Nuclear Decommissioning Authority

Magnox

HUNTERSTON A

STAKEHOLDER REPORT FROM SITE CLOSURE DIRECTOR

JUNE 2017

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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.

JOHN GRIERSON, CLOSURE DIRECTOR OVERVIEW

The organisational change to combine the two Closure Director posts at Hunterston and Chapelcross has now been concluded with myself taking over as Regional Closure Director for the Scottish Region with both sites now settling into the new arrangements. I am pleased with the focus on maintaining safe conditions on the site and delivering hazard reduction programmes, whilst some of these present technical challenges I am confident the dedication and commitment of our talented workforce will bring these to a successful conclusion. I look forward to leading Hunterston through an exciting programme of work.

1 SAFETY OVERVIEW

1.1 Safety Review Performance

It has been 36 months since the last Lost Time Accident (LTA) on site. We have however had a Medical Treatment Case (MTC) on site, therefore the site Total Recordable Incident Rate (TRIR) is now 0.34. The Day Away Case Rate (DACR) for site remains at zero. During this reporting period we have had three first aid cases on site.

The MTC resulted from an electrician tripping over a plastic pallet as he went about his task resulting in a cut to his nose and forehead. Other first aid case injuries received on site were two minor grazes to a knee and hand.

The Company Safety Improvement Plan is being well supported by the "Target Zero" campaign which has been running monthly campaigns and focussed on Transport Safety (March), The Company Safety Improvement Plan (April), Learning and Improvement (May) and the environment (June). The Target Zero topic related questions are designed to raise awareness and promote thought and discussions, which is expected to assist in reducing unwanted events or delays and ensure everyone who works on Hunterston A Site goes *'home safe every day'*.

Gaining and sharing the learning from events on site is paramount in prevention of recurrence. The MTC and first aid injuries above are a timely reminder that if you lose focus whilst going about your daily tasks you can be injured, therefore situational & spatial awareness is a key part of maintaining safety.

The safety representatives continue to support the site and meet fortnightly and support proactive safety campaigns and safety focussed site tours to ensure standards are being maintained. The Safety Representatives are supporting the roll out of *"What does Safety Mean to me"* campaign on site which is aimed at improving safety culture and strengthening our already strong positive safety culture.

2 DECOMMISSIONING PROGRESS

2.1 Clean and Drain Pond Project

The Sludge Retrieval equipment has been improved based on operational experience and the consistency of material encountered in Bay 8 of the Pond. Work continues to be challenging, however progress is being made with sludge being processed through the system.

Ultra High Pressure (UHP) water jetting is ongoing in the West Blockhouse tunnel.

Redundant tanks in the Skip Refurbishment Plant have been drained and decommissioning of the area is ongoing. Pipework removal is making good progress in the Pond Water Treatment Plant (PWTP). Work is also underway to improve the capabilities for processing sludge from the Ponds Purge Sump (PPS) to Sludge Retention Tank (SRT) No.1.

- *Approximately 6m^3 of sludge processed from Bay 8 to the Pond Purge Sump.*
- *700m^2 of 1078m^2 of concrete surfaces have been shaved.*
- *Approximately 120m^3 of water remaining in Pond.*

Sludge retrieval operations in progress.

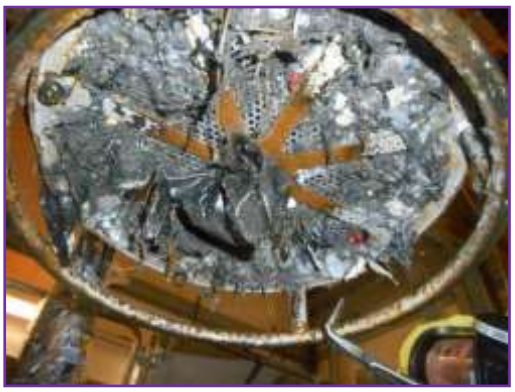
PWTP pipework removal.

2.2 Wet Intermediate Waste Retrieval & Encapsulation Plant (WILWREP)

Active commissioning had revealed several fresh challenges for the WILWREP plant since the last report. Debris within SRT2 has been found collected on the pump inlet strainer, which has hindered sludge retrievals and required manual cleaning of the pump on several occasions. Such debris was not expected from waste characterisation and was not considered in the design of the plant. Later the pump was running effectively in the supernatant layer of the tank but was blocking when entering the sludge layer. The project therefore decided to switch operations to a different sludge retention tank (SRT3) whilst a solution to the issues in SRT2 was developed. Since swapping over to SRT3 retrievals has proven effective, but slow. Similar debris has been found in SRT3 and the pump has been cleaned once during operations in this tank. As a result of the slow rate of retrievals additional supernatant from flushing water has been generated and management of this has affected plant performance.

To date five drums in total have been exported, with drums 4 and 5 successfully co-packaging resin waste with the sludge. The plant has entered a two week outage period to allow some process upgrades, routine maintenance and calibrations. Operational experience has been sought from across the NDA estate and this has allowed the project to begin development of several pump alterations that will feed into a trial and improvement process for sludge retrievals. The first iteration of this process will commence at drum 6.

Work is ready to commence for reconfiguration of the Acid storage facility, which will be connected to the WILWREP plant for the second, acid processing campaign. Initially, scaffold stairway access will be constructed to elevated sections of the plant to ensure refurbishment works can be carried out without the need for personnel to use legacy vertical ladders.



Cleaning of Sludge Retention Tank pump inlet strainer

2.3 Solid Intermediate Level Waste Encapsulation (SILWE) Project

The overbuilding with PVC cover is now complete, wind and water tight. The site continues to be very busy with the mobilisation of various sub-contractors to complete painting, install the electrical equipment (support steelwork and cables), install and test the hoist, install the ventilation ductwork and equipment and

complete the installation of the shielded doors, gamma gate and shielded windows. Final ground works around the facility, drains, roads and grout silo foundations have commenced.

At the offsite testing facility work is progressing to complete all setting to work of the conveyors, control system and grout plant. Upon completion of setting to work it is anticipated that full integrated testing of the control system, grout plant and conveyor system will start in the next quarter. The Principal Contractor continues to maintain a good standard of safety performance on the project.

Overbuilding

Hoist Load Testing

Hoist

Shield Doors Import Export and Remedial Cell

HVAC Ductwork & Cable Primary Steelwork Installation

2.4 Solid Active Waste Bunker Retrieval (SAWBR) Project

Solid waste retrievals in SAWBR continue to make good progress with a further 80+ packages of waste recovered this quarter. At the time of writing, 591 packages of waste have been safely and compliantly recovered from the SAWB Bunkers putting the project five months ahead of plan and represents excellent progress against the sites hazard reduction mission.

The project team is now in the process of clearing the last 28 packages worth of waste within Bunker 3 and will then turn their attention to safely executing another bunker wall breakthrough to access the waste materials in Bunker 2. Bunker 3 retrievals are forecast to be complete by 7 July 2017 with breakthrough to Bunker 2 scheduled to be achieved mid-August 2017.

Bunker Material

View through Bunkers

3 PEOPLE

3.1 Site HR & Occupational Health

The workforce numbers at Hunterston remain stable and there are no current restructuring activities being undertaken. A number of external factors that have distracted our employee have been progressed, which has settled personnel.

Further progress has been made in how the HM Government Reforms (£95K exit cap and pension reforms) will apply in Magnox. The Minister for Energy and Industry has advised that following discussions with the Trade Unions the draft regulations are currently being finalised and future payments in respect of exit from the NDA estate are intended to be in scope of the regulations. However, he has also advised that the Government does recognise the unique circumstances surrounding the planned decommissioning and forthcoming closure of sites. Therefore, the Government have advised that they are minded to allow for targeted, criteria based relaxation on elements of the cap to be considered for redundancies associated with planned decommissioning milestones in the NDA estate.

Constructive discussions between employers and the Trade Unions across the NDA estate and management representatives including feedback received from affected employees has resulted on a revised Career Average pension (CARE) proposal being developed through negotiation. Consultation on the pension reform was therefore extended to allow employees to understand the proposal and the various Trade Unions involved are now going through the process of planning and conducting a ballot with affected members on the revised arrangements.

Earlier this year the Company advised that they wished to promote the values of equality, diversity and inclusion (EDI) to strive for a work environment that is free from discrimination and harassment and that everyone is treated with dignity and respect. Through a series of focus groups centred round these themes, feedback was obtained from a cross section of the Company and an EDI strategy and plan of improvements have been developed

Overall health of the workforce remains good, although overall sickness levels remains above our Company target and continues to increase due to long term sickness cases. We continue to support these employees, some of which have serious health issues, through our Company Attendance Support arrangements.

4 ENVIRONMENT (April 2016 to March 2017)

4.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 267.30 m^3 of LLW was disposed of during the twelve month period from April 2016 to March 2017. 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 2016 to March 2017 was dewatering of the pond and routine waste water arisings from the site active drain system.

Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (April 2016 to March 2017)
Tritium	30 GBq	0.44 GBq
Caesium-137	160 GBq	0.27 GBq
Plutonium-241	2 GBq	0.19 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.50 GBq
All non alpha emitting radionuclides not specifically listed taken together	60 GBq	1.24 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 2016 to March 2017)**
All authorised outlets taken together.	Tritium	100 MBq	56.4 MBq
	All other radionuclides (excluding tritium)	3 MBq	1.14 MBq
Discharges made as a consequence of reactor breathing	Tritium	3 GBq	0.65 GBq
	Carbon-14	200 MBq	57.4 MBq

4.2 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 an off-site independent laboratory 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 for resource use are being monitored and reviewed and any actions are being completed as planned.

Over the period April 2016 to March 2017, 96% of the non-radioactive hazardous waste, 98% 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 3.9 tonnes of waste was disposed to landfill during that period.

In November 2016 the site successfully demonstrated its compliance with ISO14001 Environmental Management Systems standard in support of Magnox Ltd retaining its company ISO14001 accreditation.

4.3 Environmental Events

There were no significant environmental events in the period April 2016 to March 2017.

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 2017, to the end of March, are as follows;

- *Approximately 126 employees received a total collective dose of 4.065 man.mSv between them*
- *Approximately 262 contractors received a total collective dose of 37.954 man.mSv between them*
- *The highest individual dose received by an employee was 1.556 mSv*
- *The highest individual dose received by a contractor was 2.435 mSv*

The majority of dose accrued in 2017 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.

5.1 Radiological Events

There were no significant radiological events in the period from January to March 2017.

6 EMERGENCY PREPAREDNESS

On Wednesday 12 April 2017 the site received a Licence Instrument from the ONR to permit the implementation of the new, revised Accident and Emergency Arrangements; a set of arrangements that are more appropriate to the level of hazard on the site and the type of events/incidents that we are likely to experience.

The smooth transition required various presentations and communications to stakeholders to make everyone aware of what the changes were and how it would impact the emergency scheme members and sites responses.

Leading up to the transition there were frequent training exercises undertaken by contractors, self-perform teams, programmes and departments which focussed on the new Accident and Emergency Arrangements and Contingency Plans.

These scenarios were very realistic and more like the type of event that was likely to occur as a result of each department daily undertakings.

The new Accident & Emergency Arrangements have been in place now for two months and have been successfully implemented. There is a programme of planned demonstration exercises for maintaining and testing the arrangements to ensure that the site is ready to respond to any event that occurs in accordance with the new arrangements.

7 SOCIO-ECONOMIC AWARDS

To date, there has been a total of **6** applications in 2017/18 ***(3 successful, 1 rejected, 1 withdrawn and 1 pending)***. Please see below the table of applications that have been successful in receiving awards this year:

MAGNOX SOCIO-ECONOMIC SCHEME 2017/18 - HUNTERSTON AWARDS		
APPLICANT	**DETAIL**	**AWARD**
Largs Youth Theatre	Microphones for Youth Productions *(see picture)*	£460
Largs Viking Festival	Youth funding for Largs 2017 Viking Festival	£1,000
Fairlie Community Association	Fairlie Hall Refurbishment Project Equipment	£803
TOTAL		**£2,263**

8 SITE VISITS AND KEY DATES

Hunterston A Site continues to attract the right kind of interest through our good safety and business performance. A selection of visitors and key dates during the period included:-

DATE	EVENT / VISIT
7-8 Mar	NDA Site visit - Mark Raffle Programme Manager Scottish Sites /David Davidson/Ian Doyle
15 Mar	Tony Wratten - EHSS&Q Director
29 Mar	Site Closure Director Update to SSG chair- Rita Holmes and SSG vice Chair, John Lamb & Magnox Socio-Economic Local Review Panel Meeting
18 April	Joyce Corbett – Head of Pensions - Pension Reform Presentation
18-20 April	ONR Inspection – Rob Eales Inspector of Nuclear Safety
26 April	EHSS&Q Review – Tony Moore Waste Programme Director / Pete Knollmeyer CNO Fuelled Sites / Pam Duerden Head of EHSS&Q Standards
10-11 May	SEPA Inspection David Stone/Hugh Fearn
10-12 May	NDA Site visit - Mark Raffle Programme Manager Scottish Sites /David Davidson/Ian Doyle
24 May	Site Closure Director Update to SSG chair- Rita Holmes and SSG vice Chair, John Lamb & Magnox Socio-Economic Local Review Panel Meeting