

NOTES OF THE PUBLIC MEETING OF THE OFFICE FOR NUCLEAR REGULATION (ONR) HELD AT SIZEWELL SPORTS AND SOCIAL CLUB ON WEDNESDAY 15TH FEBRUARY 2012 AT 19.30

Panel Members:

John Donald	-	ONR Inspector of External Hazards
Colin Patchett	-	ONR Deputy Chief Inspector
Paul Smith	-	ONR Sizewell B Principal Inspector
Donald Urquhart	-	ONR Sizewell A Principal Inspector
Pete Wilkinson	-	Independent Chairman

PRESENT

Charles Barnett	-	Shut Down Sizewell Campaign
Trevor Branton		
John Busby		
Bob Chamberlain	-	Suffolk Coastal District Council
Bridget Chadwick		
Nicky Corbett		
Martin Cubit	-	EDF Energy Safety & Technical Manager, Sizewell B
Jim Crawford	-	Site Director, Sizewell B
Stephen de Souza	-	Head of Waste & Safety Policy, Department for Energy and Climate Change (DECC)
Marianne Fellowes		
Louise Franks	-	Clerk
Colin Ginger	-	Leiston Town Council
Joan Girling	-	Leiston Resident and Sizewell Stakeholder Group member
Geoff Grint	-	ONR Principal Inspector for Generic Design Assessments
Mel Harrison	-	CND
Phil Heaton	-	Environment Agency
Terry Hodgson	-	Sizewell Stakeholder Group member
Bill Howard	-	Leiston-cum-Sizewell Town Council
Mrs F Lampard		
Peter Lanyon	-	Shut Down Sizewell Campaign
Mike Lavelle	-	Head of Operational Development, EDF Energy
Paul Marshall	-	Assistant Chief Constable, Suffolk Police
Rob M ^c Gregor	-	Environment Agency
Andy Osman	-	Head of Emergency Planning, Suffolk local authorities
Roger Stern		
Richard Smith	-	Suffolk County Council
Nikki Spatchett	-	Sizewell B Internal Communications
Roger Stone		
Mike Taylor		
James Tott	-	Sizewell A Communications
Chris Ure	-	Shut Down Sizewell Campaign
Tim Watkins	-	Site Director, Sizewell A

and other members of the public

OPENING COMMENTS

- 1.1 Pete Wilkinson opened the meeting explaining that it was being hosted by the ONR as part of their openness and transparency programme. He described the purpose of the meeting as “enabling communities neighbouring Sizewell A & B to hear from Inspectors with responsibility for regulating safety at the nuclear power plants and at the site of the proposed Sizewell C.” The forum was described as “part of the ONR’s commitment to carry out its work with openness and transparency and is an opportunity for members of the community, interested in the nuclear facilities, to ask questions about how the UK nuclear safety and security regulator works to secure the protection of communities neighbouring the Sizewell plants.”
- 1.2 P. Wilkinson explained the protocol for the meeting. He clarified that the questions received prior to the meeting had been collated into categories and would be addressed by the ONR panel or as appropriate from representatives of organisations invited to attend this evening. If a satisfactory response was not achieved then the question would be taken ‘off-line’. The panel were introduced and it was noted that the ONR would give a brief introduction prior to addressing questions.
- 1.3 Charles Barnett sought clarification of the following:
- if a question cannot be satisfactorily answered tonight, will a reply be received at a later date ?
 - if issues arise that require action, would the ONR provide reassurance that appropriate action will then be taken ?
- Colin Patchett responded by stating that the ONR were hosting this event in order to hear what the public had to say, to ensure that there was visibility about the purpose of the ONR, and to provide confidence that as a regulator ONR is independent and challenging. He emphasised that it was equally as important that the community listen to the ONR representatives present and hear how passionate they are about their role.
- 1.4 The Chair, Peter Wilkinson asked whether Colin Patchett agreed to reply to questions at a later date if not answered on the spot.

Colin Patchett responded by stating that where answers aren’t given because of a lack of appropriate respondent or information, then yes, certainly we will provide those responses. Where the answers were not considered satisfactory for other reasons, for example, where the questioner didn’t agree with the answer, then it isn’t likely that an alternative response can be provided through this process. Members of the public are welcome at any time to comment or ask questions through ONRenquiries@hse.gsi.gov.uk, by writing to *The Office for Nuclear Regulation, Redgrave Court, Merton Road, Bootle, L20 7HS* or by asking the nominated ONR site inspector attending the publicly-held site stakeholder group meetings.

INTRODUCTION

- 2.1 C. Patchett described the mission of the ONR as “to protect people and society from the hazards of the nuclear industry” and gave a brief history as follows:
- Nuclear Regulatory framework in the UK has been in place for over 50 years
 - ONR became an agency of the Health and Safety Executive on 01 April 2011 and expects to gain Statutory Corporation status April 2013. This enables increased flexibility in a more open and transparent autonomous format.
 - The new organisation brings together the regulation of nuclear safety, security, safeguards and the safe transport of radioactive materials.
 - The responsibilities held and regulatory requirements that duty holders have to comply with remain unchanged.
- 2.2 The Nuclear Regulations were noted as:
- Health and Safety at Work Act 1974

- Nuclear Installations Act 1965 (as amended)
- Radiation (Emergency Preparedness and Public Information) Regulations 2001
- Ionising Radiation Regulations 1999

- 2.3 Paul Smith, Sizewell B Inspector, described his role as covering three key strands; routine inspection, reactive inspection, programmes and permissioning. He provided a flavour of each describing the routine inspection regime as coordinated, planned inspections to ensure that the licensee complies with the license conditions. Aspects covered include:
- Plant maintenance
 - Plant modifications
 - Operations
 - Emergency arrangements
 - Training
 - Organisational change
 - Radioactive waste
 - Security
- 2.4 Reactive Inspections were described with the help of a diagram explaining the INES scale from no safety significance (0) through to major accident (7). P. Smith advised that he had inspected 3 events rated by the operator as anomalies (INES level 1) during 2011 and found that each was of no significance.
- 2.5 Projects and permissioning were noted to recently include the following:
- Periodic shutdown – permission required to restart
 - Periodic safety review – every ten years
 - Dry fuel store
 - Intermediate Level Wastes (ILW) resins –yellow box storage
- 2.6 An indication of the ONR resources deployed at Sizewell B during 2011 was provided and noted to total 560 staff days, including 135 spent on site. Twenty one different Inspectors visited the site.
- 2.7 Donald Urquhart provided a verbal report about Sizewell A Inspections, commencing by describing the site as currently defueling, with approximately 30% of fuel removed to date, and this phase scheduled for completion during 2014. He advised that the site were concurrently decommissioning, with the necessary installation of an appropriate infrastructure to enable this. He commented that because the site shutdown in 2006 the radioactive fuel remaining on site does not generate sufficient heat to require cooling.
- 2.8 The event occurring on 03.09.11. was briefly described as a leak that enabled 13m³ of pond water to escape the active effluent treatment plant. This was noted as of negligible risk to workers and, as this was contained on site, of no risk to the public. However, the ONR undertook a formal review to ensure that the licensee responded, investigated and learnt from the event and included a self-review of the regulation in place. A report about this investigation is on the ONR website and identifies an area of non-compliance that has resulted in official enforcement action in that a formal letter identifying the non-compliance and recording future expectations was sent to the site. The response from the licensee was noted to be very positive.
- 2.9 The focal points going forward were noted to include the following:
- Removal of fuel in an expeditious manner
 - Care of assets including maintenance of ageing buildings
 - Ensuring that the nature of the organisation remains able to deliver safety to workers and the community
 - Shared learning within the industry
 - Implementation of actions resulting from the ponds event.

- 2.10 Chairman invited any comments and those that arose were noted to be covered by the forthcoming questions section. It was made clear that additional questions would be invited under each section where possible. Attendees were asked to complete a feedback form before leaving the meeting and were introduced to the experts present at the meeting available to answer questions.

QUESTIONS

These were noted to have been collated into the following topic areas:

- Emergency planning
- Impact of Fukushima on Sizewell
- External hazards and security
- Radiological protection
- Waste
- Government Nuclear Policy
- Land use planning
- Information, openness and transparency
- Sizewell B issues
- Sizewell C issues

3 Emergency Planning

- 3.1 C. Barnett described the emergency plans as non-statutory and hopelessly inadequate. He commented that there had been no consideration of how proper evacuation would be implemented. He reminded attendees of the public meeting held to consider emergency planning describing this as not providing answers or addressing criticism. He suggested shutting down the power stations until adequate plans were in place.
- 3.2 C. Patchett responded by stating that there were regulations in place for the provision of emergency plans for both the Site Operator and the Local Authority, the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPPIR). He added that an emergency plan must be prepared for reasonably foreseeable emergencies and these plans are routinely tested. In terms of extendibility, if there is an emergency which is greater than that planned for, then there are contingency arrangements in place for dealing with this. The Nuclear Emergency Planning Liaison Group (NEPLG) guidance on the Department for Energy and Climate Change (DECC) website describes what would happen. Exercises have been specifically carried out to test this, for example exercise ISIS, carried out at Bradwell in 2002, in which 30 agencies were involved and from which a comprehensive report was formulated and made available.
- 3.3 C. Barnett commented on the current size of the designated emergency planning zone (DEPZ), citing Fukushima where the DEPZ was extended to 30km and beyond, suggesting that a DEPZ of at least 20km around the Sizewell power stations was essential. He questioned whether a disaster needed to happen in the UK before the DEPZ was extended.
- 3.4 Chairman invited Andy Osman to comment on why the DEPZ is currently 2.4km. A. Osman replied that the ONR dictate the size of the DEPZ and asked that they comment. C. Patchett answered by explaining that the plans needed to be flexible to enable the zone to be extended as required and the guidance for doing this is written down.

- 3.5 Marianne Fellowes commented that the DEPZ may be flexible, but that setting an initial size of only 2.4km meant that the distribution of information and Potassium Iodate (KIO₃) tablets was restricted to that area and requested that the zone was extended. Mike Taylor commented that several educational establishments were adjacent to the current zone and suggested that the DEPZ should be extended to include these institutions.
- 3.6 Terry Hodgson requested details of the criteria for evacuation and the associated timeline. A. Osman explained that the planning process considered emergency reference levels that triggered evacuation (dose level of 300mSv) or shelter (30mSv) within the zone determined by the ONR. This is based on the hazard and potential for an incident on site, described within the operators' risk assessments and verified by the ONR. C. Patchett added that the impact of Fukushima is being reviewed within the ONR itself and nationally to seek out what enhancements could be undertaken to improve the protection of people. He advised that the vulnerable are given priority for protection and recommended consideration of the information available in the public domain that describes the learning that occurs when emergency exercises are carried out.
- 3.7 Joan Girling expressed concern that reassurance was not being provided at this meeting or via the ONR website. J. Girling referred to a document called "The Tolerability of Risk" and questioned whether this had been updated since 1982. She explained that she was unsure whether, in the light of Fukushima, it remained a 'tolerable risk' to live near the power stations. Geoff Grint responded by advising that the document had been updated and was now called "Reducing Risks, Protecting People", adding that the scope of the original document had been widened to include the whole range of industrial activities.
- 3.8 Mel Harrison questioned when the last emergency exercise was carried out in this area and whether the services involved understood their role. She added that she had spoken to several of these services and they had not been able to provide any information. A. Osman responded by explaining that the emergency plan is exercised at each power station every three years, hence locally every 18months, but in the term of his tenure (6 years) this had not involved the surrounding communities. He advised that the emergency plan was last issued in 2010 and would be reviewed once the full implications of the Government's learning from Fukushima have been formulated into a national plan and were available to implement locally. M. Harrison commented that one Government-independent body was needed to clearly advise communities about emergency planning.
- 3.9 C. Barnett suggested that the emergency plans are flawed because they are founded upon design-basis accidents and that there were no plans to deal with events beyond these yet Fukushima was a clear example of a non design-based accident. C. Patchett assured attendees that arrangements are in place to deal with beyond design-basis accidents, details of which could be found in REPIR and NEPLG guidance and that Local Authorities were expected to follow these.
- 3.10 Chairman summarised that there was no confidence within the community about the emergency plan, however, the planned review provided an opportunity for the provision of information, the adequacy of the DEPZ and the efficacy of plan implementation to all be considered with local input directed to A. Osman.
- 3.11 F. Lampard stated that Suffolk suffers from chronic water shortages and questioned where adequate supplies of uncontaminated water would come from in the event of an accident. John Donald addressed this question in two ways. He advised that if the question was whether the power station had sufficient stocks of clean water to enable cooling to return to a safe state, in the event of an accident, then each site has sufficient stored water on site in two sets of major tanks. If the question referred to sufficient water for the community then bottled water would be provided by the water companies. He added that in this area, water is not surface-stored so the potential for contamination was very low.

- 3.12 F. Lampard questioned whether this would still be the case if there was a drought. J. Donald explained that for cooling, any source of water could be used, including sea-water however, the stored water on site was more than adequate to achieve a safe shutdown. Concern was expressed that in a drought situation, the freshwater demand from the power stations would have a negative impact on the supply to the community. This was debated further and A. Osman explained that water supplied to Suffolk came from two companies; Anglian Water and Essex & Suffolk Water. He explained that the county had not experienced drought in over ten years but that if there was not substantial rainfall this spring then this was a future possibility. He reminded attendees of the floods during 2007 when another water company had provided 230,000 people with bottled water within 24hrs, explaining that water companies are under a statutory obligation to provide potable water in a bottled format if the local supply is dysfunctional.
- 3.13 M. Harrison requested details of how much water is actually stored on each site for emergencies. J. Donald advised that he was unable to provide these details as the minimum amount of water required for the plant to shutdown was likely to be confidentially marked as this was sensitive nuclear information, adding reassurance that the amount of water on site was in excess of this. Chairman suggested that M. Harrison could pursue this further by writing to the ONR and requesting the information under the freedom of information act.
- 3.14 M. Taylor expressed concern about new build as this was proposed to be within the classified extreme water shortage area, as defined by the Environment Agency. Trevor Branton advised that when the construction works were undertaken for both the A and B site that new water systems were developed to meet the needs of the stations. This has meant improved water supplies to the surrounding area.
- 3.15 Chairman concluded the debate about water by summarising that there was community concern, particularly with regard to new build, but that it was not a critical issue at present.
- 3.16 Chris Ure advised that his role was to create a community emergency plan for a local area that is a broad-based response to all sorts of risk. He advised that for radiation emissions from the Sizewell stations, he was unable to get the information he needed and questioned why this was not readily available. C. Patchett explained that there was information available to the public, however, if this is not sufficient then this will be addressed. He advised that the emergency plan is available in the library and A. Osman added that the Sizewell off-site emergency plan had been published on the internet. It was noted that parts of this are redacted because of security issues. He offered to help communities understand the risks in their specific area. C. Ure suggested that the information should have been brought to the community not the community having to research the information. This was debated at some length and concern was expressed that the information was opaque and not readily available. Chairman stated that currently the industry and their regulators dictate what is acceptable to the public and this should be reversed. J. Girling added that the local population need information about emergency planning. A. Osman offered to work with the Sizewell Stakeholder Group (SSG) to establish what was wanted and work out what was feasible.
- 3.17 F. Lampard questioned how tourists would be alerted to an emergency. A. Osman explained that information was publicly displayed within holiday camps and at Sizewell Beach car park and, whilst accepting that this was not comprehensive, sought suggestions as to how to increase awareness. He added that there were automated telephone warnings and use of media and a plan for Suffolk Constabulary to physically sweep the area. M. Harrison questioned whether Suffolk Constabulary had the appropriate protective suits to enable a physical sweep. Paul Marshall explained that he was confident that sufficient resources would be available to ensure effective communications, explaining that a gold group would be immediately established and every possible means sought to communicate and inform the public. Colin Ginger questioned how one road would cope with the evacuation of tourists and the ingress of emergency services. Chairman suggested that

this issue should be taken up with A. Osman during the consultation and review of the emergency plan.

4 Impact of Fukushima on Sizewell

4.1 The following question and comments were posed:

- Why does the Fukushima disaster not have greater relevance on Sizewell C and other plant?
- There is a need to monitor the resulting contamination carefully and keep the public informed.
- The Weightman report was rushed into print so that the findings could be forgotten as quickly as possible so as not to delay the new build programme.

F. Lampard clarified that she wanted reassurance that the Weightman report was not being 'swept under the carpet'. C. Patchett advised that for proposed new plants in the UK two designs were being reviewed under the generic design assessment (GDA) and part of this process includes a specific response from the designers about the impact of Fukushima and their proposed power station design. More details of the questions being posed are on the GDA section of the ONR website.

4.2 C. Patchett commented that the Weightman report (*see note in appendix*) is broad and covers a range of issues including the details of the accident, consideration of the infrastructure in Japan, its regulatory practices and the capability of the country to respond to a significant disaster. The Japanese power stations responded to the earthquake as planned but the following tsunami exceeded sea defences and caused the resulting events to occur. This has led to questioning whether the design bases for UK nuclear plants are adequate. The Weightman report was not rushed but is comprehensive and has led to considerable activity to ensure that these issues are addressed not just by the operators of the plant but also by the Government reviewing the infrastructure to ensure that appropriate capability was available if a disaster occurred.

4.3 Bill Howard commented that some issues are being 'parked' as the plans progress for Sizewell C.

4.4 M Taylor commented that there are European Union stress tests that may lead to criteria that would be mandatory for the UK. He questioned whether there was an agreed action plan, with timescale, for each UK nuclear site, whether these were in the public domain and whether failure to comply with this would result in withdrawal of the site licence. C. Patchett advised that withdrawal of the site licence would require an alternative operator to control the plant and this was not a simple matter. J. Donald explained the stress test process content and this was noted to be a structured set of questions that each UK power plant has now responded to. The same level of rigour will be applied to new build and a separate report of findings will be published as appropriate. He drew attention to the reports published on the ONR website concerning stress tests including the national report, a link to the Sizewell B report and in the next few months the new build at Hinkley Point report. J. Donald concluded that this demonstrates a step change in the provision of information in an open and transparent manner.

4.5 C. Barnett advised that the International Atomic Energy Agency (IAEA) stated that it will be a full 12 months before we learn the lessons from the events at Fukushima yet the Weightman report was rushed out within 3 months. He added that the Environment Agency and the ONR have given an interim acceptance of the two designs for new build at Hinkley and Sizewell despite the IAEA assessment of the lessons from Fukushima not yet being available. He suggested that these actions were to enable new nuclear plants to be built in the UK. He added that the independent consultant, John Large, was denied the individual data for the power station stress tests and questioned why this was.

- 4.6 Roger Stone commented that the Japanese workers at the Dai-ichi plant that were exposed to more radiation than was safe, had to be ordered off the site and expressed concern that this would not happen here, meaning that a minor accident would rapidly escalate.
- 4.7 Peter Lanyon quoted from the ONR report on the stress tests: "Licensees should undertake a more structured and systematic study of the potential for flood water entry to buildings containing safety significant structures, systems and components from extreme rainfall and/or overtopping of sea defences". He advised that the Department for Environment, Food and Rural Affairs has produced a report called "Climate Change Risk Assessment" that relies on experts that are 'right up tight' with industry and suggested that the ONR are not sufficiently distinct from industry. He questioned whether the ONR will stand up to industry and give reassurance to the public.
- 4.8 J. Donald advised that the ONR interim report on Fukushima, published May 2011, was produced quickly and that the final report, published September 2011, clearly states that a subsequent report will be published in Autumn 2012 that identifies all the activity that has occurred as a result of the recommendations in the final report. This will enable progress on recommendations and learning from events to be reported upon. It was noted that Mike Weightman did lead the IAEA's mission in Japan and learning from this was included in the final report.
- 4.9 C. Barnett asked why the ONR did not wait until all the information was available before publishing a report. J. Donald explained that the ONR wanted to ensure that the industry responded as quickly as possible to put measures in place to enhance resilience early, get safety improvements in place as soon as feasible and then undertake further studies to ensure that actions taken are sufficient. This has been the key regulatory strategy post-Fukushima and this is clear in the UK National Stress Test report in that the resilience enhancements will include:
- Additional means of providing / pumping water
 - Additional means for providing electricity generation
 - Enhanced facilities for communication
- J. Donald added that learning from Fukushima can inform the development of structured and systematic methodologies so that further improvements can be identified, rather than simply responding to perceived hazards.
- 4.10 C. Barnett asked why John Large was refused the data that informed the decision that the stress tests for all UK nuclear installations had been completed satisfactorily and found to be fine. J. Donaldson advised that this information was refused because the ONR were preparing their UK report prior to publication some three days later. He added that some licensees have published their stress test data but that any specific nuclear information that is security sensitive will not be published. Mike Lavelle confirmed that the data requested by John Large was security sensitive and J. Donaldson advised that the ONR would be in breach of the law if they had released this data. This led to a heated debate about what should be made available in the spirit of openness and transparency and C. Barnett stressed that in his opinion, restricting the publication of this data was unacceptable.

5 External Hazards and Security.

- 5.1 The questions received were displayed as follows:
- Aircraft attack
 - Cyber vulnerabilities as well as physical vulnerabilities since 9/11 of Iranian installations
 - Are existing and planned plants safe from accidental or planned aircraft crashes?
 - Similarly from terrorist attack - can they ever be safe?
 - Terrorist damage to cooling ponds.
 - Increased hazards of flooding caused by rising sea levels.
 - Security risks associated with large new workforce for the proposed Sizewell C.

Chairman suggested considering all the questions listed as a generic enquiry. C. Ure was asked to summarise those that he had put forward. C. Ure advised that his questions were about safety and referred to pond leaks that have previously occurred at Sizewell A and how these demonstrate that the safety regime in place is not functioning. He suggested that the risk of terrorist attack was high and expressed his concern that the local populous found this particularly difficult to live with.

- 5.2 J. Donald addressed rising sea levels and advised that there was a clear margin between current tide levels and the sea defences in place at both sites. The safety case is reviewed every ten years and any rise in levels would be incorporated during the review and improvements made to sea defences as required.
- 5.3 Richard Smith disputed that the safety regime was not effective. He advised that on the electoral role for the area he covered were over 7,500 people aged 18+ and that the majority feel safe living in this area and that both sites are safely managed. This led to a heated exchange and a strong objection from Bridget Chadwick that R. Smith was speaking on behalf of others without having the benefit of knowing their views. C. Ure added his view that many of these constituents are unaware of the dangers. R. Smith expressed the view that given that many people had lived in proximity to the sites for the duration of their existence (A Site: 50+years, B site: 16years) that many did take a keen interest in the safety of each site.
- 5.4 Chairman invited C. Patchett to continue to address the questions posed and in particular those concerning security. C. Patchett advised that the security personnel consider the possible threats, what the implications for the plant would be, how to mitigate these and ensure the plant remains safe and implement improvements as required. He advised that this was the bones of the process but that much of the detail is sensitive and would not be publicly available. M. Harrison questioned why, when there is direct action against the site, do protestors have to let the site know that they are present. Martin Cubit sought clarification that these were protests held at the end of the approach road, some distance from the sites, and when this was confirmed, advised that security protects the immediate surround of each site and not areas relatively distant from sensitive plant and equipment.
- 5.5 M. Harrison asked who funds the Civil Nuclear Police. M. Lavelle advised that EDF Energy pays for the protection of their sites and similarly Magnox would pay for the protection of their sites.
- 5.6 J. Girling questioned who would be responsible for security at Sizewell B when and if Sizewell C is built adjacent to it, necessitating some 7-9,000 construction workers. M. Lavelle explained that an integrated security plan would be developed that would take into account the large work force constructing a site adjacent to an operating power station and a shutdown power station. Details will not be divulged but will be agreed with the regulator. He confirmed that ultimately ONR is responsible for the regulation of civil nuclear security.
- 5.7 Chairman summarised this section by saying that the message is 'trust us, we cannot tell you more'. He commented on the frustration that this opaqueness causes and asked the ONR to consider further how to alleviate this dissatisfaction.

6 Radiological protection

- 6.1 C. Barnett referred to the German KIKK report and advised that this showed an enhancement in the incidence of cancer in children within 5km of all German power stations. He expressed the view that routine emissions around outages are 'lethal' to pregnant women and infants close to the plant and that a recent report in France reflects that further investigation into this link should proceed. He referred to the spikes of radiological release that occur during outages and suggested that if these cannot be controlled then the plants should be closed down.

- 6.2 C Patchett responded that there were several groups in the UK that consider information emanating from other countries including the Committee on Medical Aspects of Radiation in the Environment (COMARE) and the Health Protection Agency (HPA). He advised that the HPA are looking into the French report and that COMARE had considered the KIKK report evidence and came to a different conclusion, however, they have kept this under review.
- 6.3 A debate about the availability of detailed radionuclide release data surrounding an outage ensued. Chairman reminded attendees that the SSG have written to Sizewell B to request the following information about the last outage:
- What radionuclides are being discharged
 - What volumes are being discharged and over what time frame
 - What are the prevailing weather conditions
 - What are the calculations used for health impact, given the ICRP calculus and the ECRR calculus range.
- Chairman suggested that a joint fact finding study to resolve this issue would be appropriate and asked the ONR to support this. C. Patchett advised he would take this back for consideration and invited the Environment Agency to comment.
- 6.4 Rob McGregor advised that discharge data is provided to the Environment Agency on monthly basis and is available and readily accessible via the public register. C. Barnett advised his request was for an hourly or even half hourly record. This was supported by P. Lanyon. The Chairman asked that the ONR work with EDF Energy to provide disaggregated data (as detailed in paragraph 6.3) on an hourly basis before, during and after an outage.
- 6.5 Nicky Corbett asked why a study of children's health had not been undertaken already in this area. M. Taylor advised that one of the recommendations of the Layfield enquiry was that data should be collected around all power stations. He suggested that the ionising regulations surely demanded this but was unsure as to whether this information had ever been collected. M. Fellowes requested that the DECC representative take this back as a request to release this data if collected and if not already undertaken, to suggest that this study is embarked upon to reassure the public residing near power stations. Stephen de Souza suggested that the HPA would be the lead department for this type of study and agreed to take this issue back. B. Howard suggested that the statistics would be confused by the movement of people in and out of the area.
- 6.6 Chairman summarised by advising that there remains a polarised debate surrounding the health impacts of spikes in releases during an outage and those that are most affected are not provided with a consensus view. He asked that the ONR are instrumental in helping obtain this consensus view.
- 6.7 M. Cubit advised that EDF Energy were in receipt of the request from the SSG and would be addressing this directly with the SSG. Chairman asked why this information was not publicly available and was advised that data is provided to the EA as required and this is then published via the public register. The sparsity of the information was queried. M. Fellowes asked whether the information was recorded on an hourly basis and was told that there was online (continuous) monitoring.

7 Waste

- 7.1 C. Barnett commented that it was folly to embark upon new build when disposal routes for waste were unavailable. He reminded attendees that Sizewell B would have above ground storage in place for decades and possibly hundreds of years. Chairman suggested that this was answered in conjunction with the question posed by P. Lanyon: permanent storage of HLW is undesirable in an area of outstanding natural beauty and SSSI and a popular holiday destination. How would tourists be alerted to an accident be addressed in conjunction with this? P. Lanyon agreed to this suggestion.

- 7.2 In response to both questions, C. Patchett advised that there are arrangements in place for notifying the public and these will be kept under review. As explained earlier in the meeting by Head of Emergency Planning for Suffolk local authorities A. Osman, information is publicly displayed within holiday camps and at Sizewell Beach car park and automated telephone warnings. As regulators, the role of the ONR was to regulate to ensure plants remain safe. He added that the policy for the safe storage of nuclear waste is set by Government and that the ONR will regulate whatever strategy results from that policy. The ONR will engage with the Government and the Nuclear Decommissioning Authority (NDA) in terms of the long term storage of spent fuel. S. De Souza advised that Government policy is to build a deep geological disposal facility to store all the current and future waste and that a voluntary approach is being undertaken to gain agreement for the location of this facility. He added an explanation of the rationale behind this approach. Finally, he stated that all forms of power production generates waste and that the volume of waste from nuclear power was comparatively small, giving an example of a coal-fired station for comparison.
- 7.3 P. Lanyon expressed concern that long term storage near this coastline was inappropriate when the Government were unable to advise whether the sea would encroach upon this area. He added that it was dangerous to move radiological waste. P. Lanyon suggested that if further protection was required to ensure effective sea defences for the power stations this would have a detrimental impact on the neighbouring coastline. He stated that it was not worth taking the risk when nuclear power was not needed. Roger Stern emphatically stated that nuclear waste was a big problem and any new build should only be allowed on decommissioned sites and not green field sites.
- 7.4 J. Girling argued that dry storage of waste in an area of natural beauty on a heritage coastline that is slowly eroding for up to 100 years was inappropriate and argued that new build was not viable until waste storage had been resolved. Bridget Chadwick reminded attendees that the local populous were not being given a choice about dry storage despite Government policy that long term management should be on a voluntary basis.
- 7.5 C.Ginger advised his view that building higher walls to protect the power stations from the sea was not a long term viable solution.
- 7.6 P. Smith clarified that for dry fuel storage the nuclear waste is stored in a metal container that in itself is then stored within a shielding concrete cask. The lifetime of this storage facility was difficult to ascertain and ultimately led to the safety case requiring that the fuel could be repackaged during the storage period. If this repackaging is required during the lifetime of the station, then this process will be undertaken using the existing fuel pond. If the repackaging becomes necessary once the station has shutdown, then a repackaging plant will be built to enable the store to remain a store and not a disposal facility. This means that there will remain capacity to move the waste elsewhere for the duration of the storage period. P. Smith explained that the degradation period for the casks was not defined and whilst know to be at least 25 years, the ability to repackage was essential for an effective long term safety case to be demonstrated.
- 7.7 John Busby advised that the lifespan of the proposed Sizewell C reactors was sixty years and that once shutdown, there would still be power required to safely store the spent fuel. He postulated that an alternative power station would then be necessary to generate this power.
- 7.8 Chairman summarised that it was Government policy to have low carbon power generation in which nuclear generation features significantly and that ONR will have to meet the regulatory consequences of this. He concluded that this meeting reflects dissatisfaction at leaving spent fuel on the sites situated on an eroding coastline for future generations to sort out.

8 Government Nuclear Policy

- 8.1 C. Barnett recommended that attendees read “A Corruption of Governance” by Unlock Democracy and the Association for the Conservation of Energy, January 2012. He explained that this has examined Government documents and concludes that data provided by civil servants downplays renewable sources of energy and, without evidence, suggests a requirement for ten new nuclear power stations.
- 8.2 S. De Souza responded by saying that it was unfair to accuse civil servants of deliberately lying to politicians and to imply that politicians were unable to see through these deliberate lies. He explained that during his tenure, the energy ministers have challenged and questioned civil servants to enable the formulation of Government energy policy. His experience working within renewable energy prior to nuclear energy leads to the conclusion that the Government seek to ensure energy security (meet energy demands) in a cost effective way and that a single answer is not appropriate. Preservation of energy, generation of clean energy, obtaining cleaner fossil fuels and power generation from renewable sources will be used in combination to provide sufficient energy. He advised that much of the current energy infrastructure is ageing and needs replacing and that in the future a particular source or combination of sources of power may prove to be more effective or economical and be the preferred route.

9 Land use and planning

- 9.1 C. Ginger asked whether there was a limit on the housing allocation in Leiston and what the limit on the population would be. He further questioned whether it was safe to keep building.
- 9.2 C. Patchett advised that the ONR are a statutory consultee for land use planning around nuclear facilities and provide advice to the Local Authority in terms of population distribution around the facility. He explained that this was the process and that they had no power to enforce recommendations or direct the Local Authority.
- 9.3 Bob Chamberlain advised that Suffolk Coastal District Council have been in discussions with the ONR about the population criteria around the Sizewell facilities (up to 15miles) as the SCDC local development framework requires allocation of land around Leiston. He agreed that the ONR give advice about reasonable population density in various sectors surrounding the power station, adding that the ONR do have reserve powers to refer matters to the Secretary of State if they believe the Local Authority is proposing housing that is above population thresholds that they believe to be appropriate. The ONR website clearly explains these criteria. The SCDC also consult with the emergency planning team to ensure that proposed housing fits with their plans both within the DEPZ and beyond. He concluded by stating that whilst the actual limits on housing or population are not specified, the SCDC are looking for natural organic growth in and around Leiston.
- 9.4 C. Ginger asked for confirmation that the SCDC are listening to the ONR and B. Chamberlain expressed his view that he could not imagine that they wouldn't. B. Howard asked where he could find out the specific advice provided by the ONR to SCDC. C. Patchett advised that there is not a process currently for putting this into the public domain and agreed to take this issue back.

10 Information, openness and transparency

- 10.1 Chairman displayed the questions posed by C. Ure and suggested that due to time constraints these should be compiled into a letter and posed to the ONR. C. Ure commented that he felt these questions had been satisfactorily answered during this meeting.

11. Sizewell B and Sizewell C issues

11.1 The questions previously submitted, all by J. Busby, were displayed and J. Busby drew attention to two in particular, explaining the background to each.

11.2 P. Smith, ONR inspector has subsequently summarised the exchange as follows:

Mr Busby raised two questions that were dealt with briefly at the meeting. There was no follow-up after the meeting. The questions and answers are:

Q. Did the recent Sizewell B turbine loop repairs mean a release of steam like Byron 2? Did it therefore contain tritium from egress through the SG tubing walls?

A. The shutdown of turbine 2 at Sizewell B in November 2011 was due to a steam leak from turbine related pipework, caused by flow assisted corrosion. The steam leak was well away from the nuclear area of the site and did not involve any release of radioactivity.

Q. What is the state of Sizewell B's Steam Generators? They are alloy 690 but how many have been plugged?

A. The total number of tubes plugged is six. Five tubes were plugged during pre-service inspection, due to minor manufacturing marks. One tube was plugged during Refuelling Outage 8 due anti-vibration bar wear. The rate of wear was below international recommendations for tube plugging, but a conservative decision was taken to plug the tube. Steam Generator tubes are inspected at Sizewell B in accordance with international recommendations. 50% of all Steam Generator tubes were inspected during the last outage.

12. Conclusion

12.1 Chairman concluded the meeting by asking that appreciation is shown to the ONR for providing this outreach programme. A final question was posed by M. Fellowes about future meetings and C. Patchett advised that any outstanding responses would be communicated back to the community via the SSG.

12.2 M. Taylor asked whether the generic design assessment (GDA) process would be discussed locally and C. Patchett clarified that the GDA was simply the assessment of a design and was not the approval process to license a nuclear site to build a plant. A specific case submitted by EDF Energy would be required for a nuclear site licence at Sizewell C. He confirmed that discussing GDA during the SSG forum would be entirely feasible.

12.3 Chairman closed the meeting at 22.15 with a vote of thanks to the ONR.

13 Appendix: additional information and further responses

The following are a list of responses and resources that ONR and other referred organisations have provided in response to points raised during the forum:

Relating to	Response from	Details
3.4	ONR	Specific guidance to ONR's specialist assessors on the assessment of Hazard Identification and Risk Evaluations (HIREs) is in preparation and scheduled for completion shortly, when it will be published on the ONR website. This will include consideration of the factors to be considered in deciding the extent of the detailed emergency planning zone (DEPZ).
3.7	ONR	The links to the referenced guidance from HSE / ONR are as follow: <ul style="list-style-type: none"> • Tolerability of Risk: http://www.hse.gov.uk/nuclear/tolerability.pdf • Reducing Risks, Protecting People: http://www.hse.gov.uk/risk/theory/r2p2.pdf
3.8	ONR	<ul style="list-style-type: none"> • Dates of Level 2 and Level 3 emergency exercises are routinely published on the HSE website at http://www.hse.gov.uk/nuclear/emergexeprog.htm • The Nuclear Emergency Planning Liaison Group (NEPLG) has a lessons-learned subgroup which considers annual reports of the findings of all Level 2 and 3 exercises, which are published online. The latest (for 2010/11) is available at http://www.decc.gov.uk/en/content/cms/meeting_energy/nuclear/safety_and_sec/emergency_plan/neplg/neplg.aspx • To address how the operators and local authorities might seek to involve communities in these emergency exercises, ONR will ask the NEPLG to consider this. At present there are no plans to exercise evacuation for real as the current advice on this issue is that the disruption caused is considered to be disproportionate to any benefit. In other words, the potential benefit to be gained in terms of added public confidence in the effectiveness of evacuation plans is considered to be outweighed by the potential harm (which includes not only quantifiable aspects such as detriment to physical health and economic cost, but also less readily quantifiable factors such as anxiety and social disruption). • Recognising the level of interest demonstrated at the forum ONR is also advancing plans to develop its emergency arrangements web page, which can act as a source of information and guide people to information routinely published by local authorities and operators on planning for the unlikely event of an emergency.
3.9	ONR	<ul style="list-style-type: none"> • Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) guidance is available at: http://www.hse.gov.uk/pubns/priced/l126.pdf Information on beyond design base accidents can be found on page 33, paragraph 138. • Guidance from the Nuclear emergencies Planning Liaison Group (NEPLG) is available at: http://www.decc.gov.uk/en/content/cms/meeting_energy/nuclear/safety_and_sec/emergency_plan/neplg/guidance/guidance.aspx
3.10	ONR	Repeating the information under 3.8, ONR will develop a webpage explaining which organisation is responsible for which element of emergency planning, with links to DECC, NEPLG, NEAF and any other relevant information. This is due to be

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		published by July 2012. It is worth noting that the day after the meeting, ONR sent a letter from Colin Patchett to local newspaper, the East Anglian Daily Times, which thanked people for their attendance and, recognising that the point had been raised that people did not know where to find the off-site plan, this letter included a web link to it. This letter was published by the newspaper
3.16	ONR	<p>The link to the Sizewell off-site emergency plan, owned and the responsibility of Suffolk County Council, is here: http://suffolkresilienceforum.onesuffolk.net/assets/Sizewell/2010-03-03-santised-Sizewell-Off-Site-Plan-Issue-2.3.pdf. This will be linked to from ONR's new emergency planning page, when available.</p> <p>Should ONR conduct stakeholder research to identify what sorts of information people want it to make available? Response from ONR's Head of Communications, Sue Kelly: "ONR will explore whether this is possible as part of its overall work on openness and transparency. It is important to point out that this does happen to an extent already. For example, every six months ONR engages with and asks questions at open forums with NGOs and communities, and recently we conducted a survey on our website."</p>
3.17	Suffolk Constabulary	<p>The Chair, Peter Wilkinson asked whether Assistant Chief Constable, Paul Marshall could explain the terminology 'Gold Group'. Claire Austin, Suffolk Constabulary's Contingency Planning Manager replied:</p> <p>The Gold Group is a term that is no longer used in a multi agency context and the new terminology is the 'Strategic Co ordination Group' (SCG). This group is comprised of Executive Level members from each of the responding agencies with the responsibility of setting the strategy for resolution of the incident.</p> <p>This includes:</p> <ul style="list-style-type: none"> - Strategic aims and objectives - Determination of policy for implementation by Tactical Co-ordination Group (TCG) - Assess and arrange for adequate resources - Prioritise allocation of resources of the TCG - Implement adequate financial controls - Act as an interface with government - Liaise with neighbouring resilience fora or regional partner agencies - Co ordinate communications internally and to the public - Provide liaison with the media at Strategic level. <p>There will be a number of cells with the Strategic Co ordination Centre to support this group, one of which would be logistics. In addition all Emergency Services have memorandums of understanding with bordering Counties with regard to the provision of mutual aid.</p>
4.1	ONR	"More details of the [Fukushima] questions being posed are on the GDA section of the ONR website..." The appropriate links are

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		<p>as follow:</p> <p>GDA Issue: “Consider and Action Plans to Address the Lessons Learnt from the Fukushima Event”</p> <ul style="list-style-type: none"> • For Westinghouse AP1000 design: http://www.hse.gov.uk/newreactors/reports/step-four/westinghouse-gda-issues/gi-ap1000-cc-03.pdf • Resolution plan for Westinghouse AP1000 design: http://www.hse.gov.uk/newreactors/reports/step-four/westinghouse-final-res-plans/resolution-plan-gi-ap1000-cc-03.pdf • For the EDF / Areva EPR design: http://www.hse.gov.uk/newreactors/reports/step-four/gda-issues/gda-issue-gi-ukepr-cc-03.pdf • Resolution plan for the EDF / Areva EPR design: http://www.hse.gov.uk/newreactors/reports/step-four/final-res-plans/resolution-plan-gi-ukepr-cc-03.pdf
4.2	ONR	Link to HM Chief Inspector’s reports on Fukushima: www.hse.gov.uk/nuclear/fukushima
4.4 4.8 4.10 5.2	ONR	<p>Various links to be provided:</p> <ul style="list-style-type: none"> • European Council-requested ‘stress tests’: http://www.hse.gov.uk/nuclear/fukushima/european-council-stress-tests.htm • Sizewell B ‘stress test’: http://www.edfenergy.com/about-us/energy-generation/nuclear-generation/documents/sizewell-b-stress-test.pdf • Proposed Hinkley Point C report not yet available, but a progress report is available: http://www.hse.gov.uk/nuclear/fukushima/stress-tests-061211.pdf • Chief Inspector’s reports into implications from Fukushima: http://www.hse.gov.uk/nuclear/fukushima/index.htm
5.7	ONR	<p>Chairman asked the ONR to consider further how to alleviate this dissatisfaction.</p> <p>ONR to consider further as part of its work on openness and transparency.</p>
6.2	ONR	<ul style="list-style-type: none"> • Risks from Ionising Radiation (HPA-RPD-066 April 2010): http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1274090258191 • COMARE 14th Report: Further consideration of the incidence of childhood leukaemia around nuclear power plants in Great Britain: http://www.comare.org.uk/press_releases/14thReportPressRelease.htm <p>ONR will formally invite the HPA or COMARE to attend the next Sizewell SSG.</p>
6.3/6.4	ONR	On the subject of discharge data, Rob Macgregor from the Environment Agency has indicated that he is in discussion with both the operator of Sizewell B, and the SSG about this matter. It is recognised that the initial responses provided do not address all issues; therefore efforts will be made to facilitate further discussions.
6.5	DECC	There is ongoing collection of geographically referenced cancer registration and death data across the UK that allows epidemiological studies to be undertaken from routine statistics. The bodies who administer these datasets will become, with HPA, part of Public Health England in 2013. The last analysis of such data for childhood cancers around nuclear power stations was carried out as an input to the 14 th report of the Committee on the Medical Effects of Radiation in the Environment (COMARE) entitled ‘ Further considerations of the incidence of childhood leukaemia around nuclear power

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		plants in Great Britain.' This was published in 2011 and is available on the COMARE website (www.comare.org.uk) which also contains other relevant information.
9.3 9.4	ONR	<p>The guidance placed on the HSE web site (http://www.hse.gov.uk/landuseplanning/nuclear.htm) and the papers presented to the Nuclear Safety Advisory Committee (NuSAC) in July 2008 provide the background to the appropriate criteria for both population density and population thresholds. These are published here:</p> <p>http://www.hse.gov.uk/aboutus/meetings/iacs/nusac/030708/p12-sittingpaperpp.pdf http://www.hse.gov.uk/aboutus/meetings/iacs/nusac/030708/p12-sittingpaper.pdf http://www.hse.gov.uk/aboutus/meetings/iacs/nusac/030708/p12-addendum.pdf</p> <p>ONR will collate its advice provided to SCDC. If this information is not already publicly available, ONR will put it into the public domain.</p>