricity and fuel continues to determine where use can be minimised. Site objectives and targets identified for resource use are monitored and reviewed in line with the site Environmental Management System.

Over the period **April 2017** to **March 2018**, **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 **2.1** tonnes of waste was disposed to landfill during that period.

6.3 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 **April 2017** to **March 2018**.

7 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 March, are as follows;

- *Approximately 117 employees received a total collective dose of 2.011 man.mSv between them*
- *Approximately 285 contractors received a total collective dose of 23.290 man.mSv between them*
- *The highest individual dose received by an employee was 0.550 mSv*
- *The highest individual dose received by a contractor was 2.029 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.

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
1 March	Hunterston Site Stakeholder Group (SSG) Quarterly Meeting
8 March	Presentation to NIA - Decommissioning and existing Generation Group by Reuben Phillips and Martin Gregg
26/27 March	Brian Robinson – Magnox Technical Director
28 March	Visit by TEPCO, Naoto Yagi
29 March	Site Closure Director Update to SSG Chair, Rita Holmes and SSG Vice Chair, John Lamb & Magnox Socio-Economic Local Review Panel Meeting. Tour of SILWE Facility also ***(see picture below).***
5 April	Ian Warner - Contaminated Land Manager, Magnox
17/18 April	Magnox Leadership Conference - Manchester
23 April	Ed Seldon – Waste Operations Programme Manager
25 April	Hunterston Site Joint Council
26 April	Safety Presentation by Hertel
26/27 April	ONR Inspections - Rob Eales, Debbie Fisher, and Mike Turner
10 May	NDA Way Ahead team –Dr Matthew Clark, Andy McLean JP Martin
24 May	Site Closure Director Update to SSG Chair, Rita Holmes & SSG Vice Chair, John Lamb & Magnox Socio-Economic Local Panel Meeting