

**MINUTES OF THE MEETING OF THE
SIZEWELL A & B STAKEHOLDER GROUP (SSG)
HELD AT RIVERSIDE CENTRE, STRATFORD ST ANDREW
ON THURSDAY 17TH MARCH 2016 AT 10.00**

PRESENT

Cllr M Fellowes	- Aldeburgh Town Council	<i>SSG Chairman</i>
Mr M Taylor	- Suffolk Coastal Friends of the Earth	<i>SSG Deputy Chairman</i>
Cllr D Bailey	- Leiston-cum-Sizewell Town Council	
Mr C Betson	- Leiston Business Association	
Mr T Branton	- Co-opted Member	
Mr J Carey	- Sizewell A Representative	
Cllr J Fisher	- Saxmundham Town Council	
Ms J Girling	- Co-opted Member	
Cllr T Hodgson	- Suffolk Association of Local Councils	
Cllr M Jones	- Aldringham-cum-Thorpe & Knodishall Parish Councils	
Mr C Tucker	- Sizewell B Staff Representative	
Cllr M Whitby	- Dunwich Parish Meeting	
Mr P Wilkinson	- Co-opted Member	

IN ATTENDANCE

Ms M Barnes	- EdF Energy Sizewell B	
Ms L Chandler	- Sizewell C Planning Project Advisor, Suffolk Coastal & Waveney District Councils	
Mr M Cubitt	- Sizewell B Plant Manager	
Mr P Fahey	- Environment Agency Sizewell A Inspector	
Dr L Franks	- SSG Clerk	
Mr P Hetherington	- SSG Secretariat	
Mr J Jenkin	- Nuclear Decommissioning Authority	
Mr P Montague	- Sizewell A Closure Manager	
Mr G Moorcroft	- Office for Nuclear Regulation Sizewell B Inspector	
Mr S Parr	- Environment Agency Sizewell B Inspector	
Insp. N Aitken	- Suffolk Police	
Ms N Rousseau	- Sizewell B Community Liaison Officer	
Ms V Thomas	- Environment Agency	
Mr D Thompson	- Sizewell Liaison Officer, Civil Nuclear Constabulary	

MEMBERS OF THE PUBLIC

Mr C Barnett	- Shut Down Sizewell Campaign (SDSC)
Mrs Lampard	
Mr D Green	- East Anglian Daily Times

CHAIR'S OPENING COMMENTS

3044 Chair welcomed all attendees, provided domestic arrangements and asked all speakers to use the microphones and to introduce themselves. Chair reminded attendees that this week was the 5th anniversary of the Fukushima disaster and asked that attendees thought for a moment of the suffering of those affected. After a short pause, Chair advised that she had met with Nanako Hisamichi, a researcher from the Ministry of Industry and Trade and Economy (METI). Her mission was to evaluate what information should be communicated to the community to provide reassurance and enable the reactors to be re-started.

I PUBLIC FORUM

3045 Mr Barnett introduced himself as speaking on behalf of the Shut Down Sizewell Campaign (SDSC) representing 200-300 members. He commented that no other SDSC members attended the SSG meeting as they felt the SSG were ineffective. He drew attention to a recent article in the Daily Telegraph "Tokyo was on the brink of nuclear catastrophe" printed 05.03.16. (see appendix 1 for text only or for full copy including pictures follow this link <http://www.telegraph.co.uk/news/worldnews/asia/japan/12184114/Fukushima-Tokyo-was-on-the-brink-of-nuclear-catastrophe-admits-former-prime-minister.html>) and summarised this as describing how, during the Fukushima disaster if the remaining three nuclear reactors had undergone meltdown, 50million people would have had to have been evacuated from Tokyo. Mr Barnett asked that the secretariat ensured circulation of this article amongst members, describing the article as pertinent to the safety of the local community.

3046 Mr Barnett cautioned that geologists believe that a huge mountain landslide from the Canary Islands will cause a tsunami several times the magnitude of that experienced at Fukushima and that this may travel to the UK coast causing catastrophic events at nuclear power stations particularly on the west coast. He urged the SSG to campaign to immediately to shutdown all nuclear power stations stating that this was a matter of 'when' and not 'if' this tidal wave will happen. He stressed the importance of acting now to protect our civilisation from this future event.

3047 Mr Barnett advised that the Sizewell B Reactor pressure vessel (RPV) would shortly be inspected using the latest ultrasonic equipment but that this was irrelevant in the light of a future tsunami.

3048 Chair summarised the questions posed by Mr Barnett but he objected to 'having words put into his mouth' and re-stressed that the SSG must fight to shut down all nuclear plants. Chair attempted to suggest that a question was formulated from his earlier statements but Mr Barnett insisted that he was allowed to continue speaking.

3049 Mr Barnett drew attention to the ONR quarterly site report for Sizewell B (01.10.15. - 31.12.16.) page 6 regarding the counter terrorism exercise. He quoted the report "the scenario tested was credible, challenging and well-planned" arguing that, as no members of the public were in attendance to witness the event, the community were kept in the dark and the report was shrouded in secrecy. Chair asked that Mr Moorcroft respond to this challenge during his verbal update today.

3050 Mr Tucker advised that tsunami risk was considered within the Sizewell B safety case. He advised that following the Indonesian tsunami that the risk of tsunami in Europe was evaluated and that the Canary Islands were identified as the most likely cause. The impact of the possible tsunami was evaluated and areas such as the coast of Portugal and the USA coast near New York were considered at risk, depending on which side of the Canary Islands the mountains collapsed. It was also found that there would not be a noticeable wave effect on the Eastern coastline of the UK and the Cornish coastline may see a wave of 1-2m. Mr Tucker drew attention to an article commissioned by DEFRA in June 2005

called 'The threat posed by tsunami to the UK'
(<http://www.onr.org.uk/fukushima/submissions/207061.pdf>)

3051 Chair sought any further questions from the public and none were forthcoming. Chair summarised that the minutes would include reference to the Daily Telegraph article and to the report regarding the Tsunami and **agreed to meet with Mr Barnett to ensure that his question was accurately captured.**

2 APOLOGIES FOR ABSENCE & DECLARATIONS OF INTEREST

3052 Apologies for absence were received from Mr D Foy, Mr T Griffith-Jones, Cllr W Howard, Cllr R Rainger, Cllr N Smith, Dr C Barnes, Cllr G Holdcroft, Mr A Jakeways, Mr P Morton and Mr A Osman.

3053 Additional declarations of interest were sought but none were forthcoming.

3 SIZEWELL A REPORTS

3a. Closure Director's Report

3054 Mr Peter Montague reminded attendees that he hailed from the West Country and that the risk of tsunami had been considered by the new build group, had resulted in improved sea defences and had prompted ongoing discussions with regulators and the community.

3055 Mr Montague referred to his written report dated March 2016 and provided a presentation covering the following matters:

- Safety & Compliance: continues to be good. Discharges continue to be less than 5% of all of the limits set in the environmental permit. Routine sampling of the environment identified a positive, albeit at very low levels, result for Strontium⁹⁰, an isotope that can be associated with nuclear power generation. Further investigation in conjunction with the Environment Agency is ongoing.
- Emergency Arrangements: ONR have announced that Sizewell A no longer requires an off-site emergency plan enabling a review of emergency arrangements to respond to accidents on-site. Training and testing to enable a fast point of incidence response is ongoing with approx 6 exercises per month. Regulators will inspect new arrangements in June and thereafter shift pattern changes can occur.
- Organisational restructuring: the best fit exercise has been communicated to staff; 91% of staff achieved their first aspiration and two people were displaced, of which one has now found alternative employment.
- Projects Update:
 - Pictures describing weather proofing of boiler house roof: 'before' and 'after' photographs show removal of extensive roof furniture.
 - Emerging work on site further illustrated with pictures of the corrosion of a RSJ holding up a walkway requiring remediation to prevent possible buckling during high winds. Longer term the walkway will be removed.
 - IONSIV cartridges have been safely shipped to Oldbury site for packaging and disposal enabling progress with ponds decommissioning.
 - SSG Chair and Vice Chair attended site to see the ponds and understand the work to be undertaken during the next two/three years. A short video of the ponds was played to attendees and it was noted that removal of ponds furniture (fuel skips, fuel element debris) and removal of sludge was essential prior to ponds drain down. Divers will cut up skips underwater (planned Jan 2017) and low activity skip panels will be cleaned, high activity will be encased in concrete. After drainage the

walls will be cleaned with pressure washers or concrete shaving depending on activity levels.

- Socio-economics: consultation responses to the draft plan are being reviewed. Match funding has been approved for a Suffolk Coastal Business Application that includes a business event at Ufford Park later this month. Redundant lockers have been donated to Leiston and Halesworth's Men's Sheds. Applications invited at <https://magnoxsocioeconomic.com/>

- 3056 Ms Hogan questioned whether there were any plans for work off-shore. Mr Montague advised that the nearest structure to shore had been inspected recently and found to be in a very poor state of repair. The asset care group have been advised and the plant structures programme informed. Issues to removal of the off shore structures include kittiwake nesting and navigation lights. Ms Hogan advised that fishermen and leisure boats use these structures and that assurance of compensation for the removal of these structures has been sought. **Mr Montague agreed to investigate this matter with the help of Ms Hogan.** Ms Girling added that the Aldeburgh and Southwold fisherman also need to be kept informed. She added that the kittiwake population are a tourist attraction and the local community need to be kept informed of what strategy will be implemented with the rigs. Mr Montague confirmed that there was no intention to remove the structures in the next 7 years unless an intolerable safety hazard became apparent.
- 3057 Cllr Bailey asked how many employees there were on site and how many of these lived locally. Mr Montague advised that there were very few contractors onsite and that in May there would be 186 full time staff on site with very few of those via an agency. He advised that proposed future staffing for the next 2/3 years would be a maximum of 200 staff with approx 20 contractors.
- 3058 Chair thanked Mr Montague for the opportunity to visit the site with the Vice Chair and in particular Mr Franks, the Ponds Decommissioning Manager, for providing the ponds tour.
- 3059 Chair referred to the NDA Strategy and in particular the section regarding High Activity Waste (HAW), noting that for Sizewell there was 692m³ of HAW currently stored on site. She questioned whether the pond skips would add to this volume. Mr Montague advised that the 692m³ of HAW was an estimate of the volume of skips and that cutting them into panels and processing (to be undertaken at Hinkley) would vastly reduce this volume. Chair questioned whether Sizewell A would retain a HAW store and Mr Montague advised that this would not be the case, advising that the strategy was for processed waste to be stored at regional stores.
- 3060 Mr Wilkinson questioned what the processing of HAW involves. Mr Montague described the process used previously at Hinkley site for cleaning up skip panels. This involved milling to remove paint and a thin amount of metal from the surface of the panel to enable the rest of the panel to be recycled as clean metal or disposed of as low level waste. This process was found to be expensive and labour intensive and may not represent best value. The new strategy is to use 6m³ concrete boxes to contain skip panels separated by a layer of concrete grout. Mr Wilkinson asked what happened to the HAW removed from the panel surface and noted that this was contained within a mosaic container and stored in a regional store. A similar process would be undertaken with active sludges and fuel element debris.
- 3061 Mr Wilkinson expressed concern that the clean metal was free released suggesting that this could be recycled into a pram, for example. He sought confirmation that free released metal was smelted by Studsvik. Mr Montague conformed this and explained that the clean metal was first treated to remove any remaining radioactive contamination, smelted into steel ingots and then sampled by Studsvik. Those ingots that were found to contain any remaining trace radioactivity were either stored until the radioactivity has decayed to background levels or exclusively re-used within the nuclear industry. He described the

process as extremely stringent. Mr Wilkinson asked if Mr Montague had any concerns at all about recycling previously contaminated metal and heard that he had none. Chair added her concern about the re-use of contaminated ingots in the nuclear industry and Mr Montague advised that previously this form of recycling had saved a massive volume of ILW having to go into the repository near Drigg.

3062 Cllr Whitby asked where the regional stores were located. Mr Montague advised that stores were located or would be built at Bradwell, Barclay, Hinkley, Hunterston and Sellafield.

3063 Mr Betson led a vote of thanks to Magnox for the donation of the lockers to the Men's Sheds.

3b. Office for Nuclear Regulation

3064 Mr Jakeways, ONR Sizewell A Inspector, was noted to have sent apologies. Mr Moorcroft, ONR Sizewell B Inspector, agreed to address any concerns arising and Chair asked him to comment upon the announcement that Sizewell A no longer required an off-site emergency plan. Mr Moorcroft explained that the removal of Sizewell A from consideration did not impact upon the off-site emergency plan for the local area as this was based upon the possibility of an event at Sizewell B site.

3c. Environment Agency Report (EA)

3065 Mr Fahey, Environment Agency Sizewell A Inspector, drew attention to the combined EA report dated March 2016 and in particular the following:

- Investigation into the Strontium⁹⁰ positive result ongoing. Updates will be provided.
- Public consultation until May on proposed EA guidance "Requirements for Release of Nuclear Sites from Radioactive Substances Regulation"
(<https://consultation.sepa.org.uk/operations-portfolio/grr>)

3066 Chair asked for more information about the Strontium⁹⁰ positive result. Mr Fahey explained that the amount detected was extremely low (3Bq/kg) and presented no danger to the public as this was several orders of magnitude below the levels that would cause concern. He explained that the investigation had four key areas for consideration:

- measure Strontium⁹⁰ levels in pond water and in off-site discharges, noted as recently less than 1/10th that of discharge levels 10 years ago.
- consider how sampling and analysis was undertaken to generate this positive result in marine sediments; re-analysing samples at different labs to ensure consistency with outcome. The grain size can affect results so this will be measured in the samples analysed.
- additional monthly sampling at Aldeburgh beach (and beaches north and south) for the next three months to identify any trend. Usually sampling is an annual event.
- consider any other cause.

3067 Chair asked what effect Strontium⁹⁰ has on individuals and heard that the amount detected would have no impact. Mr Wilkinson disputed this. Mr Fahey explained that the amount found was up to 1 million times less than the level described by PHE as of concern. Mr Wilkinson objected to this reassurance describing the link between dose and effect as discredited. He suggested that this reflected the inadequacies of the environmental monitoring programme. Chair added her support saying that the EA should challenge assumptions.

3068 Cllr Whitby expressed concern that this positive level was detected at Aldeburgh beach. He questioned why this was reported by Sizewell A. It was explained that it was detected

during Sizewell A's routine environmental monitoring programme. Cllr Whitby asked if this was a surprise and heard that other positive results have been previously detected, the most recent being in 2007. Mr Parr added that Strontium⁹⁰ was routinely used in cancer treatments and for weapons testing and that the source was not necessarily Sizewell A or any other nuclear power station.

3069 Ms Girling recalled that previously it had been difficult to identify the source of Strontium⁹⁰ and that she was interested in the trend of detection levels in the local environment.

3070 Mr Tucker advised that the early discharges from Sellafield in 1970's had been tracked to the east coast and that the source of the Strontium⁹⁰ may not be the local nuclear power stations.

3071 Mr Branton advised that when atmospheric testing of weapons was undertaken that Strontium⁹⁰ levels in the environment increased. He requested that the **trend in levels of Strontium⁹⁰ was shared with the group and Mr Fahey agreed to find out.**

3d. Nuclear Decommissioning Authority Report

3072 Mr Jenkin, NDA Stakeholder Manager, drew attention to the NDA monthly update for March 2016 and in particular to the following items:

- Retrieval of metal fuel from the ponds at Sellafield was completed in October 2015, cutting the radioactivity levels in the ponds by approx 70%.
- Mentoring scheme for small businesses has re-opened for applications. The scheme pairs small or medium sized enterprises (SME's) with larger organisations to share skills experience and contacts to help SME's work within nuclear decommissioning.
- Consultation on the NDA draft strategy and draft business plan has now closed. SSG thanked for their contributions. Both documents have now been revised and submitted to Ministers for approval and, thereafter, will be published during April.
- Tony Fountain, previously the NDA Chief Executive (2009-11), has been announced as Chair for Sellafield Ltd from 01.04.16.
- Next Supply Chain Event to be held on Thursday 3rd November 2016 at EventCity in Manchester. Noted as free to exhibitors and visitors.
- Spring edition of 'Insight' has now been published.
- NDA website content has now fully migrated to www.gov.uk/nda and the old website has been switched off. This now includes a blog post from guest authors. Currently John Mathieson, NDA Head of International relations, is writing about the cooperative work with Japan to support the clean-up of the Dai-ichi nuclear plant post Fukushima.
- NDA is contributing £500,000 to a £1.5million initiative to encourage SME's to find solutions to the energy industries' technical challenges, particularly for nuclear decommissioning.
- Last flask of fuel has left Oldbury ahead of schedule and site awaits fuel-free verification.
- UK's last Magnox plant at Wylfa has now closed, having had a life extension from 2010 to 2015. Life extension to Magnox plants has enabled additional revenue of £1billion to be generated and used to fund the decommissioning programme.
- PURDA pre-election periods are anticipated prior to the devolved administration elections and the EU referendum. NDA will be subject to restrictions about what they may undertake publicly from 28th May to 23rd June. Detailed guidance will come from the Cabinet office and at that point the NDA will advise the Chair of any implications for the next SSG meeting.

- 3073 Mr Wilkinson asked Mr Jenkin to comment upon a report that researchers at Manchester University have developed a technique to isolate and neutralise Neptunium. **Mr Jenkin agreed to enquire amongst NDA colleagues.**
- 3074 Mr Taylor advised that EDF Energy have recently announced lifetime extensions for four AGR reactors. He questioned how this has affected the estimated costings for waste management. **Mr Jenkin agreed to enquire amongst NDA colleagues.**
- 3075 Ms Girling advised that she had recently found it difficult to navigate the NDA website to find stakeholder group minutes. Mr Jenkin advised that the main section for each stakeholder group was on the Magnox website. He agreed that signposting and links needed to be improved on the NDA website. Chair emphasised the importance of communication. Ms Girling commented that the NDA helpdesk was extremely helpful.
- 3076 Chair sought reassurance that the NDA financial strategy for Sizewell A prior to entering care and maintenance would enable emerging maintenance work to ensure the buildings and structures on the site are safely maintained. Mr Jenkin advised that there was an established process to bid for additional funding to support emerging essential work. Mr Jenkin advised that the NDA strategy considers various approaches at different sites but ultimately the regulators will need to be satisfied that each site is ready for care and maintenance prior to entry into that phase.

The meeting had a short comfort break at this point.

4 SIZEWELL B REPORTS

4a. Plant Manager's Report

- 3077 Martin Cubitt, Plant Manager at Sizewell B, drew attention to the written report dated March 2016 and provided a presentation that covered the following points:
- Safety and Staffing: No significant safety events. 523 EDF Energy staff, 24 apprentices and 250 year round contracting partners.
 - New Station Director: from 1st March Paul Morton became Station Director replacing Jim Crawford who is now the Project Development Director for the Sizewell C project.
 - Refuelling Outage 14: over 13,000 tasks planned in addition to reactor refuelling. Turbine 1 shuts down on 12th April; turbine 2 on 15th April. Key projects include 10year inspection of the Reactor Pressure Vessel (RPV), internal inspection and cleaning of all four steam generators, replacement of rotating elements in reactor 2 coolant pump motor, turbine 2 low pressure rotor exchange and valve inspection and work on turbine 2 generator transformer. Outage recognised as a very busy period and a cause of increased traffic in the local area. Disruption to local community has been minimised but any concerns please contact the site. Estimated additional 300 people working on site, spread over the duration of the outage period.
 - Periodic review of RPV: pictures illustrating the robotic arm test equipment and its use within the pressure vessel.
 - Dry Fuel Store (DFS) Update: inactive commissioning virtually complete, cladding of the store is complete and infrastructure is mostly in place. Period of considering results from inactive commissioning to inform final safety case to enable Regulator approval for active commissioning. Inauguration of DFS to be held later this month and SSG Chair invited.
 - Funds associated with Sizewell B power station: details of funds provided as below:

Amenity and Accessibility Fund (AAF) - administered by Suffolk Coast and Heath AONB www.suffolkcoastandheaths.org

Sizewell B Sponsor ships and Donations Fund - £10k/annum managed by EDF Energy, applications by email to Niki Rousseau.

Greater Gabbard Offshore Wind Farm Community Benefit Fund – £25k/annum managed by The Suffolk Foundation, initial lease agreement for 6 years with option to renew.

Leiston and Sizewell Community Fund – £87,500 over 7years, to be launched Spring 2016 re the Galloper Offshore Wind Farm. To be administered by EDF Energy and Community Action Suffolk.

- 3078 Mr Wilkinson questioned whether the volume and content of activity in the outage 'spike' can be predicted with any confidence. Mr Cubitt advised that current station performance was known and that specific outage data was brought to the SSG after the last outage. He asserted that the data from the last three outages reflect that there was no spike. Mr Wilkinson argued that there was a bump and suggested that the public should be made aware of any increase, however small, particularly as the relationship between dose and impact was unclear. Mr Cubitt advised that based on previous outage performance and current plant performance that no significant increase in activity was predicted for the forthcoming outage. Mr Wilkinson argued that there was increasing evidence of a link between low level radiation and childhood illness and asked that EDF Energy and regulators recognise these uncertainties and inform the public appropriately.
- 3079 Mr Wilkinson thanked EDF Energy for the CO₂ report for the Dry Fuel Store (DFS) and questioned whether this had been peer-reviewed. **Mr Cubitt advised he was happy to invite the author of the report to answer questions and Mr Wilkinson agreed to submit these in writing.** Chair commented that the construction of the DFS involved 7842 tonnes of CO₂. Mr Cubitt advised that this was approximately the same as building a small office block. Chair questioned how nuclear power could be described as low carbon and Mr Tucker advised that 30million tonnes of CO₂ emissions were saved last year by generating electricity using nuclear fuel rather than coal. Mr Wilkinson disputed these figures. Mr Cubitt advised that in terms of grams of CO₂ per unit of electricity generated then this value was considerably less than other forms of generation. Cllr Whitby interjected that he wanted to know actual values and Chair asked that these questions were submitted for the author of the report to answer. Mr Cubitt advised that the environmental report provided to the SSG last year detailed these values.
- 3080 Cllr Whitby referred to the RIFE report 2014 stating that 8.6×10^{11} Bq gaseous tritium and 6.2×10^{13} Bq liquid tritium were released by Sizewell B during the year. He referred to the previously reported detection of 3Bq/kg of Strontium⁹⁰ found on the beach stating that by comparison the amount of tritium was several orders of magnitude higher. He suggested that the tritium was released during steam venting and that the station were deliberately emitting tritium. Mr Cubitt advised that all discharges were in the public register. He referred to the explanations provided previously about steam venting and reiterated that the tritium content of the water released as steam was below the level set by the World Health Organisation for drinking water. Cllr Whitby asked for figures and Mr Cubitt reiterated that these were in the public register. Chair asked whether recent data was available. Mr Cubitt advised that the EA require monthly returns but the station have inline monitoring data and that thousands of plant parameters are monitored continuously.
- 3081 Chair invited the EA to comment on the quantity of tritium released by Sizewell B. Mr Parr commented that a Becquerel is a very small unit as it refers to the disintegration of an atom. The 3Bq of Strontium⁹⁰ detected is very small and the amount of tritium released is orders of magnitude higher. All nuclear operators are given limits for allowable discharges of each isotope. Limit setting guidance is followed and this explains the factors taken into account when setting appropriate limits. A Bq of tritium does not give the same level of radiation dose as a Bq of plutonium, meaning that limits set will vary depending on the isotope.

- 3082 Mr Wilkinson questioned whether the EA accepted that there was a disconnect, i.e. no relationship between dose and impact. When Mr Parr refuted this, Mr Wilkinson questioned why scientific evidence supporting this disconnect was being disregarded by the EA. Mr Parr clarified that with all science there is uncertainty and that the vast majority of radiation protection scientists, represented through ICRP, use the linear dose response model, based on the bulk of scientific information currently available. There remains uncertainty with some believing that low dose can have high impacts and others believing in hormesis, where low doses may have a health benefit. Mr Parr advised that the EA accept the vast majority of the scientific body of interest. There ensued a debate about how these uncertainties about the effects of low doses could be considered before the Chair interjected and asked what the worst case scenario would be if these uncertainties were the reality. Mr Parr advised that this was difficult to state as there was ongoing research into the effects of low level dose rates and, therefore, the EA use the best science available, which is what Public Health England and ICRP recommend, and indicate that there is no biological effect until there is a dose of 100mSv, 100 times the current public dose limit.
- 3083 Cllr Whitby suggested that the impact of the same dose on a power station worker and a baby were very likely to be different. He referred to the Fukushima flare stacks which enabled gaseous release of contamination at higher altitudes to avoid the plume impacting the local population. He asserted that Sizewell B vent steam to save money. He reiterated concerns about the thickness of the pipework used in the steam generator asserting that tritium transfers across the pipework and is then released in the steam. Mr Parr advised that tritium is released during normal operations at Sizewell B through the main stack which is 72m high. Cllr Whitby asked at what level steam was released and heard this was 30-40m.
- 3084 Chair questioned whether the amount of steam venting could be reduced if cost was not a consideration. Mr Cubitt advised that no money was saved by venting steam, indeed it could be argued that the steam venting caused the station to lose output and therefore was costing money. Mr Cubitt advised that steam venting was minimised and occurred to enable routine testing to ensure safety. Cllr Whitby questioned why Sizewell B could not advise the public in advance of when steam venting was scheduled. Mr Cubitt gave examples of when steam venting was necessary: power operated relief valve testing prior to return to service; auxiliary pump testing.
- 3085 Mr Tucker asked attendees to consider the data previously provided to the SSG about steam venting. He advised that steam venting occurred for two key reasons: planned pump and valve testing or where a part has tripped and the turbine condensers have not been available as a steam dump route. The latter has not happened in recent years but was included in the data made available previously.
- 3086 Chair reminded attendees that **Mr Parr has agreed to meet interested members on site to clarify the monitoring of steam venting.**
- 3087 Mr Branton referred to the RPV inspection equipment and asked whether this was entirely new or was existing equipment that had been brought up to date. Mr Cubitt clarified that the mechanical parts were mostly original equipment and the remainder updated to modern standards, for example, state of the art detectors.
- 3088 Ms Hogan commented that there was currently a lot of traffic on local roads from work at Galliper. She questioned whether consideration had been given to mitigating traffic congestion when organising the outage arrangements. Ms Hogan thanked EDF Energy for superb and effective local communication and for convening the Sizewell residents meeting. Mr Cubitt advised that mitigating traffic had been considered and appropriate adjustments had been made. Chair asked if shift changeover coincided with school times and heard that shift changeover is early morning and late evening and avoided busy periods.

- 3089 Mr Taylor referred to the lifetime extension of four AGR reactors suggesting that the decision to extend was made without technical engineering and safety back-up, adding that the next periodic safety reviews were not due until 2018 and 2019. He advised that 128 medium safety-related issues at Hartlepool and 130 at Hesham 1 have been identified on the ONR website and, although no major safety issues have been identified, this gave him cause for concern. Mr Taylor questioned whether any decision about Sizewell B would be based on sound engineering or be politically and commercially driven. Mr Cubitt asserted that lifetime extension was always based on the ability of the plant to safely operate. He advised that sound engineering and technical judgement would be deployed to upgrade the plant. The ability of the plant to operate safely for the duration of the lifetime extension had to be proven in the safety case to the regulator before extension was granted. Mr Moorcroft advised that nuclear site licence conditions would prevail and that these include the periodic safety review to ensure modern standards were being met.
- 3090 Mr Taylor referred to the Reuters report that warned that a fault had been identified on the majority of USA nuclear stations relating to open-phasing events. Mr Tucker advised that this matter was within his area of expertise. Mr Tucker explained that nuclear power stations have methods to detect a 'loss of grid' fault (i.e. a sudden disconnection from the grid) which then prompts appropriate safety systems to start. What was found at one station (Byron, USA) was a loss of connection for one phase of the electrical supply which the detectors did not pick up and hence more equipment was lost than usually occurred during a full loss of grid fault. Subsequent to this event, similar faults occurred at Dungeness B and the industry is now looking again at single phase / open phase detection. Sizewell B is fortunate in that it already has a loss of grid detection system that looks at all three phases and will detect any open phase fault. This is a wide issue that the Nuclear Regulatory Commission are continuing to investigate.
- 3091 Ms Girling requested that contractors were made aware that their workers were using rural roads at inappropriate speeds and taking short cuts through small villages. Mr Cubitt advised that all contractors undergo an induction during which considerate road usage was emphasised, including detailing preferred routes. Ms Girling asked whether any monitoring was undertaken and heard that all workers were encouraged to be vigilant and whistleblowing is encouraged. Chair questioned whether the CNS could assist with monitoring this and heard that this was primarily a matter for Suffolk Police but if officers did see inappropriate driving they would speak to the driver concerned. Mr Wilkinson asserted that this was not within the remit of the CNS. Cllr Whitby added his concern and questioned whether there were designated routes. Chair suggested that she should contact Suffolk County Council Highways and local police and ask them to be more vigilant during the outage period. Ms Girling asserted that education enabled prevention more effectively than punishment.
- 3092 Ms Girling requested the anticipated date for the site licence for the Dry Fuel Store (DFS). Mr Moorcroft advised that the Licensed Instrument for active commissioning of the DFS was pending ONR's assessment of the safety case, advising that a project assessment report will be made available. The Licensed Instrument should be issued during quarter 3 (July - September). Chair questioned whether the opening of the DFS was entirely separate from the active commissioning process and this was confirmed.
- 3093 Ms Girling sought clarification of the description in the report of an outage activity 'installation of in RPV samples for future inspections'. Mr Cubitt advised that this referred to a set of metal samples that were contained within the RPV. Chair suggested using 'in-RPV'.
- 3094 Chair advised that the BBC had reported on 10.3.16. that Areva is fabricating MOX fuel for use in Japanese reactors. Mr Tucker advised that the French Government have asked EDF Energy to take over Areva but this had not been confirmed. Chair re-iterated that the SSG would like to be advised if MOX fuel was to be used in the UK.

4b. Office for Nuclear Regulation (ONR) Report

- 3095 Mr Moorcroft, Sizewell B Inspector, drew attention to his quarterly report dated 01.10.15 – 31.12.15. highlighting the following:
- Dates of visits, routine licence condition inspections and a system based inspection.
 - Inspection of DFS construction and commissioning undertaken by an ONR project inspector
 - Observation of on-site emergency arrangements exercise and security exercise found both to be adequate.
 - IAEA Operational Safety Review Team have visited the site and their findings will be published on the ONR website in due course.
- 3096 Questions were invited. Mr Wilkinson referred to the counterterrorism exercise reported as an 'adequate demonstration of arrangements' and asked what the scenario was and what assumptions had been made. Mr Moorcroft advised that the scenario is agreed in advance of the exercise by the ONR, CNS and Operators and then observed by ONR Inspectors who consider various objectives. He advised that it was difficult to report security exercises in a public forum. Mr Wilkinson suggested that more transparency and accountability could be achieved by security clearing two or three SSG members and enabling them to act as independent observers who can report back to the SSG in broad terms.
- 3097 Mr Wilkinson expressed his continued frustration with the off-site emergency plan. Chair added that the SSG should be able to see the modelling of traffic flow for evacuation, for example, suggesting that this was not security sensitive. **Mr Moorcroft offered to discuss this with CNS colleagues and invite them to come to this forum.** Mr Wilkinson interjected that this had been requested many times previously with no discernible effect.
- 3098 Mr Taylor expressed concern about the criteria used for traffic modelling and questioned how this related to planning matters. He questioned whether new property developments were included in the traffic modelling. Mr Moorcroft advised that responsibility for testing the off-site emergency plan every three years was within the remit of the County Council. He advised that the ONR do review emergency plans and the testing thereof and were also a non-statutory consultee for land use. He advised that the specifics of the models used to formulate the emergency plans were for Suffolk County Council to explain. Mr Wilkinson insisted that there needed to be either a real time demonstration that the emergency plan can work or an admission that it will not. Mr Moorcroft said that the risks of live demonstration needed to be weighed against the benefits and there has to be a consideration of costs. Chair insisted this was a matter of public confidence and that this was public money. Cllr Whitby questioned whether the annual Latitude festival was taken into consideration when planning evacuation routes and Mr Moorcroft re-iterated that it was SCC and not the ONR that drew up the plans. Cllr Jones questioned whether the public had been asked whether they would be interested in participating in a practice evacuation. This was debated and Mr Montague reminded attendees that every flood in the UK demonstrated evacuation arrangements.

4c. Environment Agency Report

- 3099 Stuart Parr, Environment Agency Inspector for Sizewell B, drew attention to the combined Environment Agency Report dated March 2016 and in particular to the section describing discharge reporting, noting that both sites were well within permitted levels. Mr Parr advised that he had visited site in January and February and that during the latter visit he had considered the monitoring arrangements for recording and reporting gaseous radioactive discharges from minor permitted outlets, including those used for steam venting. He concluded that the operator is compliant with their permit conditions and that appropriate

records are being made for these discharges that are then compiled into monthly discharge reports submitted to the EA.

- 3100 Mr Parr referred to the environmental monitoring programme, overseen by Sizewell B on behalf of both A and B sites, and suggested that as this SSG had shown a high level of interest that, in the future, he would specifically report on the outcomes rather than refer to attendees to the public register.
- 3101 Questions were invited. Cllr Whitby asked that when monitoring data is received about steam venting, that the prevailing wind direction is also recorded. Mr Parr advised that he has asked the operators to inform him when the site undertakes operations during the outage that may involve release of steam. Mr Parr then agreed to check the weather forecast at that time. Cllr Whitby asked if these operations could be planned to happen when there is an off-shore wind. Mr Tucker advised that operations are planned approx 13 weeks in advance to fit around available resources and that wind direction was not predictable.
- 3102 **Mr Parr agreed to provide the Chair with dates to meet interested members on site to clarify the monitoring of steam venting.**

5. MATTERS ARISING FROM MINUTES AND ACTION TRACKER

5a. Minutes from the SSG Meeting held 03.12.15.

- 3103 The minutes of the SSG Meeting held on 3rd December 2015 were agreed as an accurate record.

5b. Minutes from the SSG Sub-group Meeting held 15.02.15.

- 3104 The Minutes of the SSG Sub-group meeting held 15th February 2015. were agreed as an accurate record.

5c. Matters Arising, the Action Tracker and Correspondence.

- 3105 Ms Girling drew attention to the action tracker and specifically the matters relating to the sewage works and the outfall (ref 2786/2903/3024). She questioned who owned the outfall and how the sewage is monitored and expressed concern that the outfall is so close to the beach. Ms Girling advised that she had communicated with Mr Pink and with the EA expressing concern about the dog walkers who use the beach and the sea for recreation along with other visitors and local residents. Mr Fahey confirmed that monitoring only occurs if the beach is designated bathing water and Sizewell beach is not designated as such. Chair suggested that this is a matter for Leiston Town Council to consider.
- 3106 Mr Cubitt advised that the sewage plant takes combined sewage from both sites and that Sizewell A has the consent to discharge. The outfall is monitored regularly by the stations. The consent will eventually switch over to the B station and although the appropriate pipework is already in place, having been installed during the last outage, it has yet to be agreed when the responsibility will transfer. It was stressed that routine monitoring happens at the point of discharge and not on the beach itself. Mr Branton confirmed that the outfall plant has undergone modifications during the history of A site construction and subsequent operation, then B site construction and operation. He was unsure whether it could be modified to accommodate Sizewell C. He advised that monitoring of effluent was undertaken in the seal pits. Mr Taylor observed that in addition to Leiston Town Council, Aldringham-cum-Thorp and Dunwich Parish should look into this matter. **Chair agreed an action to write to these Councils.**

- 3107 Chair invited other comments about the Action Tracker. Chair drew attention to the action (ref 2969) regarding the OSART recommendations and heard that a full report would be made public by DECC anticipated June / July.
- 3108 Chair commented that she had heard that the authorities for nuclear new build had held a meeting in Suffolk and had invited all local councils. Ms L Chandler, Sizewell C Planning Project Advisor, Suffolk Coastal & Waveney District Councils, advised that this was a new nuclear local authority special interest group drawn from all authorities in England and Wales that have potential to host new nuclear power stations. This is a member group supported by officers and they hold an annual conference to share experiences and learning. Chair asked that any learning from this could be shared with the SSG. Ms Chandler advised that Cllr Holdcroft was Chair of this group.
- 3109 Mr Taylor drew attention to the actions detailed on the sub-group minutes. Chair read through these and confirmed that these had been undertaken with the following exceptions:
- 3110 Action concerning NDA draft Strategy: *Chair to circulate the phrase “All methods of re-using plutonium, thus keeping weapons-useable material in circulation, should be dropped in favour of immobilising this material” to the SSG members for approval prior to submitting this as part of the SSG response to the consultation.* Chair advised that this had not be actioned but that re-use of plutonium fuels had arisen today (para 3094). Mr Tucker expressed his disagreement with the italicised statement and Mr Branton advised he would need more information before subscribing to this view. Ms Girling advised that she doesn't feel qualified to express this view and would like more information. Mr Jenkin confirmed that the consultation about the NDA strategy had now closed but agreed with members that the re-use of spent fuel was an ongoing matter.
- 3111 Action: *Recommend that the SSG ask when the last level 3 extendibility exercise was undertaken.* Chair posed this question and **agreed to seek confirmation offline.**

6. CHAIR'S REPORT

- 3112 Chair advised that she had attended site meetings at both Sizewell A and B sites, had asked to attend sites during the Christmas period to thank staff that were working and had undertaken a site visit with the Vice Chairman to tour the ponds. The latter visit had been combined with a socio-economic meeting. Chair commented that staff on the B site were knowledgeable about the SSG and knew who their representatives were.
- 3113 Chair advised that since the last SSG she had attended a National Stakeholder Group meeting in Manchester and key topics included the NDA draft strategy and draft Business Plan and the implications of the Government spending review. Chair emphasised the value of being able to meet peers and discuss common issues.
- 3114 Chair thanked Sizewell B for providing a room to enable a visit from a researcher at the Ministry of Industry and Trade, Nanako Hisamichi, whose mission was to understand how stakeholders were kept informed of activities at the nuclear power stations.

Meeting closed at 13.35

Next Meeting: **18.30 for 19.00 start on Thursday 9th June at Saxmundham Market Hall.**

Appendix 1: Daily Telegraph article (Text only, copy including pictures available at <http://www.telegraph.co.uk/news/worldnews/asia/japan/12184114/Fukushima-Tokyo-was-on-the-brink-of-nuclear-catastrophe-admits-former-prime-minister.html>)

Fukushima: Tokyo was on the brink of nuclear catastrophe, admits former prime minister

Five years on from the tsunami, the former Japanese prime minister says the country came within a “paper-thin margin” of a nuclear disaster

By Andrew Gilligan, Tokyo
10:00PM GMT 04 Mar 2016

Japan's prime minister at the time of the 2011 earthquake and tsunami has revealed that the country came within a “paper-thin margin” of a nuclear disaster requiring the evacuation of 50 million people. In an interview with The Telegraph to mark the fifth anniversary of the tragedy, Naoto Kan described the panic and disarray at the highest levels of the Japanese government as it fought to control multiple meltdowns at the **crippled Fukushima Daiichi nuclear power station**.

He said he considered evacuating the capital, **Tokyo**, along with all other areas within 160 miles of the plant, and declaring martial law. “The future existence of Japan as a whole was at stake,” he said. “Something on that scale, an evacuation of 50 million, it would have been like a losing a huge war.” Mr Kan admitted he was frightened and said he got “no clear information” out of Tepco, the plant’s operator. He was “very shocked” by the performance of Nobuaki Terasaka, his own government’s key nuclear safety adviser. “We questioned him and he was unable to give clear responses,” he said.

“We asked him – do you know anything about nuclear issues? And he said no, I majored in economics.”
“From a very early stage I had a very high concern for Tokyo” Naoto Kan, former PM

Mr Terasaka, the director of the Nuclear and Industrial Safety Agency, was later sacked. Another member of Mr Kan’s crisis working group, the then Tepco chairman, Tsunehisa Katsumata, was last week indicted on charges of criminal negligence for his role in the **disaster**.

The 9.0 magnitude quake, the largest ever recorded in Japan, triggered a gigantic tsunami which broke through the plant’s flood defences, cutting off power to its control room and the coolant systems of its nuclear reactors.

Deprived of cooling, radioactive fuel, in three of the plant’s six reactors melted down. Explosive hydrogen gas built up, blowing holes in the reactor containment building and allowing radioactivity to escape.

“When we got the report that power had been cut and the coolant had stopped working, that sent a shiver down my spine,” Mr Kan said. “From March 11, when the incident happened, until the 15th, the effects [of radioactive contamination] were expanding geographically.

“From the 16th to the 20th we were able to halt the spread of radiation but the margin left for us was paper-thin. If the [fuel rods] had burnt through [in] all six reactors that would definitely have affected Tokyo.

“From a very early stage I had a very high concern for Tokyo. I was forming ideas for a Tokyo evacuation plan in my head. In the 1923 earthquake the government ordered martial law – I did think of the possibility of having to set up such emergency law if it really came down to it.

“We were only able to avert a 250-kilometre (160-mile) evacuation zone [around the plant] by a wafer-thin margin, thanks to the efforts of people who risked their lives. Next time, we might not be so lucky.”

Dramatic CCTV footage from the plant, released in 2012, showed a skeleton staff – the so-called “Fukushima 50” - struggling to read emergency manuals by torchlight and battling with contradictory, confusing instructions from their superiors at Tepco. At one stage, an appeal went out for workers to bring batteries from their cars so they could be hooked up to provide power for the crippled cooling systems.

Total disaster was averted when seawater was pumped into the reactors, but the plant manager, Masao Yoshida, later said he considered committing hara-kiri, ritual suicide, in despair at the situation.

Mr Kan said he had to retreat to an inner room after the atmosphere in the government’s crisis management centre became “very noisy”.

He said: "There was so little precise information coming in. It was very difficult to make clear judgments. I don't consider myself a nuclear expert, but I did study physics at university.

"I knew that even based on what little we were hearing, there was a real possibility this could be bigger than Chernobyl. That was a terrible disaster, but there was only one reactor there. There were six here."

Although the Fukushima disaster caused no immediate deaths from radiation, it did force the evacuation of almost 400,000 people, most of whom have still been unable to return to their homes. Hundreds of thousands more fled in panic and much of Fukushima province ceased functioning.

An area within 20km (12.5 miles) of the plant remains an exclusion zone, with no-one allowed to live there. Some studies have identified a higher incidence of child cancer in the wider region.

Mr Kan said that the nuclear accident is "still going on" today. He said: "In reactors 2 and 3, the radioactive fuel rods are still there and small amounts of [radioactive] water are leaking out of the reactor every day, despite what Tepco says."

He said the experience had turned him from a supporter of nuclear power into a convinced opponent. "I have changed my views 180 degrees. You have to look at the balance between the risks and the benefits," he said. "One reactor meltdown could destroy the whole plant and, however unlikely, that is too great a risk."

Mr Kan lost the prime ministership later in 2011 amid strong criticism of his handling of the crisis. A parliamentary investigation accused him of distracting emergency workers by making a personal visit to the plant, withholding information, and misunderstanding a request by Tepco to pull out some staff as a demand to withdraw them all.

However, another independent inquiry said his action in ordering the "Fukushima 50" to stay at their posts was vital. "I went to the Tepco offices and demanded they not evacuate. To this day I am criticised for that, but I believed then and I still believe now that I did the right thing and that that was a decisive moment in the crisis," he told The Telegraph.

He admitted "regret" at his decision not to publish results from a computer system called Speedi, System for Prediction of Environmental Emergency Dose Information, which accurately forecast the spread of radioactivity around the plant and could have saved thousands of local residents from exposure.

"As a result, some areas were exposed to high levels of radiation," he said.

He criticised his successor as prime minister, Shinzo Abe, for restarting some of the country's nuclear power stations, all of which were shut down after the crisis, saying that Japan had "not learned the lessons enough" and was "closing its eyes" to the risk of a second disaster. He has joined protest demonstrations against the plant reopening.

"There is a clear conflict between government policy and the wishes of the public," he said. "Additional protective measures against tsunamis have been taken, such as raising the protective walls, but I don't think they go far enough. **We shouldn't be building nuclear power plants in areas** where there is a population to be affected. After the tsunami, Japan went without nuclear power for years, so it can be done."

The former leader said that "a lot of the accident was caused before March 11" by the complacency and misjudgement of Tepco, a verdict echoed by the official inquiry, which dubbed the nuclear accident a "man-made disaster".

The criminal investigation which led to last week's charges against Mr Katsumata and two other Tepco managers found that they had known since June 2009 that the plant was vulnerable to a tsunami but had "failed to take pre-emptive measures [despite] knowing the risk".

Mr Kan expressed satisfaction at the charges brought last week against a senior Tepco manager and said he would testify against Mr Katsumata if asked.