HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT

ACTING SITE DIRECTOR – ALASTAIR WALKER

JUNE 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 am glad to report the site has not had any positive Covid cases in the reporting period. The focus remains the safety of our personnel and the site continues to monitor any changes in guidance and/or legislation e.g. working from home where possible, home testing. The site established on site testing facilities in March and up to the end May, has carried out over 840 tests with no positive results. The testing facility is open to anybody working on the Hunterston site including core staff, agency supplied workers, contract supplied workers and contractors.

One of our colleagues suffered an injury in March as a consequence of slipping on a patch of muddy ground. As a result of the injury, the site instigated detailed surveys of the footways and is taking forward an implementation plan to rectify a number of defects that were identified. I am glad to say the individual has now returned to work, however it was a stark reminder to everybody on site to remain vigilant at all times, report any defects and challenge any unsafe practices.

There has been some excellent progress in a number of areas during the reporting period. The HAW team finished the financial year strongly by retrieving a total of 30Te of solid waste then continued their success by achieving the milestone of the **1000th** box and the **148th** drum transferred over to the Intermediate Level Waste Store. The team discovered two fuel elements during March. The fuel elements would have been deposited into the bunkers when Hunterston A Site was operational and were expected.

Such discoveries form part of the approved safety case and operating procedures for the retrieval operations associated with all bunker waste at the site. The fuel elements remain in a safe and controlled environment for processing and we anticipate there will be further occasions when used fuel will be discovered as we continue to retrieve waste safely and securely.

There were a number of key reviews involving our regulators in the period. The 2019/20 Annual Review of Safety, Security and Environment (ARoSSE); the 2019/20 Annual Review of Environment (ARoE) and an inspection of License Conditions 19, 20,21,22 and 26 by ONR all took place in the March. I am pleased to confirm that ONR, ONR CNS and SEPA were all satisfied with the information they were presented and continue to have confidence in Magnox's management of the site.

A number of changes on the site were introduced in March. The first was a change to the Accident and Emergency arrangements. The change enables monitoring and surveillance by the site Security Guard Force in silent hours and removal of the Duty Controller from the silent hours on-site staffing. The second was a change to the weekly working pattern. As of Monday 1 March 2021 the site works a 4 day week, Monday to Thursday.

Hunterston ran a number of successful Target Zero safety campaigns between March and May on the topics of 'Decommissioning Mindset', 'Work at Height' and 'Security''.

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

2 SAFETY OVERVIEW

2.1 Safety Review Performance

Safety Performance on site continues to be good and it would have reached **83** months by the end of March 2021 since the last Lost Time Accident (LTA). However, in March an individual tripped on a kerb sustaining a fractured ankle. The incident was investigated and the root cause established that the impact of works on an adjacent portacabin had not fully recognised the potential impact to the engineered footpath. As a result this event was characterised as a workplace incident with the necessary reporting through RIDDOR completed. A green brief on the event and the root cause was also shared across the Magnox and NDA Estate via the Green Brief Process.

This again underpins the open and transparent reporting process which enables us to learn and share.

The consistency in our safety performance is a product of a continuing good Safety Culture at HNA underpinned by the company-driven Target Zero campaigns which are designed to raise awareness and maintain safety focus whilst delivering the decommissioning of Hunterston A Site. These targeted campaigns are aimed at all persons who work on Magnox sites and continue to be well received as we strive for Zero Accidents, Zero Incidents and Zero Harm. The latest campaigns have included specifics of special awareness and planning of work as a result of our incident above as

well as Security which could be used in the workplace as well as home. These topics have been well received with many shared personal experiences.

COVID is still to the fore of our activities with over 170 people on site daily at this time. Safety of our staff remains a high priority and our COVID Secure arrangements are continuously reviewed and changed to meet current and changing situations. This review has seen the introduction of on-site testing which went live on Monday 8 March. This is not mandatory but feedback is that it is being positively recognised as a step towards a safer environment both at work and at site.

In addition our Environmental performance remains focussed and we continue to maintain an open relationship with SEPA, supported by weekly meetings and recently on week commencing 17 May we had the first visit to Site by SEA Inspectors since COVID last year. This is a welcome opportunity to share the many positives at Hunterston and was positively reported by SEPA.

2.2 Emergency Preparedness

In the period we also transitioned from 24 hour operational cover at Hunterston to a Site with operational cover during normal working hours. During silent hours the site is manned only by Security personnel with an all call "Duty" response. This was implemented after an extensive planning period which included plant configuration, personnel training and Emergency Exercising, all designed to challenge our arrangements and evaluate our response and readiness. All of this work culminated in number of successful Readiness Reviews at both Site and Executive Level and a series of Demonstration Exercises leading to the issue of a Licence Instrument (LI) by ONR.

4 DECOMMISSIONING PROGRESS

4.1 Hunterston Reactors

<u>Reactor Remediation</u>

Reactors Remediation works consisting of column base repairs, cradle rail removal and flooring replacement is due to commence in June and scheduled to be completed this financial year.

Roof repairs tenders have been received and work is planned to commence late summer for a duration of around 3 months

<u>Reactor Cladding</u>

This is now 'on hold' due to an NDA approved proposal to develop new Site-Specific Strategies (SSS) which support a fleet-wide assessment for an optimal sequencing of reactor dismantling under a Continuous Reactor Decommissioning (CRD) programme.

4.4 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 is now progressing towards Phase 2 which is expected to commence next month. During Phase 2, each system will be operated to ensure that each system interface is functionally demonstrated.

Additionally the grout plant has recently undergone various modifications to ensure operator safety when the new forklift truck is introduced into 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 3m^3 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.

During April 2021 SAWBR achieved a milestone having safely retrieved, processed, packaged and transferred the **1,000th** 3m³ Box to the ILWS and we are now approaching **50%** of the way through Bunker 1 which is a significant achievement

(see picture opposite of Bunker 1 Waste retrievals with Brokk ROV in operation)

The SAWBR team continue to make good progress in Bunker 1 waste retrievals and to date have safely exported a cumulative total of 104 3M³ boxes from Bunker 1 to the ILW Store, this equates to 68.612te of waste. This brings the total of 3M³ boxes exported from SAWBR to 1006 Boxes. The project expects to complete against a forecast out-turn total of 1148 3m^3 boxes by Summer 2022, factoring in the slower rate of processing in Bunker 1 and the impact of the COVID-19 pandemic.

Routine planned Maintenance in SAWBR commenced on Monday 3 May 2021 and will last approximately 3 weeks.

4.3 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 3m^3 stainless steel drum the waste contents are mixed with encapsulant powders with a sacrificial paddle to achieve an immobilised waste form within the drum.

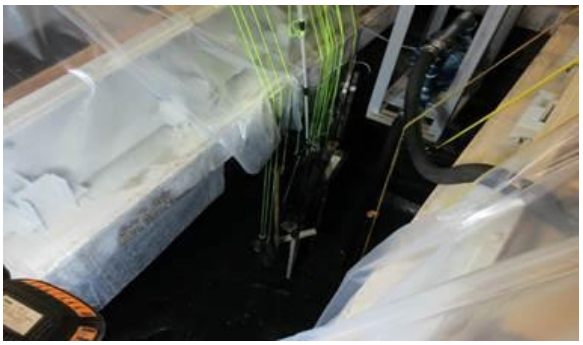
The team has continued with the retrieval of residual sludge from Sludge Retention Tank (SRT)3. Many 'orphan' waste items, which were not expected, have been uncovered during the residual sludge cleaning within this tank. These items are inhibiting further sludge pumping operations from SRT3. The majority of these waste items will be transferred into the Solid Active Waste Bunkers (SAWB) once the relevant paperwork has been processed. These in turn will then be processed through the SAWBR facility.

WILWREP has continued to process sludge from SRT 1 into drums, with making good progress which continued during April and the plant has now exported **148** 3M³ Drums to the ILW store, with the resin retrieval process also ongoing.

Due to the sequencing of the WILWREP plant and the Covid-related delays, the resin recovery equipment had not been operated for two years since bulk resin retrievals ended, so a slow, steady approach to restarting this plant has been undertaken, leading to recovering the small quantity of remaining resin into WILWREP drums.

Routine planned Maintenance in WILWREP and the ILW Store commenced Monday 3 May 2021 and will last approximately 3 weeks.

Orphan wastes in SRT3 - the majority of the residual sludge has been removed.



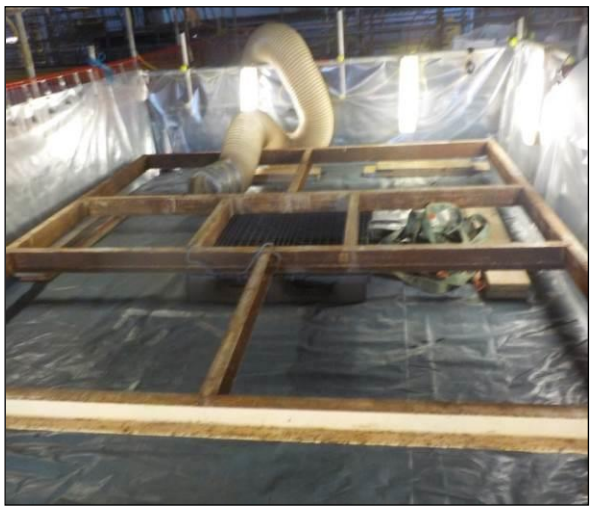
SRT 3 Orphan wastes suspended ready for removal

4.5 Ponds Programme

Pond Purge Sump (PPS)

The Lattice Frame removal was completed satisfactorily in March 2021, which also included the size reduction and waste processing of the lattice frame steelwork and its support frame originally located on top of the PPS walls. All redundant tools and lifting equipment etc. were removed from the PPS work area and combisafe guard rails secured in place around the PPS walls, completing the main works associated with the PPS Lattice Frame Project.

Final Lattice Frame section being transferred to the PWTP roof



PPS Support Frame at the PWTP roof ready for size reducing

New Effluent Treatment Plant (NEffTP)

There is continued progress to install the sites NEffTP with Factory Acceptance Testing being completed in March 2021 and the subsequent delivery of component parts to site. Site works continue in preparation for the upcoming installation work, located within the sites Low Level Waste Transfer Facility (LLWTF), which is scheduled to start in June.

5 PEOPLE

5.1 Site HR

As planned with effect from 1 March 2021 we implemented our revised working pattern moving to a 4 day week. This is subject to a six month review to ensure the benefits identified, both for the Company and workforce, materialise as expected. Early indications are that this is working well operationally and also the workforce are enjoying the work life balance benefits

We have successfully made 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. An enabler to this was also introduction of a revised Security Guards shift rota. Following a series of training and exercises our Lead and Deputy Lead Guards achieved the required level of competence to gain the necessary regulatory approvals, with implementation taking place on 6 April 2021. This has allowed our shift operations staff to transition into day posts and utilise their valuable skills in other areas. We have had positive feedback from the security and operations staff affected by this change.

Significant recruitment activity of approximately **40 posts** is currently ongoing through a mixture of posts to be filled with Magnox New Starters' Contracts and Supply Worker contracts, with a healthy number of applications being received. The majority of these are within our Maintenance department and Ponds Programme. Some of these will result in additional staff, with others being conversion of some Agency Supplied Worker (ASW) posts now being resourced through New Starter Contract terms which may result in the post being filled by the current (ASW) incumbent.

Hunterston are still intending to recruit a small number of Radiological Technician apprentices who we expect will be offered continued employment upon satisfactory completion of their apprenticeship. This initiative has however been delayed with no further progress to report. This is due to an appropriate training provider still required to be identified. Discussions are continuing to seek a resolution to this issue.

Equality Diversity & Inclusion continues to be a focus with a number of awareness or focus subjects being communicated.

This has included Black Inclusion Week and the International Day Against Homophobia, Biphobia, Intersex and Transphobia (IDAHoBIT). This year Magnox has commissioned new flags, to show our support for the day and support for LGBTQ+ equality in the workplace. The flag could be seen flying high on the Hunterston flagpole.

5.2 Occupational Health

We have had no new COVID cases during the period and one individual who contracted COVID19 and was absent for some time recovering from long term effects has returned to work. Our absence figures are reducing month on month after an extended period of high absence rates due to long term sickness cases over the last 12 months, with a variety of unavoidable illnesses.

We are continuing to support individual's mental health and wellbeing through various means with regular articles and initiatives from both the Company and our own Wellbeing Group and Mental Health First Aiders. Examples include Mental Health Awareness Week where the focus this year was nature and during that week staff were encouraged to dedicate an hour of their work time to their mental health.

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 March, are as follows;

- *Approximately 124 employees and visitors received a total collective dose of 3.719 man.mSv between them*
- *Approximately 118 contractors received a total collective dose of 3.443 man.mSv between them*
- *The highest individual dose received by an employee was 0.764 mSv*
- *The highest individual dose received by a contractor was 0.519mSv*

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 (April 2020 to March 2021)

In late March 2020 the Hunterston A site was put into a safe and secure state. Between late March and July 2020, when the restart of physical operations recommenced, there were no solid, liquid or gaseous discharges with the exception of gaseous discharges made as a consequence of reactor breathing. This environmental summary includes reporting figures for the period when the site was put into an "operational pause" in reaction to the national Covid-19 lockdown.

7.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue.15.93m^3 of LLW and VLLW with a total activity of 0.28 GBq was disposed of during the twelve month period from April 2020 to March 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 April 2020 to March 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 (Apr20 to Mar21)**
Tritium	30 GBq	0.012 GBq
Caesium-137	160 GBq	0.032 GBq
Plutonium-241	2 GBq	0.001 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.003 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.031 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 (Apr20 to Mar21)**
All authorised outlets taken together.	Tritium	100 MBq	0.20 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.24 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	490.63 MBq
	Carbon-14	200 MBq	60.02 MBq

7.2 Non-radiological Environmental update (April 2020 - March 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 April 2020 - March 2021 the site used 15.75 Terra Joules (Tj) of energy; 15.24 Tj attributed to electricity consumption and 0.51 Tj attributed to fuel use in site vehicles, equipment, and generators. In the same 12 month period the site water consumption was 8,787 m3. 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 April 2020 to March 2021, 45.03 tonnes of waste was collected for consignment from site, 40.47 tonnes was consigned for recycling, recovery, or composting, 4.45 tonnes consigned for disposal to landfill and 0.11 for incineration (with no energy recover). This gives a recycling rate of approximately 90%.

7.3 Environmental Events

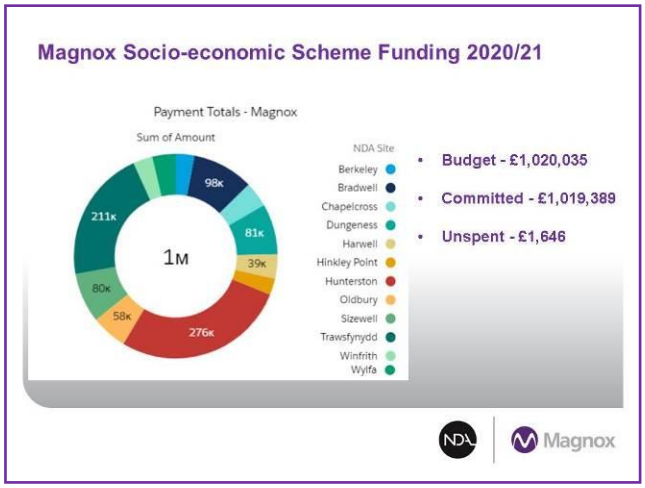
There were two environmental events (with a significance category above ES-99) between January 2021 and March 2021.

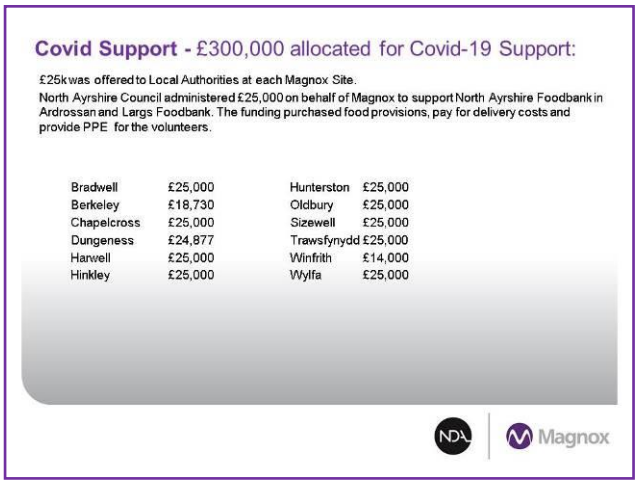
- Ventilation plant was returned to service prior to completion of an annual maintenance task. This event did not result in any environmental harm or safety impact.
- An error was identified within one of the radionuclide fingerprints recorded on a spreadsheet used to calculate the radioactivity content of solid waste. The error was a transcription error which resulted in the fraction of a single radionuclide, Niobium 94 (Nb-94), within the radionuclide fingerprint being recorded as 0.002 instead of 0.0002. This has resulted in the radioactivity content of the waste disposed of under this calculation methodology being over reported. Initial assessment has indicated that the total radioactivity of solid waste disposed during calendar years 2019 and 2020 has been over reported by less than 0.5%.

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**

Please see highlights for 2020/21below:





Funding applications supported around the Hunterston Site in 2020/21 included:

West Kilbride Council - £200 for one off annual Zoom licence to assist the council with adapting to virtual online meetings.

Irvine and Dreghorn Brass Band **-** £1,000 to purchase 20 chairs and 20 music stands for the band to perform.

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 – this has obviously been restricted due to Covid19 restrictions.

DATE	EVENT / VISIT
Monday 15 / Tuesday 16 March	ONR Inspection Visit – Bill Kings Principal Inspector
Tuesday 23 March	Scottish Annual Regional Review of Safety Security and Environment *(Microsoft Teams meeting)*
Wednesday 7 April	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)*
Thursday 8 April	John Grierson – Magnox Nuclear Operations Director
Wednesday 21 April	EHSS&Q Review – Paul Winkle Chief Operating Officer / Pam Duerden EHSS&Q Director
Wednesday 5 May	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)*
Wednesday 19 May	ONR Periodic Safety Review