



# **HUNTERSTON A**

## **SITE STAKEHOLDER GROUP REPORT SITE CLOSURE DIRECTOR**

**JUNE 2019**

## **HUNTERSTON A SITE CLOSURE DIRECTOR'S REPORT TO THE SITE STAKEHOLDER GROUP JUNE 2019**

**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**

On Wednesday 3 April 2019 Hunterston A Site achieved the delivery of five years of work without a Lost Time Accident (LTA) - this is an excellent achievement and means that the Day Away Case Rate (DACR) and the Total Recordable Incident Rate (TRIR) remain at zero.

The "Target Zero" initiative continues to proactively raise awareness on site of safety matters such as '*Health and Wellbeing*' (March), '*Work at Height*' (April) and '*Asbestos*' (May). In support of Health and Wellbeing, the site introduced "Mindfulness", a mode of attention characterised by openness, acceptance and enhanced ability to respond to the present moment. Being mindful allows for a clearer understanding of how thoughts and emotions impact on our health and quality of life. In support of Working at Height, the Site delivered a Virtual Reality training package to raise awareness of working at height. This type and method of training is new to site and was well received by those who attended. During May, everyone on site was encouraged to complete one of two e-learning training courses to raise awareness of asbestos.

Our reporting culture remains strong with 1,652 Learning Capture Forms being raised on site between the 1 April 2018 and 31 March 2019.

The Safety Representatives on site continue to meet fortnightly to discuss and raise issues with the Site EHSS&Q Management and actively assist in investigations, Team Based Fact Finds, Housekeeping Tours, Contractors Safety Forum and participate in the Site Health, Environment and Safety Committee (HESAC) Meeting.

### **2 EMERGENCY PREPAREDNESS**

The Site Emergency Preparedness Engineer continues to maintain the site contingency arrangements training programme.

The sites Contingency and Emergency arrangements are frequently tested during training exercises to ensure that the Site Contingency Teams skill sets are being maintained. The training scenarios are relevant to foreseeable events that could occur from work activities being undertaken on site. The Site self-performing teams and contractors have their own specific contingency capability to respond to any foreseeable event that could occur as a result of their activities on site and they too, undertake training exercises to ensure they remain in a state of readiness to respond to events that occur.

### 3 DECOMMISSIONING PROGRESS

#### 3.1 Ponds Programme

Steelwork removal and concrete decontamination in both Blockhouse tunnels is now complete. The shaft and parts of the tunnel were first cleaned using a remote Ultra High Pressure (UHP) water jetting system. The steelwork was then removed and the remaining surfaces cleaned using concrete shaving equipment.



*East Blockhouse before*



*East Blockhouse after decontamination*

At the Caesium Removal Unit (CRU) cells, all thirty-six concrete roof blocks were removed and placed in a temporary storage area. Safe access was installed into both cells and then the two CRU vessels were deplanted, removed and transferred to the temporary storage area in preparation for disposal. Both cells have now been cleaned, grid marked and HP surveys carried out satisfactorily.



*One of the CRU vessels within its cell*



*Vessel removed, cell cleaned and surveyed*

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

The period March-May 2019 has been a very busy period with completion of Bunker 1 preparation activities, including the installation and commissioning of the Bunker 1 Fuel Detection System.

The project has now demonstrated its robust arrangements to the satisfaction of the Site Design Authority and this allowed breakthrough to Bunker 1 to commence on Tuesday 9 April. Bunker 1 breakthrough was achieved on 18 April 2018 and the work face has been gradually opened up to establish a flow of waste from Bunker 1 (*see picture*). These operations were carried out remotely using the Brokk Remotely Operated Vehicles (ROVs).



The plant came off line week commencing 6 May 2019 to allow routine planned maintenance in SAWBR

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

Good progress has continued to be made during the quarter March - May 2019 and the plant has now exported 111 of the expected 150 Sludge 3m<sup>3</sup> Drums to the ILW store. A total of 11,484 Kg of Sludge and 5,512 Kg of Resin has been safely recovered and encapsulated to date.

*Sludge Retention Tank (SRT) 3* - bulk sludge has been completed with approximately 300mm of residual material remaining within the tank. The tank level within SRT2 now stands at ~13%. SRT2 bulk sludge is almost complete with 600mm of material currently within the tank. *Active Resin Storage Vessel (ARSV) 1* - bulk resin is complete with approximately 150mm of residual material remaining within the tank.

The plant came off line to allow routine planned maintenance in WILWREP week commencing 6 May 2019 and this also provided an opportunity to progress non process dependant Maintenance Shutdown activities and housekeeping tasks within the facility.

The project has decided to use this downtime to move the retrieval equipment to SRT1. Whilst recoveries are ongoing within SRT1 the residual sludges left in SRT 2 and 3 will be consolidated into one tank to allow further recoveries of sludge as we progress towards full clearance in SRT 1, 2 and 3.

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***During April 2019 SAWBR / WILWREP achieved a significant milestone with the production and export of the 1000th Package of Intermediate Level Waste to the ILW Store.***

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

SILWE has seen significant progress with the setting to work of the grout plant with the



*Grout plant 1<sup>st</sup> phase setting to work*

first phase of mixing and optimisation now complete. The team are working through the resulting fault observations before carrying out some confirmatory sequences over the

following weeks. The Remediation cell



*Remediation cell robot installation*

robot installation is now complete. Supporting documentation is in the process of being amended and approved before setting to work may commence. The HVAC contractor has now reinstated the ductwork removed to facilitate the remediation cell robot installation. Mechanically, the HVAC installation is near completion. All associated documentation is now being assessed prior to commencement of commissioning and setting to work activities.

### 3.5 Hunterston Reactors Project

#### Weather Envelope

The Weather Envelope has encountered a number of issues over the past couple of months which prompted both Magnox and Spencer's to review the commercial viability of the contract. Following the review, Magnox and Spencer's are working together to terminate the contract through mutual agreement.

#### Risk Based De-planting

As part of the Risk Based De-planting scope of work the project team are developing the scope definition documents to support removal of existing plant and asbestos from inside the Reactor Buildings in support of the safe store strategy. The risk based de-planting scope will include any physical modifications that may be required within the Reactor Buildings. This may include modifications to access routes, de-planting of systems within the Reactor Buildings and small scale asbestos removal. De-planting will be carried out to reduce hazards to tolerable levels of residual risk. Hazards will then only be reduced further if:

- *The residual risk is disproportionately high compared to those from other hazards on site.*
- *Risk will increase or become harder to manage in the long term (e.g. during quiescence).*
- *Further reduction optimises the full lifecycle cost of maintaining associated residual assets.*

The work package comprises a number of different specific work items. Once the scope of work for each of these items has been assessed, the project team will engage the Supply Chain for specialist support during the execution phase for the physical works.

## 4 PEOPLE

### 4.1 Site HR

We have no current organisational changes being progressed and are undergoing consultation to revise the Security Guards shift pattern. This is to make better utilisation of additional resources we have incorporated into the Guardforce to improve our resilience and reduce additional working hours in this area.

We now have two nominees to take up the role of Diversity Ambassadors for Hunterston Site. The next steps are training to be undertaken by the nominees from across all sites to assist them in their role of promoting, enhancing and embedding Equality, Diversity and Inclusion (EDI) within their site.



### 4.2 Occupational Health

Our short term sickness levels remain good and long term sickness rate is continuing to reduce month on month.

Our focus on general health and wellbeing is continuing through the following initiatives:

Our 'Target Zero' theme around 'Wellness' (March) focused around the four pillars of good health (relax, move, eat, sleep well). This was followed up in April with a Health Promotion Day with informative sessions for the workforce aimed at improving your physical and mental wellbeing and the introduction of 'Mindfulness'.

An employee led Wellbeing Group has recently been established at Hunterston to promote a range of wellbeing initiatives. The purpose of the group will be to co-ordinate and drive wellbeing initiatives not only in the work place but on a personal and social level. The Group will focus on a number of objectives that are deemed beneficial in an individual's wellbeing and be looking to offer information on internal and external activities that will promote the various types of wellbeing such as Emotional Wellbeing and Physical Wellbeing.

During Mental Health Awareness Week (13-19 May) the Mental Health First Aiders (MHFA's) organised a programme of daily activities (the theme was '*Body Image and how we think about ourselves*') to highlight our campaign to reduce the stigma of a Mental Health illness and support personnel. They have also set up a self-help library of useful resources on site and along with this are publicising our Employee Assistance Programme (EAP). We hope that on a local level our MHFA's can help our staff with confidential onsite support and signposting.

## 5 ENVIRONMENT (April 2018 to March 2019)

### 5.1 Radioactive Discharges

#### Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 126.24 m<sup>3</sup> of LLW and VLLW was disposed of during the twelve month period from April 2018 to March 2019. There is no limit on the volume or radioactivity content of LLW and VLLW being disposed of under the new site EA(S)R Permit. 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 April 2018 to March 2019 were decontamination of various areas within the cartridge cooling ponds building and routine waste water arisings from the site active drain system.

<b>Radionuclide or Group of Radionuclides</b>	<b>Annual Limit</b>	<b>Activity discharged (Apr 18 to Mar 19)</b>
Tritium	30 GBq	0.102 GBq
Caesium-137	160 GBq	0.187 GBq
Plutonium-241	2 GBq	0.055 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.370 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.527 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 (Apr 18 to Mar 19)
All authorised outlets taken together.	Tritium	100 MBq	56.4 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.493 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	595.75 MBq
	Carbon-14	200 MBq	67.31 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 April 2018 to March 2019 the site used 19.88 Terra Joules (Tj) of energy, 18.92 Tj attributed to electricity consumption and 0.96 Tj attributed to fuel use in site vehicles, equipment, and generators. This equates to a fuel consumption volume of 24.80 m<sup>3</sup>. In the same 12 month period the site water consumption was 13,507 m<sup>3</sup>.

Over the period April 2018 to March 2019, 100% of the non-radioactive hazardous waste, 99.3% 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 0.06 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 Permit held by Magnox Limited for the Hunterston A Site, SEPA have assessed the site as **“Excellent”** with regards to compliance with the sites Permit conditions. As of 1 April 2019, the Hunterston A Site will now be regulated under the Environment Authorisations (Scotland) Regulations 2018, which replace the Radioactive Substances Act 1993.

There were no significant environmental events in the period April 2018 to March 2019.

## 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 2019, to the end of March, are as follows;*

- Approximately 117 employees and visitors received a total collective dose of 1.036 man.mSv between them*
- Approximately 224 contractors received a total collective dose of 10.789 man.mSv between them*
- The highest individual dose received by an employee was 0.295 mSv*
- The highest individual dose received by a contractor was 1.020 mSv*

*The majority of dose accrued in 2019 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 2019/20 there has been a total of **6** applications submitted to the Magnox Socio-Economic Scheme. There are 5 applications pending and one successful to date.

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

<b>MAGNOX SOCIO-ECONOMIC SCHEME 2019/20 - HUNTERSTON AWARDS</b>		
<b>APPLICANT</b>	<b>DETAIL</b>	<b>AWARD</b>
Largs Youth Theatre	Equipment for 'Little Mermaid' Production	£720
<b>TOTAL</b>		<b>£720</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. Below is a selection of visitors / key dates during the period.

DATE	EVENT / VISIT
7 March	Hunterston Site Stakeholder Group (SSG) Quarterly Meeting
13/14 March	ONR Inspection - Bill Kings
4 April	Site Closure Director Update to SSG Chair, Rita Holmes and SSG Vice Chair, Stuart McGhie
4 April	Well Being Health Promotions
15 April	Target Zero 'Working at Height' Virtual Reality Workshops
17/18 April	Site Closure Director Stand Downs - Quarterly Executive update
7 May	Visit by SEPA Site Inspector ,David Stone
13 May	Visit by Japanese delegation (Japco & Tepco)
13 - 19 May	Mental Health Awareness Week
13 -15 May	ONR Inspection - Bill Kings/Katharine Walker
30 May	Hunterston Decommissioning Update from Scottish Sites Closure Director, John Grierson to site Stakeholder Group Chair, Stuart McGhie and Magnox Local Socio-Economic Panel Meeting
3 June	Hunterston A End State meeting
6 June	Visit by Dr Seeba / Tim Gilroy, DIT and Kerstin Rath, British Embassy Berlin
6 June	Hunterston Site Stakeholder Group (SSG) Quarterly Meeting