



HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT SITE CLOSURE DIRECTOR

MARCH 2019

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

Fifty seven months have passed since the last Lost Time Accident (LTA) occurred on Hunterston A Site as it continues to demonstrate excellent safety performance. The Total Recordable Incident Rate (TRIR) & Day Away Case Rate (DACR) remain at zero.

The Magnox "Target Zero" campaign continues to raise awareness on site and focusses on all aspects of work activity including behaviours, environment, waste management, chemical safety and distractions, all of which can impact the safety performance of the site. Recent topics have focussed on Safety Leadership areas such as Road Safety, Safety Successes, Safety Conversations, Transition and Complacency. These topics have created positive discussions and have elevated awareness within the teams.

At the start of January, on return to work from the festive break, a series of safety stand downs were delivered to the work-force by the Site Closure Director.

The site continues to maintain a healthy reporting culture and receives a constant flow of daily Q-Pulse reports. These can be defects, safety concerns, positive feedback or improvement suggestions.

Safety Representatives meet fortnightly with EHSS&Q management and continue to provide and highlight topics/areas of concern raised by workforce. The Safety Reps continue to undertake visits to site facilities around the site for assurance purposes, to ensure standards and expectations are being implemented.

2 EMERGENCY PREPAREDNESS

The Site Contingency and Emergency Arrangements are embedded on site and are frequently tested to ensure they are suitable, appropriate and responders' skills are being maintained. During December the site demonstrated its arrangements to the company independent inspectors, with a scenario involving contingency responses to a fire event and person receiving a wound in a Contaminated Controlled Area. This was successfully executed by the Site Contingency Team in accordance with the Site Contingency and Emergency Arrangements.

The Site has collated the 2019 programme of regular training exercises.

3 DECOMMISSIONING PROGRESS

3.1 Ponds Programme

Good progress has been made in B Blockhouse tunnel, with UHP jetting of the concrete surfaces now complete. The team are removing steelwork from the conveyer system and will finish off concrete decontamination using dry concrete shaving. The team will then back out of this area and move to A Blockhouse tunnel to complete decontamination of the surfaces within this area.

Elsewhere in the Cartridge Cooling Pond Building, the Working Area Dry Bays and the Chemical Dosing Plant have been deplanted, the waste disposed, the areas cleaned and health physics surveys completed satisfactorily.

Also, work is underway to open up the Caesium Removal Unit (CRU) cells to gain safe access into them and allow the deplanting of the two CRU vessels to proceed. Access into the cells requires 36 off concrete roof beams, (approx. 2.6m long by 0.8m wide by 0.2m high and 4-rows deep), to be prepared for lifting and then removed prior to transfer to the temporary storage area.



B Blockhouse tunnel post UHP jetting



Removal of concrete roof beams above CRU Cells 1 & 2

3.2 Wet Intermediate Waste Retrieval & Encapsulation Plant (WILWREP)

The plant production rate significantly improved across December leading up to the festive break with 11 drums produced in the month. Since return to work in January, canyon plant issues have been challenging resulting in limited production time. The facility was returned to service on 29 January but experienced some further issues in unrelated areas limiting production. The facility has to date produced 84 3m³ Drums with a total of 7040Kg of Sludge and 4808Kg of Resin safely recovered and encapsulated to date.

The plant came off line to allow Routine Planned Maintenance in WILWREP w/c 4 February 2019 and this also provided an opportunity to progress non process dependant Maintenance Shutdown activities and housekeeping tasks within the facility.

3.3 Solid Active Waste Bunker Retrieval (SAWBR) Project

On the 10 December 2018, the SAWBR facility achieved another significant milestone with the clearance of waste materials from Bunker 2. Bunker 2 clearance was completed in 277 packages resulting in a cumulative 893 boxes of Higher Activity Waste (~1,880 tonnes) safely and compliantly recovered to the ILW Store.



Work to progress Bunker 1 preparation activities have progressed well each side of the festive period including a deep clean of the four cleared bunkers to permit safe personnel entry to install an additional camera and lights, access improvements for the remote operated vehicles that recover the waste and a period of planned routine maintenance which includes replacing the gearbox on the facility crane.

The next stages of preparatory work will see the installation of a Fuel Detection System (FDS) followed by testing and commissioning of the system. Following completion of this work, a permissioning committee will be convened to establish if all pre-requisites to allow safe and compliant breakthrough of the Bunker 1 wall shall be permitted. Breakthrough into Bunker 1 and return to waste retrievals is forecast for end of March 2019.

3.4 Solid Intermediate Level Waste Encapsulation (SILWE) Project

SILWE progresses with the setting to work of various pieces of plant throughout the facility. The grout plant is close to completing the Software Functional Acceptance Test (SFAT) and is preparing for wet commissioning. The fire detection system has been functionally tested and awaits the final connection to the Magnox infrastructure. The Import/Export cell robot installation has undergone sequence testing and various faults are currently being resolved. Factory Acceptance Testing (FAT) of the Remediation Cell robot has now taken place with many fault observations being progressed to a resolution.

Recently Magnox deployed the Cross Site Transporter to the SILWE site to establish and finalise various set points relating to the SILWE hoist interface.

The majority of objectives were completed and the exercise was deemed a success. The stack sampler panel has now been installed within the process plant



Cross site transporter interface set-up



Stack sampler panel installation

room and final connections to the existing ductwork network is planned to take place in the near future.

3.5 Hunterston Reactors Project

The contract to deliver the weather envelope project has experienced some technical challenges and is currently being reviewed by Magnox and the contractor, C Spencer.

As part of the Plant & Structures (P&S) Scope for the Weather Envelope project, there is a requirement to confirm that there is no radiological contamination or asbestos within the reactor roof building fabrics prior to any demolition/dismantling works being conducted. A Decommissioning Proposal Approval Form (DPAF) was raised by P&S to take 16 external and 2 internal core test samples on each of the reactor roofs, ensuring a sample was taken from each separate roof section. The reactor roofs are deemed to be fragile and unsafe for personnel to stand on, therefore it was necessary to erect various scaffold structures to facilitate the core samples to be taken.

The project team continue to progress enabling works and post operational clean out (POCO) activities. Key members of the team have been undertaking housekeeping surveys within Reactor 1 to determine the volume of waste materials that need to be removed. The team have also started to clear two bays on the ground floor of the Reactor with a view to using these bays as areas where the waste materials can be segregated and then passed to the Site Waste Team for onward processing. On completion of the waste removal from Reactor 1, the team will replicate this exercise in Reactor 2.



200t crane lifting scaffolding on to Reactor 1

Core samples being taken from Reactor 1 roof

An important part of any decommissioning work is to ensure that bulk hazards associated with any plant and processes have been removed as far as is reasonably practicable. The project team will be carrying out surveys within both reactor buildings to determine the state and condition of the remaining plant items within the buildings. The surveys will include reviewing previous modifications to determine what level of de-planting and /or POCO work has already been carried out. The surveys will also include taking samples of liquids contained within remaining pipework systems, and estimating expected volumes of liquids/gases remaining. Once all the sampling and survey work has been completed the systems will be POCO'd to meet the Care and maintenance Entry Criteria.



Examples of existing systems within Reactor 1

Between 26 October 2018 and 17 January 2019 the project team, assisted by numerous site departments, transferred four consignments of Intermediate Level Waste (ILW) from various areas within Reactors 1 and 2 to the Solid Active Waste Bunker (SAWB) loading room where the items were accepted by the High Active Waste Team.

The success of this work demonstrated through good planning, clear communications and stakeholder management a good example of how we can work together as one team to reduce hazards at Hunterston.

4 PEOPLE

4.1 Site HR

The organisational changes required following completion of the Wet Intermediate Level Waste Encapsulation Plant (WILWREP) Project system design and build, Phase 1 of the Acid Storage Facility, evolution of the Solid Intermediate Level Waste Encapsulation (SILWE) project and commencement of Pond Purge Sump project have now been implemented and revised structure been embedded. The small numbers of employees directly affected by this change have successfully transferred to other positions and we have also retained supply workers with valuable skills knowledge and experience that can be utilised in other positions to support business requirements. Other transitions to reduce and increase resources and skill requirements will be ongoing as we progress our programme towards Care and Maintenance in line with available funding.

We are progressing our Company-wide Equality, Diversity and Inclusion (EDI) Improvement Plan with the introduction of Diversity Ambassadors for each site. We are currently seeking nominees for this initiative. The role being for this person to promote, enhance and embed equality, diversity and inclusion (EDI) within their site. They will, through coaching, encouragement and engagement with the workforce to enhance further the confidence to Speak up, Speak out and Call out behaviours not within our standards and expectations as well as sharing best practice and promoting EDI-related events and training.



4.2 Occupational Health

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

As part of our Continuous Safety Improvement Plan Workforce Wellbeing workstream we have recently implemented and promoted a new Display Screen Equipment assessment and management process and provided practical mental health awareness training to team leaders.

In addition, in April we have a Health Promotion Day planned where there will be informative sessions for the workforce to improve their physical health and wellbeing through provision of tools to improve understanding of their emotional health, the importance of good nutrition for good health and how they may manage their own personal wellbeing.

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 2018, to the end of December, are as follows;

- *Approximately 167 employees received a total collective dose of 6.767 man.mSv between them*
- *Approximately 502 contractors received a total collective dose of 69.106 man.mSv between them*
- *The highest individual dose received by an employee was 1.906 mSv*
- *The highest individual dose received by a contractor was 4.920 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.

6 ENVIRONMENT (January 2018 to December 2018)

6.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 120.59 m³ of LLW was disposed of during the twelve month period from January 2018 to December 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 January 2018 to December 2018 were decontamination of the cartridge cooling ponds and routine waste water arisings from the site active drain system.

Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (Jan 18 to Dec 18)
Tritium	30 GBq	0.08 GBq
Caesium-137	160 GBq	0.19 GBq
Plutonium-241	2 GBq	0.05 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.35 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.51 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 (Jan 18 to Dec 18)
All authorised outlets taken together.	Tritium	100 MBq	56.4 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.57 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	584.16 MBq
	Carbon-14	200 MBq	65.48 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 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 January 2018 to December 2018 the site used 20.87 Terra Joules (Tj) of energy, 19.67 Tj attributed to electricity consumption and 1.20 Tj attributed to fuel use in site vehicles, equipment, and generators. This equates to a fuel consumption volume of 31.14 m³. In the same 12 month period the site water consumption was 14,231 m³.

Over the period January 2018 to December 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 2.07 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 January 2018 to December 2018.

7 MAGNOX SOCIO-ECONOMIC SCHEME

To date in 2018/19 there has been a total of **15** applications submitted to the Magnox Socio-Economic Scheme. There is one application pending.

Please see the table below listing the **14** 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
Cumbrae 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
Dalry Burns Club	2019 Burns Primary Schools Competition	£400
25 Group Royal Observer Corps	Skelmorlie Secret Bunker Site Lighting	£595
TOTAL		£44,247

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 December	Hunterston Site Stakeholder Group (SSG) Quarterly Meeting
12 December	SEPA & ONR HAW Meeting at HNA
3 & 8 January	Site Closure Director Return to Work Briefs
16 January	Mental Health Training for Team Leaders
28 - 31 January	ONR Inspection - Rob Campbell - Head of Decommissioning, Fuel & Waste (DFW) Sub-Division Bill Kings Principal Inspector - Nuclear Safety Mike Turner - Nuclear Inspector
31 January	Site Closure Director Decommissioning Update with SSG Chair, Rita Holmes and Socio-Economic Local Review Panel Meeting
13 February	Hunterston Site Joint Council Meeting
6 February	Asset Management – AMD Practical Demonstration Andrew Davies - NDA Martin Grey - NDA
6 February	NDA Security – Chris Williams - Site Familiarisation/Liaison visit
6 March	Bob Radford Magnox Commercial - Information Governance presentation to Lead Team on 'Records Management Project and Company PBI'