Hunterston SSG Teleconference 4 June 2020

Questions and Answers

Questions from John Lamb, West Kilbride Community Council

Hunterston A Station Report:
Can A station please answer as to why the date for entry to Care and maintenance is now 2027. Is this extension of the date due to:

- NDA Approval and funding?
- Delay in contract for cladding of the Reactor buildings which was scheduled to take a minimum of two years?
- Decommissioning of wet ILW historic containment?
- Delay in commissioning of Solid ILW encapsulation plant and having to now do the complete store of +/- 1100 boxes, instead of encapsulation as they are filled from Silo 1?

Response from Alistair Walker, Acting Site Director, HNA.
The slippage emanates from performance issues on the Solid Intermediate Waste Encapsulation project and as this project is on the critical path for the site to enter into C&M, the forecast date has been revised accordingly. To be clear, the date provided in the report is a forecast, based on the latest progress and the site is working closely with the project team and contractor to minimise any further impact on the C&M Entry date.

Hunterston B Station Report:
EDF Scoping request to NAC for Waste Facilities at Hunterston B. to build a new ILW store, and a feasibility study for sharing the Hunterston A ILW store:

The previously agreed position on ILW storage for Hunterston B was that it would be able to be stored in the existing store.

Response from EDF
There has been no formal agreement yet on shared use of ILW storage facilities but a feasibility study is being carried out to explore this option. It is important to be clear that a final decision has still to be taken on the best route for storage of ILW from Hunterston B and EDF is still looking at a range of options. In the meantime, to ensure the necessary consents are in place should we require them, we are pursuing planning approval for a new ILW store at Hunterston B, which we may decide in the future that we don't need to build.

To which extent was the existing store reconfigured to accommodate the additional ILW waste.

Response from EDF
The A station store belongs to NDA/Magnox and it is for them to comment on this point. In the meantime, discussions and feasibility studies continue.

Response from Alistair Walker, Acting Site Director, HNA.
The capacity of the Hunterston A ILWS was increased in 2013 from 1500 packages to 2490 packages, to provide flexibility in the future, should there ever be a decision to use the store e.g. accelerated decommissioning, B station waste.

Why do Hunterston B now have to waste a lot of time for no reason and build its own storage and encapsulation facility? What has changed?

Response from EDF

While this was a topic under discussion for a few years there has been no formal agreement on shared use of the HNA ILW store to date. NDA carried out credible option studies for ILW storage in Scotland 8 years ago. This led to an NDA preferred option for shared use of the HNA ILW store. At that time EDF did not change its decommissioning plan to reflect this NDA view, instead EDF retained the plan to build an ILW store at Hunterston B. This was because the NDA study requires detailed underpinning of the issues and challenges to ensure it represents the optimum solution over the lifecycle. In 2019 EDF carried out a technical feasibility study into the use of the HNA store for HNB waste. This gave us confidence that it *can* be done. The next phase of work will give us the answer whether it *should* be done, considering the relative value of the necessary regulatory requirements against the financial burden on the UK taxpayer.

No details have been supplied as to the numbers of core inspections that have been carried out or the actual results?

Response from EDF

Reactor 3: Ten channels were inspected in Spring 2020. All channels had been previously inspected to give a direct comparison of core state. The results were within expectations showing 1 channel with 2 new full height axial cracks and 9 channels with no new full height axial cracks. This shows the core state is little changed from the major inspections is 2019 and confirms there is significant margin to the safety case allowance.

Reactor 4: Thirty five channels were inspected following four months of operation. The results were within expectations. Forty-one new full height cracks were identified in 22 channels. Crack width and distortions were within the expectations set out before the inspections. There are no new types or locations of cracks. This shows that the R4 core state is behind that of R3.

What is the outcome of the REPIR arrangements for Hunterston—Have Ayrshire Civil Contingency Team implemented a new controlled area or not?

NAC did not hold a full Council meeting in March so they did not make a decision?

Response from Jane McGeorge, Ayrshire Civil Contingencies Team

In response to your question, regarding the DEPZ for Hunterston B Power Station - to ensure compliance under the REPPIR 2019, the Chief Executive consulted with Elected Members and in relation to Hunterston B, it was (a) agreed to determine the boundary of the DEPZ for Hunterston B should be 2.4km to maintain the current status-quo and (b) this boundary should be fully reviewed at the first Council meeting after 1 December 2020.

Please note that all delegate decisions are published on line and the DEPZ report and decision can be viewed at:-https://north-ayrshire.cmis.uk.com/north-ayrshire/CommitteesMeetings/MeetingsCalendar/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/3356/Committee/130/Default.aspx

Questions from Stuart McGhie, Vice Chair

I would request that EDF could describe and discuss in more detail the following Planning Applications.

- Disposal of spent fuel
- Safe storage & Waste facilities
- ILW & Waste processing

Response from EDF

The proposed facilities are:

- Interim Conditioned Intermediate Level Waste Store (ICILWS) – a building to store the ILW which will have been processed in the OWPF.
- Operational Waste Processing Facility (OWPF) – a building housing the plant which will process wastes
- Decommissioning Waste Processing Facility (DWPF) – a building where solid decommissioning waste is monitored for reassurance so it can be taken offsite as low level waste or routed into the OWPF.

It's important to note that spent fuel from HNB is transported to Sellafield for storage and does not remain on the site – the completion of defuelling will be when the last fuel element leaves the site.

Our Consenting Strategy includes a planning application for Safestore construction/alteration of Reactor Building nearer the time when that work will occur. This is similar to what Magnox have done on their sites.

Will the B station be decommissioned by the NDA ?

Response from EDF

While we have still to agree the details of our role with HM Government and the Nuclear Decommissioning Authority (NDA), we are in constructive discussions to secure an agreement on the future management of the AGRs. We have already begun operating with decommissioning in mind.

Response from the NDA

As announced by BEIS, our sponsoring department, back in September 2019, discussions are underway between BEIS, EDF Energy (the owners of the AGR fleet), and the NDA, to examine the future decommissioning of the AGR fleet when it is time for the reactors to come off line. As yet no decisions have been made, and those discussions continue.

Can the A station ILW store be utilized by the B station?

Response from EDF

There has been no formal agreement yet on shared use of ILW storage facilities but a feasibility study is being carried out to explore this option. It is important to be clear that a final decision has still to be taken on the best route for storage of ILW from Hunterston B and EDF is still looking at a range of options. In the meantime, to ensure the necessary consents are in place should we require them, we are pursuing planning approval for a new ILW store at Hunterston B, which we may decide in the future that we don't need to build.

Response from the NDA

In 2012 Magnox and NDA carried out a strategic review of waste storage at sites in consultation with a wide range of stakeholders. The review of Scottish Magnox sites concluded that co-location of

Hunterston A and B intermediate level waste (ILW) was the NDA's preferred option. As part of this process, a number of pubic engagement sessions were held, which indicated stakeholders broadly supported in principle of co-location using the Hunterston A ILW store as a shared facility.

From Rita Holmes, Chair (on behalf of a member of the public)

With regard to Hunterston B, what would be the NDA role be during the
(a) defuelling period
(b) Preparations for care and maintenance or
(c) Accelerated decommissioning?

Response from the NDA
Again there is no current update as discussions are ongoing between BEIS, NDA and EDF Energy on the way forward.

What will be the major differences between the safety cases for restarting the two reactors?

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B
The safety cases for return to service of Reactors 3 and 4 at Hunterston are expected to be similar but not identical to each other. The Reactor 4 safety case will draw upon a number of claims, arguments and evidence presented in the Reactor 3 safety case. There are some differences between the respective reactor cores however, for example ONR will expect the presence of a population of high shrinkage graphite bricks in Reactor 4 to be specifically considered.

Has the safety case for R4 now been submitted?

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B
The safety case for return to service of Reactor 4 was submitted to ONR on 29 May 2020.

What is the capacity of ONR -during the Covid19 recovery period to look at the two safety cases at once?

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B
ONR is currently focussing its attention on the assessment of the Reactor 3 safety case. Assessment of the Reactor 4 safety will follow the Reactor 3 safety case assessment.

What would be the type and source of ILW going into any new ILW store? (i) during the defuelling period and (ii) during preparations for care and maintenance should the application and construction go ahead?

(ii) Would there be further capacity in the store to accept waste during the preparations for care and maintenance?

Response from EDF
This detail will be shared through the consultation process ahead of submitting the application in 2021.

Are there any discussions going on regarding accelerated decommissioning?

Response from NDA
There are currently discussions ongoing for the Magnox Fleet.

From Rita Holmes, Chair (on behalf of a member of the public)

Under section “Environmental safety” of HNB Report

What volume of sodium hypochlorite was released over the “less than 10 hours the pipe leaked?

Response from EDF
The total estimated loss of sodium hypochlorite from the pipe coupling is 140 litres. This is based on very conservative terms and is likely to have been less.

When had the pipework last been inspected or any maintenance done on it?

Response from EDF
The Operations Generation Team visit the hypochlorite dosing plant 3 times per day. As part of these visits they check the integrity of the run of pipework. Planning was already underway for a full refurbishment and upgrade of the system. This work has started with the replacement of two tanks and filling points. The work is expected to be completed during this quarter.

How often does the dosing take place? How was the leak discovered?

Response from EDF
During the winter dosing period (between mid December and late May) the plant is normally run for 24-36hrs once per week typically Tues 6am – Wed 6am. The Operations Generation Team visit the hypochlorite dosing plant 3 times per day.

On the 15th April:

- No leak reported following operator visit at 1130.
- Subsequent visit reported a steady stream from the pipework and dosing was promptly stopped at 1625.
- It was later noted that a small drip had been observed from the coupling by an operator at around 0930.
- The failure of the coupling appears to have taken place sometime between 1130 and the afternoon visit.

From Rita Holmes, Chair

Our community`s main concern is aerial and liquid discharges into the environment and we are keen to know as much as possible about any plans that would impact on discharges. This is so we can assess for ourselves what is in the interest of the people who live and work here. We appreciate what is said about it being “taxpayers money”, we are taxpayers too and want it used appropriately without comprising our environment. Hence the questions….

1. In the HNB Report “disposal” as well as storage is mentioned. Given that we went through all the controversy, about the Graphite Pathfinder Project and the proposition of near site, near surface disposal at Hunterston, do we have your assurance that this is not again ‘on the cards’. Although, near site, near surface is part of SG Policy, we were told by the geologist on CoRWM Committee on Radioactive waste Management that Hunterston was geologically unsuitable for this type of disposal.

Response from EDF
Disposal of waste at HNB is not part of this proposal. The OWPF facility is to enable processing of ILW, the ICILWS is for storage of ILW until a disposal facility is available. The DWPF will facilitate the removal of LLW off site - enabling disposal at appropriate facilities, as is routinely carried out for our LLW during generation.

2. With regard to Very Low Level Waste, we know that land adjacent to the site could be available for this type of facility. Do you have plans for a Very Low level Waste facility at Hunterston?

Response from EDF
No plans have been made for any disposals at HNB. EDF will be required by the Regulators to demonstrate that the optimum solution is implemented for all waste disposals and will make assessment of that solution at the appropriate time. It is recognised that guidance from Regulators means that we will need to assess the impact of leaving some wastes on site against the environmental impact from transporting and disposing elsewhere.

3. With regard to the proposed planning application for the three new buildings, is there enough land within the licensed site for these, bearing in mind that there is very little land free on the A site? Can you at this stage give us an idea of what sort of size of building each will be?

Response from EDF
It is too soon to provide this level of detail but we can reassure you that there is sufficient space on the Hunterston B site to construct and operate these facilities.

4. One new building is for storage...would this be for ILW once it is processed and in boxes/ drums or for ILW before it is processed?

Response from EDF
This would be for ILW once it has been processed in the Operational Waste Processing Facility (OWPF) although it's possible that during processing activities the ILW store may sometimes be used to facilitate these operations

5. Why the need for another storage facility when we were told that HNA ILW had capacity for HNB waste?

Response from EDF
There has been no formal agreement yet on shared use of ILW storage facilities but a feasibility study is being carried out to explore this option. It is important to be clear that a final decision has still to be taken on the best route for storage of ILW from Hunterston B and EDF is still looking at a range of options. In the meantime, to ensure the necessary consents are in place should we require them, we are pursuing planning approval for a new ILW store at Hunterston B, which we may decide in the future that we don't need to build.

6. What specific type of waste processing will take place in each of the other two buildings?

Response from EDF
The proposed facilities are:

- Interim Conditioned Intermediate Level Waste Store (ICILWS) – a building to store the ILW which will have been processed in the OWPF.
- Operational Waste Processing Facility (OWPF) – a building housing the plant which will process wastes

- Decommissioning Waste Processing Facility (DWPF) – a building where solid decommissioning waste is monitored for reassurance so it can be taken offsite as low level waste or routed into the OWPF.

It's important to note that spent fuel from HNB is transported to Sellafield for storage and does not remain on the site – the completion of defuelling will be when the last fuel element leaves the site.

Our Consenting Strategy includes a planning application for Safestore construction/alteration of Reactor Building nearer the time when that work will occur. This is similar to what Magnox have done on their sites.

More detail will be available during the consultation process

7. The huge HNA ILW store was permitted just before new rules re 'camouflage/ blending in /security '. Given the number of buildings already on Hunterston Site eg Interconnecter, etc it would be beneficial to see some redundant ones height reduced or removed altogether (A station reactor buildings). Is this a consideration that would prompt NDA to promote accelerated decommissioning at HNA or at very least remove the 5 old ILW vaults?

Response from Alistair Walker, Acting Site Director, HNA.
The strategy Magnox are currently working to leaves 5 structures on entry into C&M. These are the ILW Store, ponds building, both reactor buildings and the SAWB building. All other buildings will be demolished and this is scheduled to occur in the later stages of the decommissioning programme.

8. The SILWE plant is behind schedule, how will this impact on the Hunterston A plan for going into C&M? Will HNB be using the SILWE plant for its ILW encapsulation? Is the intention of EDF to encapsulate?

Response from Alistair Walker, Acting Site Director, HNA.
The slippage on the SILWE project has meant it has now come onto the site critical path for entry into C&M. Current forecast C&M Entry date is Aug 2027. There are currently no plans for EDF to use the SILWE plant.

Response from EDF
More detail on how proposed facilities will be used will be available during the consultation process.

9. As defuelling at HNB will take a fair amount of time: there is only one charge machine, availability of flasks is limited etc., what does EDF consider the length of time will be for defuelling?

What stage are the plans at for (i) defuelling (ii) decommissioning?

Response from EDF
We have still to agree the details of our role with HM Government and the Nuclear Decommissioning Authority (NDA), we are in constructive discussions to secure an agreement on the future management of the AGRs and will be able to provide more details once these discussions have concluded.

10. Who will do the decommissioning? NDA/ Magnox or another?

Response from EDF
While we have still to agree the details of our role with HM Government and the Nuclear Decommissioning Authority (NDA), we are in constructive discussions to secure an agreement on the future management of the AGRs. We have already begun operating with decommissioning in mind.

11. With regard to Safety Cases for R3 and R4 and assuming, (rightly or wrongly), that ONR permits restart, will EDF be asking for a further period of operation after the 6 month period covered by the Safety Case is up?

Response from EDF
Submission of safety cases for further periods of operation will be informed by future inspection results. EDF's current date for the move into defuelling at Hunterston B is 2023.

12. Again assuming consent of both safety cases, will EDF operate both in tandem (with perhaps a few weeks difference, or will R3 run for 6 months then R4 run for 6 months after that?

Response from EDF
The current best estimate for return to service for Reactor 3 is 13 July. The current best estimate for return to service of Reactor 4 is 27 July. These dates will depend on the submission of the R4 safety case and the assessment of ONR of both. If the reactors are brought back online on those dates their operating periods will overlap.

13. With regard to the Iodine Absorption plant testing equipment Equipment, if it left under contact document level and the monitoring equipment at Hunterston was accurate and correct, then how was it above the CD level when it was returned to the owner? Was it human error or something else?

Response from EDF
It was not down to human error. Even after cleaning the equipment contains radioactive contamination. It is thought that a particle of this contamination moved during transit to a part of the equipment that was less shielded. Work is underway to apply an additional filter to the equipment that will be removed prior to transport, to avoid this happening again. There was no harm to anyone from this event.

14. Why is this event noted under Radiological Protection rather than under Environmental safety?

Response from EDF
There was no environmental impact. No contamination was lost; it was contained within the equipment which was wrapped and inside a case. The equipment is sent via an approved carrier of radioactive material. The low dose rate on contact with the equipment just exceeded the transport requirements for this type of package.

15.1 When can we expect a decision on R3 Safety Case?

Response from EDF
The ONR is independently assessing the safety case.

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B
The ONR assessment of the safety case for return to service of Reactor 3 is ongoing. Interactions continue, between ONR and EDF, in order to clarify ONR's understanding of the claims and arguments being made. ONR does not yet have a timescale for making a decision on whether Reactor 3 is safe to return to service.

15.2 When can we expect a decision on R4 Safety Case?

Response from EDF
The R4 safety case has completed our internal independence assessment and is to be sent to ONR end May/early June.

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B
The safety case for return to service of Reactor 4 was received on 29 May 2020. ONR has not yet commenced its assessment of the safety case and does not yet have a timescale for making a decision on whether it is safe to operate Reactor 4.

16. Are the full results of the R4 Inspection available yet?

(*15 and 16 are about when decision on Safety Cases is likely. Given that the new EDF restart dates are beginning and mid July, then we would look at the decision being made by 30th June at the latest. We know 'it will take as long as it takes' ONR to assess robustly, but we have to ask?)*

Response from EDF
Reactor 3: Ten channels were inspected in Spring 2020. All channels had been previously inspected to give a direct comparison of core state. The results were within expectations showing 1 channel with 2 new full height axial cracks and 9 channels with no new full height axial cracks. This shows the core state is little changed from the major inspections is 2019 and confirms there is significant margin to the safety case allowance.

Reactor 4: Thirty five channels were inspected following four months of operation. The results were within expectations. Forty-one new full height cracks were identified in 22 channels. Crack width and distortions were within the expectations set out before the inspections. There are no new types or locations of cracks. This shows that the R4 core state is behind that of R3.

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B
The results of the Reactor 4 core inspection, carried out in January 2020, are included in the Reactor 4 safety case.

17. Given that the state of the core is the main factor holding up restart of R3 and R4, and given that inspection is a major contributor in the safety cases being made, if the Fuel Grab Load Trace could have been used more effectively and wasn`t. then that is very disappointing.

(The R4 inspection was from 10th Dec 2019 onwards...we have been told it is consistent with EDF`s predictions about core state. When will the specific findings re number of cracks, configuration of cracks and width of cracks be made public? Also will ONR be detailing the criteria with regard to core state, which EDF has submitted in its R3 Safety Case .eg. Will it specify total number of single cracks, double cracks, multiple cracks, width, and position of the affected channels in the reactor? Can you say more about this?

Also, given that EDF is no longer stating any Operational Allowance only CEDTL , does that mean that the Operational Allowance is for some reason no longer significant or that to give a revised OA would show the narrowing of the safety margin?)

17. (1) When will the specific findings re number of cracks, configuration of cracks and width of cracks be made public?

17. (2) Also will ONR be detailing the criteria with regard to core state , that EDF has submitted in its R3 Safety Case .eg. Will it specify total number of single cracks , double cracks, multiple cracks, width , position of the affected channels in the reactor. Can you say more about this?
17. (3) Also, given that EDF is no longer stating any Operational Allowance only CEDTL, does that mean that the Operational Allowance is for some reason no longer significant or that to give a revised OA would show the narrowing of the safety margin?

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B

17. (1) ONR has made a previous commitment to share the graphite inspection results. ONR will share the results in the coming weeks, subject to the caveat that the significance of the inspection results will not have been assessed by ONR.
17. (2) It is for EDF to adequately describe the core state of Reactor 3 within its safety case. The ONR assessment of the Reactor 3 safety case will consider all significant crack morphologies against the fundamental safety principles of unimpeded movement of control rods and fuel, adequate (gas) cooling of the fuel and core and appropriate neutron moderation and thermal inertia.
17. (3) For Reactor 3, ONR's expert inspectors continue with their interactions with EDF to understand and form a view on EDF's arguments to demonstrate its margin to safety. Whilst the Operational Allowance is not defined, ONR will still expect to see the existence of significant margin between the predicted core state after 6 months and CEDTL figure. The assessment is ongoing at this time and ONR will publish its assessment findings once a decision has been made on whether Reactor 3 may return to service.

18. Given that the state of the core is the main factor holding up restart of R3 and R4, and given that inspection is a major contributor in the safety cases being made, if the Fuel Grab Load Trace (FGLT) could have been used more effectively and wasn`t. then that is very disappointing. It appears an opportunity lost. (1) It does seem significant to us so how does ONR justify it as insignificant. (2) What is meant by a regulatory issue was raised to track close out of the FGLT matter?

(*Section 6 of ONR Report – (3) We are asking, if the amber alert criterion had been utilised, would it have given a better indication of which channels EDF should have been looking at? (4) If that is not the reason then what is the reason that the Monitoring Assessment Panel has identified this as a minor shortfall?*)

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B

18. (3) The finding arose from an ONR Fault studies inspection of EDF's surveillance processes applied to the graphite core. The finding applied to EDF's ongoing development of the use of FGLT information to identify early indications of a degrading fuel channel, i.e. a FGLT signal which might give a clue that there is fuel channel distortion or debris, but not enough to cause a stuck stringer. The shortfall was that EDF was potentially not making optimal use of the existing and future data available by not having an amber rating for the FGLT data.
18. (1) & (4) The ONR Fault Studies inspector was of the view that a FGLT indication alone is unlikely to give you significant information, but in conjunction with indications from several different monitoring strategies might lead you to believe that there is something going on in a channel or region of the core. The historic FGLT data is available and is reviewed and the Fault Studies inspector was of the view that the historic data would not have made any difference to the channels inspected in the past.

18. (2) An ONR regulatory issue is any safety or security matter that has the potential to: degrade safety or security; challenge regulatory compliance; or challenge regulatory strategy. ONR uses a graded approach for the management of regulatory issues and an issue level is assigned to indicate its safety or security significance. The FGLT issue was rated at the lowest level (Level 4). Typically these are matters arising from ONR interventions that have attracted an ONR inspection/assessment rating of Green (No Formal Action) but where minor shortfalls/improvements have been identified.

19. (1) Why is there no comment from ONR on the iodine absorption equipment event / non-event.?

(In the HNB Report under Safety and Environment: sub section Radiological Protection, paragraph 5: "Equipment used for the testing of the iodine absorption plant was returned to its owner using an approved carrier. The package was monitored before dispatch and found to be below the contact dose rate limit 0.005mSv per hour for this type of packaging. On arrival the dose rate was found to be above the limit at 0.010mSv per hour. The rate is equivalent of eating a bag of Brazil nuts or spending a few hours in Cornwall. Our testing equipment has been checked and found to be accurate. An investigation has been completed and actions are in hand to prevent recurrence."

It reports the event, but no outcome. We wondered if it was a case of human error and if it was not, then what was it? (I am not sure that Brazil nuts and Cornwall are scientifically verifiable, so not helpful.) (2)Was there an outcome?)

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B

19. (1) The ONR Q1 SSG report is for the period 1 January to 31 March 2020. The event occurred on 2 April 2020 and was reported to ONR on the 9 April in accordance with ONR's incident reporting criteria. The event will be included in the Q2 SSG report.
19. (2) Question for EDF - The event has been followed up by the ONR Transport specialist inspector. The specialist inspector considers this event, which involved the appropriate use of an 'Excepted Package', which is lowest category of radioactive transport package, to be of low significance and does not warrant formal follow up. Station is conducting an Apparent Cause Investigation (ACIN) and the corrective actions will be reviewed as part of the next transport inspection, (currently scheduled for June 2020).

20. Can ONR explain (under 12, bullet point 2, in non-routine matters) on-load discharge power limit with regard to partially irradiated fuel assemblies PIFA?

(In ONR Q1 SSG Report page 5 under 12, bullet point 2, re On-load Discharge Power limit.

It refers to defuelling, which we understand will commence once HNB stops operation, so somewhere in the near future, (next few years). Are we right in assuming (i) that there will be partially irradiated fuel to be removed, (ii) that there are different concerns about totally irradiated and partially irradiated fuel being removed (iii) can you explain what part the prompt power safety case limit plays in worker safety? (iv) can you explain why it is being increased from 1.80MW to 2.35MW and how MW plays its part?)

Response from Stuart Fannin, ONR Principal Inspector, Hunterston B

20 (i) Under power operations new fuel is routinely added to the core, partially irradiated fuel is re-distributed around the core and irradiated fuel is removed from the core in order to ensure a uniform neutron flux density and hence power density is generated by the core. The defuelling programme at the end of generation therefore has to consider a range of partially irradiated and irradiated fuel assemblies.

20. (ii) There are different concerns in relation to irradiated and partially irradiated fuel which are complex and include the level of decay heat generated by the fuel pins, the level of irradiation of the fuel element graphite sleeve, which separates the flows of gas around the fuel pins, and irradiation of the Tie bar, which links the fuel assemblies together to form a fuel stringer.
20. (iii) The prompt power safety case limit ensures that sufficient cooling continues to be provided during defuelling operations such that fuel containment is preserved and the structural integrity of the Tie bar is maintained. This limit contributes to worker safety by preventing the release of radioactive material that could potentially occur if the fuel was to melt or if a fuel stringer was to be dropped during lifting operations.
20. (iv) The intent of increasing the power limit from 1.8 MW to 2.35 MW was to achieve alignment with Hinkley Point B, Torness and Heysham 2 since the fault sequence is essentially the same and the protections are sufficiently similar across the stations. MW refers to Mega Watts and is the unit used to describe the quantity of heat generated by the fuel.

21. Is EDF awaiting decision on R3 Safety Case before it submits R4 Safety Case?

Response from EDF
The R4 safety case has completed our internal independence assessment and is to be sent to ONR end May/early June. The ONR will then independently assess the safety case.

From Rita Holmes, Chair (on behalf of a member of the public)

Is there a draft plan sitting with EDF, ready to start the decommissioning of Hunterston B, if or when ONR decide the reactors should not be operated at power any longer?

Response from EDF
While we have still to agree the details of our role with HM Government and the Nuclear Decommissioning Authority (NDA), we are in constructive discussions to secure an agreement on the future management of the AGRs. We have already begun operating with decommissioning in mind.

Presuming there is a plan, how quickly and at what rate do EDF anticipate the rundown in their permanent staff members?

Response from EDF
We have talked to all staff in the site about their plans for the future whether that will be staying at Hunterston B, moving to another part of the company or taking retirement. These conversations and the other work being carried out are helping to inform what the size and shape of the workforce at Hunterston B will look like in the future. These plans will be shared, with staff in the first instance, at an appropriate point in the future.

From Rita Holmes, Chair to Hunterston A and NDA

1. SAWBR

The forecast is for 1110 3m cubed boxes by summer 2022. How many box spaces does that leave in the ILW store for?

(i) Consignments (if it is decided to do this) from HNB

(ii) Waste packages from accelerated decommissioning at HNA, if that is decided by the strategy review board?

Response from Reuben Phillips, Waste Manager, Hunterston A
We forecast that the waste retrieval operations at HNA will produce 1351 packages. The ILW Store has a capacity of 2490, so spaces for 1139 packages will exist at that point. These spaces have not been allocated in any way at this time.

2. WILWREP

The forecast is for approx 152 drums of ILW by autumn 2020. Is there any plan for the facility to be used for HNB liquid waste?

Response from Reuben Phillips, Waste Manager, Hunterston A
Magnox are in discussions with EDF examining any opportunities for EDF to make use of the current HAW facilities on the HNA site, to avoid EDF having to build similar facilities. These discussions are at an early stage.

3. SILWE

Given the complexities of the SILWE plant and it being a new plant, do you think that 3 years is a conservative estimate for encapsulating 1500 boxes, bearing in mind that some are already in the ILW store and will have to be retrieved?

Response from Alasdair L Jackson, Project Manager, Hunterston A
In answer to the question the facility is designed to have adequate through put to meet that target. Once the plant is actively commissioned we can confirm batching times and cleaning times. The through put can be increased subject to whatever shift pattern is adopted by the waste ops team. For example if they double shift or work on Fridays.

4. Reactors Care and Maintenance programme

We seem to have been waiting for a long time for the outcome of the strategy review. Can you say how you think accelerated decommissioning at HNA might benefit North Ayrshire? In light of HNB decommissioning starting in the next few years, do you think NDA, might factor this in, even at this stage to their review?

Response from NDA
The conclusion of the Magnox reactor decommissioning strategy review was delayed by the Covid pandemic. We are now in the process of finalising the conclusions and will inform stakeholders of the outcome at the earliest opportunity. As we've said previously, it is highly likely that continuous decommissioning would be undertaken at a lead site, with learning used to inform the development of site-specific strategies across the rest of the Magnox fleet. The proximity of AGR decommissioning is one of the factors that will be taken into consideration.

5. Ponds Programme

Is the proposed new effluent plant, once it is operational, likely to be used by HNB during its decommissioning?

Response from Chris Gough, Programme Delivery Manager, Hunterston A.
The New Effluent Treatment Plant (NEffTP) has been primarily designed to process the remaining liquid effluent from the HNA site. The plant is however, largely modular in design, using standard, interchangeable cartridge filters so it does have the potential to be repurposed once the HNA liquid effluent has been processed.

6. Waste Management

Which other facilities were used, rather than Drigg?

We note that no waste has been burnt at the incinerator for HNA.

Is it likely that whoever decommissions HNB will be asking for a Waste Incinerator on site?
The Community would oppose this

Response from Reuben Phillips, Waste Manager, Hunterston A
HNA use LLWR Ltd. as a waste broker, meaning that various destinations are available for the disposal of Very Low Level or Low Level Wastes. In the last two years HNA has disposed of radioactive wastes to the following facilities:

- Suitably licenced landfill near Peterborough
- Incineration at Ellesmere Port and Southampton
- Super-compaction at Winfrith followed by disposal at LLWR (Drigg)

There is no incinerator on the HNA site.

Questions from Rita Holmes, Chair for Scottish Government

BEIS policy review, who at SG is liaising and making comment on the draft review? Are we able to see the draft review and comments?

Response from Pat McAuley, Scottish Government
It's primarily Patrick McAuley who is liaising with BEIS on the policy review with oversight from Don McGillivray. BEIS own the document so would need to be asked if they would be content for this to be shared with the Group. A response from them may not be in time for the meeting on Thursday however.

Scottish HAW Policy review, who are the SEPA, NDA and CoRWM members on the Implementation group?

Response from Pat McAuley, Scottish Government

- SEPA – Dr Paul Dale, Angela Wright, Andrew Whittall and Richard McLeod
- NDA – Dr James McKinney
- CoRWM – Campbell Gemmell and Andrew Walters

What is in the draft Project Initiation document? When will collation and analysis be available?

Response from Pat McAuley, Scottish Government
The Project Initiation Document sets out the background into the HAW 2011 policy, objectives of the review project, deliverables, scope and timescales. It's hoped to collate and analyse the information with findings available in late June or early July.

NDA Strategy 1V - What are Scottish priorities that need to be reflected in it. Is there any discussion about accelerated decommissioning happening at a Scottish site?

Response from Pat McAuley, Scottish Government
This has mostly been about outlining SG opposition to the building of new nuclear power stations under current technologies in Scotland and confirming that Scotland is not participating in the Geological Disposal Facility (GDF) project (both England and Wales are) References to the HAW 2011 policy and where there are distinct devolved polices/arrangements in place are also being referenced/made clear as appropriate. There has not been any specific discussion about accelerated decommissioning for a Scottish site through the development of the NDA strategy IV.

Question from Cllr Tom Marshall, North Coast & Cumbraes

Can I have an explanation of how the costs are controlled by going to a four day working week?

Response from Alistair Walker, Acting Site Director, HNA.
Going to a four day week is assumed to provide a marginal cost benefit. The total number of hours worked on a weekly basis is still 37; they are just worked over 4 days as opposed to the current arrangement of 4.5 days. This provides benefits in terms of savings in site infrastructure such as heating, water, electricity, etc.

Questions from Drew Cochrane, Largs Community Council

1. Is there a cut-off point when it becomes no longer economically viable to continue working for restart? (Given power demand will likely be lower for some time due to Covid and decommissioning is planned in 2023).

Response from EDF
As well as being important for the site itself, the work we have done at Hunterston B is an investment in the future of the fleet of AGRs. Although there are differences in the design of the bricks in our reactors and in the way the stations have been operated the information obtained at Hunterston B provides a useful baseline for the remainder of the AGR fleet.

2. Who will be decommissioning Hunterston B? Will it be NDA/Magnox or EDF or another?

Response from the NDA
As announced by BEIS, our sponsoring department, back in September 2019, discussions are underway between BEIS, EDF Energy (the owners of the AGR fleet), and the NDA, to examine the future decommissioning of the AGR fleet when it is time for the reactors to come off line. As yet no decisions have been made, and those discussions continue.

3. Will there be any difference in the decommissioning of Hunterston B to Hunterston A?

Response from the NDA

We cannot comment on the ongoing discussions between the UK Government, the NDA and EDF. Decommissioning plans for Hunterston B have not been finalised so it's too early to be able to make a comparison between the decommissioning of the two sites.