HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT

ACTING SITE DIRECTOR – ALASTAIR WALKER

SEPTEMBER 2021

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SITE 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 SITE DIRECTOR OVERVIEW

Hunterston A site is part way through its Care and Maintenance Preparations (C&MP) phase of decommissioning which, subject to NDA approval and funding, is currently forecast to complete by October 2030 based on the current decommissioning strategy.

The NDA has approved a proposal to develop new Site-Specific Strategies (SSS) and these decommissioning strategies support a fleet-wide assessment for an optimal sequencing of reactor dismantling under a Continuous Reactor Decommissioning (CRD) programme; in order to ensure that lifetime costs, technical challenges and risks are minimised, while opportunities are maximised. A credible revised site configuration for the new decommissioning strategy at Hunterston is currently in development and is expected to be presented later in the year.

The site continues to manage challenges posed by the Covid19 pandemic and I can confirm there were 12 positive cases in the reporting period, none of which were work related transmissions. The focus remains the safety of our personnel and the site continues to monitor any changes in guidance and/or legislation e.g. social distancing. The site established on site testing facilities in March and up to the end August, has carried out over 2171 tests. The testing facility is open to anybody working on the Hunterston site including core staff, agency supplied workers, contract supplied workers and contractors.

There were no safety issues over the reporting period.

There has been some excellent progress in a number of areas during the reporting period. The HAW team transferred 32 packages over to the Intermediate Level Waste Store before shutting the plant down for a planned three week outage. The outage has gone as planned and is scheduled to be completed by the end of August. Work to remove the cradle rails from both Reactor buildings commenced and a contract has been placed with HLS McConnell to carry out roof repairs to both Reactors buildings.

There were a number of inspections involving our regulators in the period. ONR and ONR CNS carried out separate inspections on compliance with several License Conditions and security protocols respectively. Both inspections received positive feedback and both regulators continue to have confidence in Magnox's management of the site. Monthly Target Zero themed campaigns continue across Magnox.

More details on some of these highlights are within the appropriate sections of this report.

2 SAFETY OVERVIEW

2.1 Safety Review Performance

The Total Recordable Incident Rate (TRIR) for Site is 0.48. This figure is reflective of the Lost Time Accident (LTA) that occurred on Site during March this year. Since the LTA in March, the Site has continued to demonstrate a good safety performance throughout all areas on Site. During this reporting period there have been no events that required First Aid Treatment and it has been five months since the last LTA.

The Site COVID 19 Arrangements SR1246, HNA Arrangements for implementation of the Requirements of S-192 – Health Protection Guidance During the Covid–19 Pandemic have proved effective in keeping the site safe with very little impact experienced on site through infection or contact tracing. The site rigorously undertakes Lateral Flow Testing (LFT) and encourages all to participate and take a test each week. The Site Facilities Management Contractor undertakes LFT on all 3rd party Contractors attending site and again has proved effective in identifying infectious persons before they enter the Site.

The requirements of SR1246 in relation to Social Distancing and High level of personal Hygiene is expected of all who attend site and this will continue into autumn when they will be reviewed.

Target Zero Campaigns proactively continues to support the site safety culture and generally prompts a decent level of discussion at meetings and pre or post job briefings.

Target Zero topics presented were June – Introduction to 5S *"Everything has a place and everything in its place",* July – Degrading Assets and August – Sustainability.

Fire Safety Management Group, Event Review Team, Safety Representatives continue to meet as planned. These group meetings/committees meet at planned frequencies to ensure the required standards are maintained and areas of concerns discussed and resolved.

Our reporting Culture remains strong. The site receives approximately 100 Q Pulses each month for various events whether negative/positive. All these Q Pulse reports are screened at the daily Safety and Compliance meeting to ensure the appropriate actions are arranged and implemented in a timely fashion.

2.2 Emergency Preparedness

The Off Shift Transition (Security Guards present on site during silent hours) has been successfully implemented with minimal impact to Site. The Security Guards have embraced the change and have proved to be efficient in maintaining security of the site. There have been occasions when the Off-site Duty Controller has been contacted due to events that arise during silent hours. These events were foreseeable such as alarms real or spurious, though the Contingency Arrangements were implemented and were appropriate in each case. The Site Contingency Team have undergone refresher training in rescue from height, places of Restricted Access and casualty management and Nuclear Occupational First Aid Training in support of maintaining required skill sets.

Security Guards and Duty Controllers have also commenced refresher training in First Aid at Work, in support of the Site Accident and Emergency Contingency Arrangements in Silent hours.

Contractors working on site generally are required to provide their own Contingency arrangements with support from Site Duty Controller and Security guard force. The Contractor must demonstrate their contingency capability to the Emergency Preparedness Officer and deemed adequate by Site prior to commencements of work. The Contractors are expected to undertake frequent training exercises during their time on Site.

4 DECOMMISSIONING PROGRESS

4.1 Hunterston Plant & Structures

Reactor Remediation

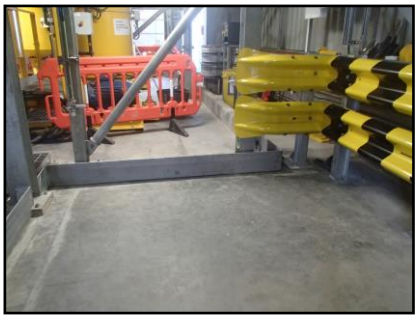
Reactors Remediation works consisting of column base repairs, cradle rail removal and flooring replacement has commenced on site. Cradle rail removal, external to the reactors is ongoing. All works are scheduled to be completed this financial year.

A roof repairs Contractor has been appointed and is due to mobilise within the next month with the roof repairs due to be completed this financial year

4.2 Solid Intermediate Level Waste Encapsulation (SILWE) Project

The SILWE facility exists purely to encapsulate the 3m3 packages containing the solid waste retrieved / recovered from SAWBR with a grout mix. This is expected to take up to 3 years to encapsulate approximately 1500 stainless steel boxes. Once encapsulated, the containers will then be in their disposable state.

Inactive commissioning continues to progress towards Phase 2 which is expected to commence in October. During Phase 2, each system will be operated to ensure that each system interface is functionally demonstrated.



Recently the grout plant has undergone additional modifications to the replace the existing bund with a more robust solution. This will also act as a physical barrier when the forklift truck is operational within the workspace.

Active commissioning is now forecast to commence in the third quarter of 2023.

4.3 Solid Active Waste Bunker Retrieval (SAWBR) Project

The SAWBR facility was constructed to recover solid HAW (Higher Activity Waste) from within the site's five HAW bunkers. This is achieved by using remotely operated vehicles (ROV's) to fill hoppers that are then tipped into RWM (Radioactive Waste Management Ltd) approved 3m³ stainless steel boxes.

The initial breakthrough into Bunker 5 was achieved in March 2014 and Bunkers 5, 4, 3 and 2 have been sequentially emptied to date. Progress to recover the wastes from Bunker 1 continues albeit at a slower rate than the wastes from Bunkers 5-2. This is due to the higher probability of fuel fragment carry over from the station's operational phase. Detailed sorting of the waste is carried out using high definition cameras installed on the ROVs and in the facility before loading into waste buckets which are each weighed, then put through a Fuel Detection System to provide assurance that the waste can be safely discharged into the stainless steel storage box and be compliant with the RWM packaging criteria.

Waste recovery operations in Bunker 1 of SAWBR showed good progress through July. To date, the SAWBR team have safely exported a cumulative total of **139** 3M³ boxes from Bunker 1 to the ILW Store - this equates to **83.089te** of waste by Thursday 29 July 2021. This brings the total of 3M³ boxes exported from SAWBR to **1032** Boxes and we are now over **50%** of the way through Bunker 1. Work is ongoing to consider what to do with some of the more unusual items removed from Bunker 1.

In the photos below you can see large paper filters and there is a metal rope from a hoist (probably the hoist which had originally lowered the waste into the bunkers). These items were causing a build-up of waste obstructing the flow of FED debris, however since they have been retrieved the FED is flowing much better.

Routine planned maintenance shutdown in SAWBR commenced on Monday 2 August 2021 for approximately three weeks.

4.4 Wet Intermediate Level Waste Retrieval & Encapsulation Plant (WILWREP)

The WILWREP facility was constructed to recover liquid HAW (Higher Activity Waste) from associated sludge, acid and resin tanks around the site. Following retrieval into a RWM (Radioactive Waste Management Ltd) approved 3m³ stainless steel drum the waste contents are mixed with encapsulant powders with a sacrificial paddle to achieve an immobilised waste form within the drum.

The WILWREP team continue to consolidate residual SRT sludges into SRT1 *(see picture of residual sludge and miscellaneous debris)*. Due to high dose debris in SRT3 the focus has shifted to SRT2 and, following the production of an appropriate lifting plan, the removal of some of the SRT shield plates from the WILWREP facility has allowed easier access to the latter tank. The residual sludge removal system has been moved to this tank and work is now ongoing to transfer sludge from SRT2 into SRT1. The debris retrieved from SRT3 will be processed and transferred to the SAWB in the near future.

Sludges in SRT2 are requiring some fluidisation, which results in a slower process, as supernatant management and settling times have to be considered.

Drums 151, 152, 153 and 154 have been exported to the ILW Store. The Canyon will now be prepared for maintenance activities and handed over to waste projects for reconfiguration.

There has been priority for the team to attempt to complete all resin recoveries prior to pausing WILWREP operations in August to allow Waste Projects to commence the acid reconfiguration works.

Routine planned maintenance shutdown in WILWREP commenced on Monday 2 August 2021 for approximately two weeks.

4.5 Ponds Programme

<u>Pond Control Chambers</u>

There are four chambers in which a total of approximately 50m3 of effluent was discovered during inspections. It is believed that the 4 chambers are linked and draining one will lower the levels in all. The effluent requires to be pumped out in 2.5m^3 batches from Control Chamber D to the Modular Active Effluent Treatment Plant (MAETP) for processing. This will confirm or not if the four chambers are hydraulically interconnected.

Pump

Control Chambers valves and hoses with support frame

The commissioning of the system for draining the Control Chambers is almost complete and successfully identified a challenge to the method of plant operation, an updated process has been developed to ensure the system operates smoothly during transfers and is proceeding through approval.

Skip Refurb Plant A-Frame

There are various pieces of redundant plant and equipment within the Pond that are being removed in a methodical safe manner, one such item is a large redundant A-Frame which was decommissioned through normal cold cutting reduction techniques to size reduce for disposal.

The A-frame has been completely size reduced and all components packaged ready for dispatch as Very Low Level Waste (VLLW).

SRP A-Frame

Deplant Delay Tank Valve Chambers

The valve chambers are suspected to be a route for rainwater into redundant tanks resulting in additional liquids to be processed via the Effluent Treatment facility. The proposed solution is to remove the valves from the chambers and seal the inlets and outlets to prevent further water ingress.

New Pipe Seal

Enclosure

Containments have been erected around the valve chambers to provide protection during work activities. A Mobile Filtration Unit (MFU) has been set up to manage the air within the enclosure. The team have deplanted the first of the valve chambers and are proceeding on to the remaining two.

5 PEOPLE

5.1 Site HR

We are nearing the end of our six-month review period of our revised working pattern following introduction of a 4-day week that was introduced on 1 March this year. It has also been several months since the organisational change to remove the 24/7 shift operations presence at the site and introduction of a Lead Guard role to be the main point of contact for any incidents during silent hours. Both changes are becoming well embedded and feedback from the workforce is that they are enjoying the work life benefits from these changes to their work pattern.

Significant recruitment activity continues to be a key focus and we are encouraged to be attracting good candidates for the roles being advertised external to the Company. This volume of activity is likely to continue for some months as we work through recruitment and selection to fill roles in a priority order.

Our initiative to recruit a small number of Radiological Technician apprentices at Hunterston has not yet come to fruition due to difficulties in securing an appropriate training provider. Discussions continue in seeking a resolution to this issue.

5.2 Occupational Health

We have had minimal COVID cases during the period, none of which have been serious or of a long-term duration, and we continue to support Government advice on health precautions to reduce this risk. Our long-term sickness cases have reduced and there are no trends that gives us any cause for concern

We are continuing to support individual's mental health and wellbeing through various Company and site initiatives driven by our own Wellbeing Group and Mental Health First Aiders. As a Company we are planning to train all our Team Leaders in Mental Health Awareness and are supporting World Suicide Day on 15 September and will mark this by our Chief Operating Officer sharing with the workforce a family experience and the personal learning he took from it.

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 2021, to the end of July, are as follows;

- *Approximately 147 employees and visitors received a total collective dose of 7.571 man.mSv between them*
- *Approximately 232 contractors received a total collective dose of 8.687 man.mSv between them*
- *The highest individual dose received by an employee was 1.067 mSv*
- *The highest individual dose received by a contractor was 0.786 mSv*

The majority of dose accrued in 2021 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 ENVIRONMENT (July 2020 - June 2021)

7.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 33.64m^3 of LLW and VLLW with a total activity of 0.55 GBq was disposed of during the twelve month period from July 2020 to June 2021**.** There is no limit on the volume or radioactivity content of LLW and VLLW being disposed of under the 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 July 2020 - June 2021 were decontamination of various areas within the cartridge cooling ponds building, liquors generated through wet waste recovery and encapsulation processes, and routine waste water arisings from the site active drain system.

Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (July 2020 - June 2021)
Tritium	30 GBq	0.016 GBq
Caesium-137	160 GBq	0.043 GBq
Plutonium-241	2 GBq	0.002 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.004 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.045 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 2020 - June 2021)
All authorised outlets taken together.	Tritium	100 MBq	0.275 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.331 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	463.74 MBq
	Carbon-14	200 MBq	56.56 MBq

7.2 Non-radiological Environmental update (July 2020 - June 2021)

Treated sewage effluent from the plant is not currently being independently assessed by SEPA due to SEPA Covid-19 restrictions on visiting Site. Results from an independent off-site laboratory analysis verify that the sewage treatment works reed beds continue to work efficiently to maintain good quality effluent in compliance with the sites CAR discharge licence.

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 July 2020 to June 2021 the site used 17.68 Terra Joules (Tj) of energy; 17.05 Tj attributed to electricity consumption and 0.63 Tj attributed to fuel use in site vehicles, equipment, and generators. In the same 12 month period the site water consumption was 10,638m3. The site continues to report carbon equivalent emissions data as per the new company process.

New reporting requirements have been put in place for waste disposal and recycling with new reporting groups being established for use in the company unified dashboard. Over the period July 2020 to June 2021 a total of 71.69 tonnes of waste was collected for consignment from site. This comprised 67.24 tonnes consigned for recycling, recovery, or composting, and 4.45 tonnes consigned for disposal to landfill. This gives a recycling rate of approximately 94%.

7.3 Environmental Events

There were two environmental events (with a significance category above ES-99) between April 2021 and June 2021.

During the replacement of two Air Conditioning Units, a loss of fluorinated gas from each of the old units was identified. It's believed that the gas had been lost during the intervening period since the units previous maintenance visit. New units have been installed, commissioned and are now in service.

8 SOCIO-ECONOMIC / STAKEHOLDER UPDATE

The electronic application form for the socio-economic scheme can be found on our external website at **https://www.gov.uk/government/collections/magnox-working-with-our-communities**

Garnock Visitor and Community Hub, Lochshore – North Ayrshire Council secured £500,000 NDA funding towards a £4.2m project. The construction has just begun on the old Glengarnock Steelworks site to create the Hub and aims to open in August 2022. The multi-functional building will act as a facilitator of outdoor and sporting activity across the site, creating new job and volunteer opportunities.

North Ayrshire Future Skills Hub update **-** The timescales for the Hub have been significantly disrupted by the Covid-19 pandemic. The Design Team are developing the project from a high level feasibility study into a more detailed design which includes a comprehensive cost plan. In addition, the project timelines were revised to allow the College to take up an opportunity to acquire adjacent land from North Ayrshire Council. The additional land will make a significant improvement to the overall project and was approved by the Council at the end of January 2021. Magnox funding is committed, but has not yet been released to the college.

9 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
Thursday 3 June	Hunterston Decommissioning Teleconference Update by Acting Site Director, Alastair Walker to Hunterston SSG Chair, Rita Holmes and SSG Vice Chair, Stuart McGhie. ***(Microsoft Teams meeting)***
Mon 7 - Thur 10 June	ONR Inspection Visit – Bill Kings Principal Inspector
Wednesday 23 June	Nuclear Equivalent Inspector Site visit - Jessica Taylor
Tuesday 29 June	Scottish Site Stakeholder Group Meeting ***(Microsoft Teams meeting)***
Tuesday 24 August	Smarter Working Technology - Workshops
Tuesday 24 August	Paul Murray - Waste Programme Director Site visit
Wednesday 25 August	SEPA Inspection Site visit Melanie Hayes/ Stewart Ballantyne
Thursday 2 September	Hunterston Decommissioning Teleconference Update by Acting Site Director, Alastair Walker to Hunterston SSG Chair, Rita Holmes and SSG Vice Chair, Stuart McGhie. ***(Microsoft Teams meeting)***