Site Stakeholder Group

Dungeness B Station Director's report – 16 October 2014

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1. Safety and station update – Martin B Pearson, Station Director

In July we completed our statutory outage on Unit 21 in 104 days; an outage is where the reactor and generating units are disconnected from the grid in order to undertake inspection and maintenance. The £25 million investment in plant saw 1,238 staff on site with one million hours of work completed.

I am disappointed to report an environmental top tier event concerning a leak of tritium on site. We provided an update to SSG members at the time and stress that there was no danger to the public or our staff due to this issue. We worked closely alongside the regulator and the issue has now been resolved. I have included more detail later in this report.

We are still undertaking a number of improvements to our coastal flooding defences, investing around £5 million so far. The works began in 2013 to upgrade the existing flooding defences to cover more extreme events that are statistically very unlikely to occur in the U.K., ones that might happen only one in every 10,000 years.

The station has just put in a planning application for the final phase of the project; a rock armour wall behind the shingle bank which we plan to be completed by the end of this year. During this work the normal concrete access path in front of the station will be closed by construction fencing for safety reasons. Access will be available on top of the shingle bank until the main rock armour alterations complete. After being off-loaded onto the beach, the rocks will be placed on top of the shingle ridge before being carefully placed behind the shingle bund. (Appendix 1 shows artist impression)

Whilst works are underway to improve flood defences at Dungeness B it is vital that the existing flood defences are maintained. A joint planning application by the Environment Agency and EDF Energy to recommence beach feeding of the existing shingle ridge from the Dungeness Borrow Pit was recently approved. I met with the Dungeness Residents Association in August to discuss the detail and we have taken on board some further suggestions on how to reduce the impact to residents during these operations.

We remain on track to make a decision on our lifetime extension in mid December 2014

2. Environmental events

Background
An extensive groundwater monitoring programme at Dungeness B routinely monitors groundwater beneath the site to assess general groundwater quality. Whilst barriers are in place to prevent the loss of material, this programme provides an additional warning of any release to ground. This enables the behaviour of any potential pollutants in the shingle and shallow groundwater beneath the site to be monitored.

Dungeness B has over 150 boreholes located both within and outside the site boundary. Since the identification of elevated tritium concentrations in groundwater in December 2012 sampling results have shown a number of boreholes returning tritium concentrations above 100 Becquerels per litre (Bq/l); this is the investigation threshold agreed with the Environment Agency.

Investigation
In July 2014 the groundwater sampling programme identified tritium concentrations in excess of the expected levels. Since these initial results were identified results from these boreholes have remained significantly below this initial level and are currently around 250 Bq/l (as of 06/10/14). An expanded monitoring programme was implemented immediately by both site personnel and an independent external groundwater monitoring

consultant. This expanded monitoring programme has confirmed the extent of the elevated tritium in groundwater is contained within the site boundary.

During the investigation to identify the cause of the elevated levels an inspection of nitrogen injection pipework in close proximity to the above boreholes identified a small hole approximately 2mm in diameter.

This pipework has been routinely used as part of a route to discharge carbon dioxide from an active system to the atmosphere via a consented discharge point. The nitrogen injection pipework runs in an enclosed trench below ground level. It is believed that the small hole in the pipework has permitted the release of carbon dioxide into the trench which has resulted in the elevated tritium concentrations identified in groundwater nearby.

The identified hole was quickly repaired and further inspection has confirmed that no further holes are present along the pipework. A significant formal investigation is now underway to establish the cause of this event and to confirm the relationship between the loss of active carbon dioxide and elevated tritium in groundwater.

Summary
The source of the elevated tritium in groundwater is believed to have been identified and the repaired.

Ongoing groundwater monitoring continues to track tritium levels above the 100Bq/l investigation threshold whilst remedial works are ongoing. However no further significant peaks have been observed since the repair of the nitrogen injection line. An investigation into the cause of this event is underway.

Both the Office for Nuclear Regulation and Environment Agency have been kept informed of our findings and actions during this investigation. As previously reported, the findings from this investigation continue to demonstrate that elevated results are contained within the site boundary and consequently there is no risk to the public, or our staff as a result of this event.

2. Emergency arrangements

Since the last report the following emergency exercises have taken place/scheduled to take place

- 8 Oct 14 - Exercise – 0930 to 1230 hrs - ELTHAM
- 22 Oct 14 - Exercise - 0930 to 1230 hrs - EMSWORTH.
- 5 Nov 14 - Exercise - 0930 to 1230 hrs - ERITH.
- 19 Nov 14 - Exercise - 0930 to 1230 hrs - EXETER.
- 3 Dec 14 - Exercise - 0930 to 1230 hrs – EXMOUTH

3. Station events

Two INES 1* events have been reported in 2014

- Auto trip of Reactor 22 after 400kV Grid disturbance (phase imbalance), April 2014
- Tritium leak from Nitrogen Injection System pipe work, July 2014

*INES = International Nuclear Event Scale. It ranges from Level 0 (Deviation) to Level 7 (Major Accident). A Level 1 event refers to minor problems with safety components with significant defence-in-depth remaining.

4. Update on Dungeness B graphite bricks

In June, the Office for Nuclear Regulation approved the limit of graphite weight loss at Dungeness B to 8%. This is a small increase from the previous limit of 6.2% and refers to the amount of weight the graphite core is allowed to lose.
Every three years we thoroughly inspect the graphite core as part of our statutory outage.

At Dungeness B, we have used the information from a continuing programme of monitoring, inspection and physical sampling of the graphite core to assess the state of the core. This knowledge feeds in to modelling and analysis which give us the knowledge to allow us to safely increase the limit of weight loss within the core from 6.2% to 8%.

As time goes on we will continue to collect data, build this into our models and calculations and ensure our safety margins are robust and appropriate.

5. Generation summary

Unit 21
On 1 August 2014 at 01:01hrs, Reactor 21 automatically tripped due to a fault on the main boiler feed pump. The pump tripped, as expected, which led to reactor temperatures increasing and the reactor protection systems operating. The reactor was safely shut down with safety systems operating as they should.

On 25 September 2014 at 19:31hrs Reactor 21 automatically tripped whilst taking Unit Auxiliary Transformer 21 out of service for defect repairs. The electrical switching was successfully completed however; a fault developed on the DC Heaters and the unit was safely shut down.

Unit 22
Unit Auxiliary Transformer 22 tripped after its Buchholz protection operated. This is transformer protection which activates due to a pocket of air being released within the oil compartment.

6. Community relations

Visitor centre
Our visitor centre continues to thrive with us welcoming nearly 9,500 visitors from the community to date.

We were recently visited by The East Kent Federation of Women's Institute Environment & Natural History Group, who enjoyed their tour so much that they made a charitable donation of £100.00 to Marie Curie Cancer Care on behalf of Dungeness B.

Visits to Dungeness B can be arranged by contacting dungenessbtours@edf-energy.com or 01797 343728.

Charity fundraising
Staff here at the station have helped beat our cancer fundraising target almost two years early. Across the company over £330,000 has been raised in just fifteen months, beating the target by over £130,000. The site celebrated with a Blooming Great Tea Party raising yet more money for the charity.

Charity Team Members at Blooming Great Tea Party 1 September

Dungeness B Nuclear Engineering Apprenticeship Scheme Open Day
Tuesday 28 October 2014 Dungeness B Visitor Centre.
0900hrs to 1600 call 01797-343728 to reserve your place.

Dungeness B is holding an open day for would-be apprentices to find out more about the accredited scheme run by EDF Energy.

The Nuclear Engineering Apprentice Scheme runs for four years, the first two years of which are based at the Royal Naval base at HMS Sultan near Portsmouth, Hampshire. During this time apprentices undergo training in an academic and workshop environment to ensure they gain an excellent introduction to engineering and initial skills development.

Part of this programme also covers the development of life skills and confidence & communication. As well as completing qualifications such as a BTEC and an NVQ Level 3, they are also given the chance to participate in the Duke of Edinburgh award scheme.

7. Company news

Agreements for planned Hinkley Point C nuclear power station approved by the European Commission

The European Commission has approved the agreements between EDF Group and the UK Government to build a new nuclear power station at Hinkley Point C in Somerset. Its decision followed a rigorous and detailed examination of the deal during a 12 month investigation by the European Commission. The proposed agreements are for a long-term contract for the electricity generated at Hinkley Point C and for a guarantee for the project's debt.

The agreement for Hinkley Point C

The Commission found that the long-term contract (Contract for Difference) and the guarantee constitute an appropriate and proportionate way for the UK to meet its need for secure, low carbon energy. The Commission's decision leaves the key elements of last October's agreements unchanged whilst it has reinforced measures designed to share potential future benefits with customers.

EDF Energy's response to Ofgem investigation into complaint handling

EDF Energy has agreed to pay £3m to benefit vulnerable customers following an Ofgem investigation into the company's complaint handling during the final stages of introducing a new customer service IT system in 2011.

Despite careful planning and investment in resources to manage the transition of the new system over an 18 month period, some EDF Energy customers experienced long call waiting times in the latter part of 2011.

As soon as the problems emerged, following a number of unforeseen technical system problems, EDF Energy suspended the transfer of customer accounts into the new system. Actions were taken to resolve these technical problems and hundreds of additional staff were recruited to restore service levels.

New apprentice intake starts with Lakes District adventure

The latest apprentices to join EDF Energy have kicked off their new careers with a team building week in the Lake District.

The apprentices, alongside those from some key partner companies, enjoyed a week in the Lakes on the annual outward bound course which brings together all of 53 of the first-year apprentices.

Roger Barge, apprentice training co-ordinator at Sizewell B power station, said: "The quality of applications was very high and so that means the quality of our apprentices will also be very high."

The 2015 scheme opens on 1 November 2014, details and applications on the EDF Energy website - http://www.edfenergy.com/careers

Search on for new graduates

EDF Energy is looking for around 60 engineering and commercial graduates to join the company. The scheme offers graduates a chance to work at many of the company's nuclear sites and also its engineering excellence centre at Barnwood before taking a permanent position within EDF Energy.

Graduates are given a mentor to support them through the first 12-months of the scheme and then to help them into a career within the company

Applications for the 2015 scheme is open now, full details and 'application forms' are on the EDF Energy website - http://www.edfenergy.com/careers

New Blue+Price Promise energy tariff launched

EDF Energy has announced the launch of Blue+Price Promise March 2016, a new cheaper energy tariff that provides fixed prices for 18 months.

Customers will be alerted if they could save more than £1 a week at typical use with any other tariff2, either from EDF Energy or its competitors, giving peace of mind for people concerned about changing energy prices. As with all EDF Energy tariffs, customers are also free to leave with no exit fees at any time.
Blue+Price Promise March 2016 replaces the company's existing fixed-price tariff, Blue+Price Promise February 2016, and will be at the lower price of £1,039 a year via Direct Debit for a typical dual fuel customer – based on a national average of regional prices.

Regards,

Martin B Pearson
Station Director

Appendix 1

Artist's impression of rock armour