

Nuclear Institute - Cumbria Branch

Question	Agree	Response
Letter accompanying consultation response		<p>Introduction:</p> <p>The Cumbria Branch on behalf of the Nuclear Institute (NI) , which is a Professional Institution, and leading learned organisation in the nuclear industry, welcomes the opportunity to respond to this consultation, on volunteering to enter the siting process for a Geological Disposal Facility.</p> <p>This response covers each of the 9 questions in the Partnership’s consultation document, attached at Annex A.</p> <p>In addition, we have set out below:</p> <ul style="list-style-type: none"> - An overview of the Nuclear Institute, and its role - Brief description of how we’ve involved the NI membership in preparing the response - A summary of the key points in the NI response <p>The Nuclear Institute is content for this response to be made public in its entirety.</p> <p>Overview of NI</p> <p>The Nuclear Institute (NI) is a registered charity and operates as both a professional institution and a learned society. It commenced operations on 1st January 2009, following the merger of the British Nuclear Energy Society and the Institution of Nuclear Engineers, both of whom have origins going back to the 1950’s.</p> <p>The NI aims are:</p> <ul style="list-style-type: none"> - The promotion of the public understanding of nuclear sciences and the impact on society and the environment - The advancement of education relating to nuclear energy and its applications - The advancement of nuclear science, engineering and technology - In the interests of public safety, the promotion of high standards of education and professional performance amongst those engineers, scientists and others working within the nuclear industry. <p>The NI has a licence from the Engineering Council to qualify Engineering Technicians, Incorporated Engineers and Chartered Engineers and in 2010 received a licence from the Science Council to qualify Chartered Scientists. Anybody who has an interest in nuclear technology can join the NI as a learned member The NI has about 2,000 members including a thriving group of over 1000 younger professionals, the Young Generation Network (YGN). The YGN are active across the UK and internationally promoting the advancement of nuclear technology, sharing of best practices and the education of the public in promoting nuclear understanding and science and technology as a career path.</p> <p>The NI operates 10 regional branches in the UK, one in South Africa and one in UAE. We have many international links to develop</p>

and promote better practice in all aspects of nuclear. The NI is a member of the European Nuclear Society, with a membership second in size only to the French Nuclear Society.

The Cumbria Branch is one of the largest of the UK Branches with a membership of approximately 300 nuclear professionals. These professionals are from a spread of geographical locations ranging across the Cumbria County. A large proportion of the NI Cumbria Branch membership live and work in and around West Cumbria. Our nuclear professionals have a range of skills which encompass engineering, science and technical capability. We include environmental specialists, nuclear operators and a range of engineering disciplines within our members' core competencies.

The NI Cumbria Branch is an extremely active branch engaging with the local public through a series of lectures to promote understand of nuclear science and engineering e.g. the renowned summer lecture series which has previously focussed on topics such as new reactor build and the science behind a GDF. The Branch has also been a significant contributor to nuclear related public consultations relevant to the local area. This includes a Cumbria Branch led response on the NI response to the DECC consultation on MWRS Stage 4 frameworks for siting the GDF. The branch were also significantly engaged in The NI response to the DECC consultations on the Nuclear National Policy Statements, in 2010 and 2011 which reflected the NI Cumbria branch's concerns about the credibility of designating Braystones and Kirksanton as well as Sellafield as new nuclear build sites (in the 2010 consultation response).

As the NI offers a range of professional membership grades, many of our members hold professionally recognised Memberships such as Chartered Engineers or Scientists. In addition, a proportion of our members are recognised as leaders in their fields through achievement of the status of Fellow. A significant proportion of our membership hold professional accreditations with scientific and engineering professional bodies e.g. Royal Society of Chemistry, Institute of Mechanical Engineers etc. We hold a body of nuclear expertise and knowledge within our Cumbrian membership community.

In addition to our local membership core expertise, we are able to reach out to the Nuclear Institute expertise from across the UK. For instance one Past President, John Earp, is recognised for his nuclear expertise and has been invited to sit on a Pre-Licensing Nuclear Safety Committee for a projected new build in the UK and last year was nominated to become a member of the Nuclear Chief Inspectors Technical Advisory Panel. Our current President Norman Harrison, is invited to sit as an Industry Expert for the Nuclear Liabilities Finance Advisory Board (NLFAB), which advises the Secretary of State as to the adequacy and independence of funds established by new build operators to cover costs of decommissioning and remediation at the end of power plants operating life.

We believe that as nuclear professionals working and living in West Cumbria, we have a valuable contribution to make to the consultation on volunteering for the siting process. We also are willing to volunteer independent nuclear expertise to participate in future Partnership sessions and can provide a range of experts to support the Partners.

Further information can be obtained at www.nuclearinst.com or from the Executive Secretary Elaine Boyes (e.boyes@nuclearinst.com or 0208 695 8222).

NI Response Process:

Whilst the NI is a national organisation, it was recognised that this issue was concerned with a regional branch and Cumbria Branch lead the discussion, focussing the inputs around those local to West Cumbria.

For this consultation a small central Cumbria team was set up to co-ordinate the overall response. Local Cumbrian Branch members were contacted and asked to provide responses to the consultation. These were then collated and factored into a consolidated response which was reviewed by the central team. This consolidated draft was then circulated round the Cumbrian Branch committee for their comments/endorsement. The resultant draft was then produced for endorsement by the Nuclear Institute Board of Trustees. The emphasis throughout the process was to ensure that the response reflected the views of the nuclear professionals located in the regional branch of Cumbria.

An Overview of Key Points:

The NI recognises that there is a pressing need to find a long term solution for disposal of waste and supports volunteering to engage in the next part of the process and agree that Allerdale and/or Copeland Borough Councils should continue to take part in the search without entering into any commitment.

With regard to geology, the NI recognises that there remains significant work to determine the suitability of the remaining land not excluded by the BGS (British Geological Survey) study. . We acknowledge that this may not all be suitable for a GDF but without the evidence to definitively prove this, there is value in continuing to the next phase of the process.

The NI recognizes that in England the Environment Agency (EA) is the lead regulator for the disposal of radioactive waste and we are reassured by the rigour with which they are undertaking this role. However the NI does not believe that the role and responsibilities of the Office of Nuclear Regulation, (ONR, previously NII) are sufficiently clearly visible in the MWRS consultation document.

The NI advocates that the role of ONR is increased in visibility to give assurance that the lead UK nuclear safety regulator is satisfied with the processes for delivery of a future GDF.

The NDA is currently both the customer for and the supplier of the GDF. The NI advocates that the roles for funding and business investment decisions be separated from that of design and nuclear safety in a similar manner to the model used for Site Licence Companies interactions with the NDA.

We broadly agree with the conclusions made by the Partnership in that all perceived negative impacts can be mitigated once the next stage of the siting process is underway.

The NI recommends that, as part of the community benefits package, the Partnership should insist that investment is made into up-skilling the Cumbrian workforce such that it is well placed to win quality jobs on the project, maintain the existing nuclear infrastructure and eventually draw quality employment into the area.

The NI is unable to express an opinion on the design and engineering at this early generic or conceptual stage but it agrees with the Partnership's assessment.

		<p>We accept that the baseline and upper inventory estimates used in the consultation provide a reasonable scenario for the West Cumbria community to use in it's deliberations on participating in the next part of the process.</p> <p>The NI agrees that the siting process is logical, fair and transparent whilst honouring the principles of voluntarism.</p> <p>In order to ensure that the Partnership remains balanced and informed, the NI would like to offer the Partnership our independent professional expertise base in nuclear matters. The NI could provide independent West Cumbria based or National support and expert advice to the process.</p> <p>Submitted and Signed on Behalf of the Cumbria Branch Nuclear Institute and endorsed by Board of Trustees</p>
1 – Geology	Yes	<p>While there are some doubts over the suitability of the remaining land not excluded by the BGS (British Geological Survey) study, we support the methodology used by MWRS in seeking independent peer reviews of the study as best practice. The area of land remaining which was not excluded by the study clearly leaves adequate land available to accommodate the footprint of the GDF (Geological Disposal Facility) up to the estimated maximum 25 square kilometres. We acknowledge that this may not all be suitable for a GDF but without the evidence to definitively prove this, there is value in continuing to the next phase of the process.</p> <p>We do acknowledge that the suitability of the host rock is one of the key factors in deciding the long term safety of the repository in terms of migration of nuclides through the environment, and this needs to be understood intimately when identifying potential site areas. Whilst there remains uncertainty about the suitability of West Cumbria's geology it should be noted that understanding into nuclide transport through groundwater and different rock types has increased significantly in the last decade through R&D and will continue to do so over the future decades.</p> <p>Therefore it is prudent that West Cumbria should remain part of the search to identify a potential site area so that the knowledge can be applied to any decision to participate in future stages of the volunteering process.</p>
2 – Safety, security, environment and planning	Not Sure/ Partly	<p>The NI recognizes that in England the Environment Agency (EA) is the lead regulator for the disposal of radioactive waste and we are reassured by the rigour with which they are undertaking this role. The NI believes that the proposals presented to date do meet all safety, security, environment and planning requirements.</p> <p>However the NI does not believe that the role and responsibilities of the Office of Nuclear Regulation, (ONR, previously NII) are sufficiently clearly visible at this stage. The ONR has a wealth of experience of the regulation of sites licensed under the Nuclear Installations Act that should be applied to the GDF project.</p> <p>There are three reasons why additional input and involvement of the ONR should be sought:</p> <p>a. Underpinning documentation (Document 36.1 Regulators' roles and processes in the implementation of MWRS) shows that the GDF will be subject to the requirements of the Nuclear Installations Act and therefore subject to licensing and regulation by the ONR. The public consultation pack indicates a low awareness of the ONR role and it required significant research to locate the statement that supported the intent to license the future GDF.</p>

		<p>b. The proposals for the GDF indicate that the waste will, in principle, be retrievable. In this event it is likely that the waste will be retrieved to ONR licensed sites for treatment, storage or repacking in which case the ONR are a significant regulator in the process.</p> <p>c. The ONR have developed a robust methodology for progressive permissioning of facilities on Nuclear Licensed Sites. This ensures that the safety case is developed in parallel with the design and that work does not progress, nor significant expenditure committed, unless it can be demonstrated that it is compliant with pre-agreed safety principles and likely to lead to a licensable outcome. (The NI strongly advocates the discipline associated with this approach.)</p> <p>Therefore the NI advocates that the role of ONR is increased in visibility to give assurance that the lead UK nuclear safety regulator is satisfied with the processes for delivery of a future GDF.</p> <p>The NDA is currently both the customer for and the supplier of the GDF. As the “controlling mind” for the GDF, at this stage, the NDA occupies a position similar to that of a Site License Company ultimately responsible for the safe operation of the facility but it is also responsible for delivering the Government programme for resolution of the current lack of a long-term disposal route for higher activity radioactive waste. Even at this formative stage the NI believes that a robust but constructive customer/supplier relationship has many advantages in ensuring that safety, security, environment or planning problems are resolved in a pragmatic and affordable manner and also ensures that that the regulators are clear on who has responsibility for demonstrating compliance with regulations.</p> <p>The NI advocates that the roles for funding and business investment decisions be separated from that of design and nuclear safety in a similar manner to the model used for Site Licence Companies interactions with the NDA.</p>
<p>3 – Impacts</p>	<p>Yes</p>	<p>We broadly agree with the conclusions made by the Partnership in that all perceived negative impacts can be mitigated once the next stage of the siting process is underway.</p> <p>The NI considers that it is very important that the positive image of the West Cumbria nuclear industry be maintained and notes that the brand reputation work has not been completed and available to support this consultation.</p> <p>West Cumbria has long been affected by industry, both within and outside the National Park. This has not had adverse effects on the region as a whole. Many historic industrial sites are now tourist attractions, e.g. the mining industry. We believe that with adequate planning any impacts can be managed for the benefit of the area, ideally as long as provisions are made to address these impacts before the end of stage 5 is reached (where the right to withdraw from the siting process is removed). Most of the negative impacts will be of a finite nature during the construction phase of the repository. For example, the effect of noise and visual pollution during construction phases need to be taken into consideration as part of any community benefits package to ensure adequate infrastructure investment and to minimise impact on people's day to day lives</p> <p>The NI believes that siting the repository in Cumbria will bring economic sustainability to the region, as the nuclear industry has already done for the last 60 years. Maintaining or increasing the West Cumbria engineering and science base can only benefit other local industries which require these key core skills.</p>

		The NI note that there is a positive benefit which would sustain the scientific and engineering skills in West Cumbria, particularly as this will occur in the same timeframe as there is a decreasing need for these skills as the national decommissioning programme is delivered at Sellafield.
4 – Community benefits	Yes	The NI recognizes that the nature of a community benefits package is unclear at this stage and agrees that these need to be carefully negotiated and openly scrutinized. The design, construction, commissioning and operation of the GDF will require the employment of a significant number of skilled technicians and engineers. The NI recommends that, as part of the community benefits package, the Partnership should insist that investment is made into up-skilling the Cumbrian workforce such that it is well placed to win quality jobs on the project, maintain the existing nuclear infrastructure and eventually draw quality employment into the area.
5 – Design and engineering	Yes	The NI is unable to express an opinion on the design and engineering at this early generic or conceptual stage but it agrees with the Partnership's assessment. As described in Question 2.2 above, the NI does believe that issues of detailed design, retrievability and site specific issues should be subject to the same rigour of assessment as those applicable to a Nuclear Licensed Site.
6 – Inventory	Yes	<p>As largely professional scientists and engineers working in the nuclear industry, we appreciate the considerable alterations which may occur to the waste inventory estimate as a result of developments in technology, legislative changes, new nuclear projects and the opportunity for reprocessing spent fuel.</p> <p>We accept that the baseline and upper inventory estimates used in the consultation provide a reasonable scenario for the West Cumbria community to use in it's deliberations on participating in the next part of the process.</p> <p>We support the principles that the Partnership have proposed and encourage the Partnership to continue to engage with the Government as they seek to improve information on the upper inventory limits. We believe that it is reasonable for the Government to provide greater certainty over the inventory in the reasonably near term and this information should be made available to support any participating community in their decision making process.</p>
7 – Siting process	Yes	Yes, the partnership has taken a methodical approach to the siting process and has provided a conceptual process by which the Government's (already thorough proposals) for stage 4 of the siting process will be honoured. This uses standardised assessment techniques, such as weighted scoring matrices, to determine the overall comparison between potential site areas to be taken forward to stage 5. The NI agrees that the siting process is logical, fair and transparent whilst honouring the principles of voluntarism.
8 – Overall views on participation		<p>The NI considers that local communities should volunteer to engage in the next part of the process and agree that Allerdale and/or Copeland Borough Councils should continue to take part in the search without entering into any commitment.</p> <p>Many of the NI members live and work in the Allerdale and Copeland communities adjacent to the largest producer of radioactive waste in the UK. We are also living in proximity to one of the largest stores of High Level radioactive waste and Intermediate Level radioactive waste, in the world. The NI believes that the local communities should be fully engaged and active in seeking a long term and safe disposal solution.</p>

9 – Additional comments		<p>The NI recognises that there is a pressing need to find a long term solution for disposal of waste.</p> <p>The inhabitants who live and work in the Allerdale and Copeland Boroughs are the community most at risk from the accumulated waste of the early nuclear power and weapons programmes and resolution of final radioactive waste disposal is particularly important for themselves and future generations (both current and future local residents). We note that our NI Cumbria members contribute to this population by living and working in West Cumbria and this NI response to the consultation represents the local Cumbria NI membership.</p> <p>Similar to an infrastructure asset such as a road, the interim surface storage and packaging facilities currently in place require continual maintenance, upgrading when necessary to ensure modern and latest standards are in place, and eventual replacement. Some of the current facilities have been in place since the 1960's and so require considerable investment just to maintain adequate levels of safety. Individual waste products and packaged waste may require re-work if the GDF construction is delayed. Such activities expose the West Cumbrian workforce to risk, as well as costing the taxpayer more money. The sooner there is a permanent disposal facility the better for our population. The location will define the required repository design and the corresponding packaging design specification for waste products. Establishment of the location will enable these two issues to be resolved and reduce the need for such re-work of the waste packaging and storage arrangements</p> <p>In order to ensure that the Partnership remains balanced and informed, the NI would like to offer the Partnership our independent professional expertise base in nuclear matters. The NI could provide independent West Cumbria based or national support and expert advice to the process.</p> <p>Submitted and Signed on Behalf of the Nuclear Institute</p>