



## ***Appendix 1: Written responses to questions raised in writing (September 2016)***

### **Sea transports**

A1 The international regulations require the highest activity packages to be subject to an enhanced 200m immersion test. It is expected that recovery of the packages will take place prior to degradation caused by, for example, corrosion, through implementation of the emergency arrangements.

A2 The Radioactive material transport regs cover the 200m immersion test and require emergency arrangements (including recovery).

A3 No. The age of the vessel is immaterial. What matters is that the vessels we use meet and often exceed the required international standards for nuclear transports.

Before we undertake such transports, we prove that we comply with the UK regulations that enforce those standards to our regulators the Maritime and Coastguard Agency, and the Office for Nuclear Regulation.

A4 Pintail is an INF3-class vessel – the highest level of the International Maritime Organization’s INF Code which regulates shipments by sea of packaged irradiated nuclear fuel, plutonium and high level radioactive wastes.

Oceanic Pintail has an unblemished nuclear safety record. It is inspected annually and certified by the Maritime and Coastguard Agency (MCA). It continues to be used because it is a high quality asset with additional safety features, an excellent maintenance history and a lifetime of low use.

It is fitted with a wide range of safety features, including a double hull around its cargo spaces, twin engines and a comprehensive suite of built-in redundancy to all its critical operating systems. There is always a back-up system ready to be brought into operation.

A5 INS / PNTL crews are among the best trained and experienced nuclear transport mariners in the world. On average, each crew member has twenty years of experience. The crews on INS / PNTL ships are approximately two to three times larger than that found on chemical tankers of a similar size, providing an unrivalled depth of skills and resources on board during each voyage.

Each senior officer is trained to perform the duties of his immediate superior and the Chief Officer (second in command) on each PNTL ship holds a Master's Certificate. Several emergency training exercises are held each year to test the company's overall response activities, the communication systems, the expertise of team members and the ships' crews and the performance of equipment. All personnel are actively encouraged to enhance their skills and qualifications and to take relevant training courses.

A6 As well as our crews undergoing emergency response training and exercises, while at sea, the ships maintain a communications link with a report centre that is manned 24 hours a day. This voyage monitoring system automatically reports the vessel's latitude and longitude, speed and heading every two hours. If a message is not received by the report centre within a pre-determined time, the emergency response system is automatically activated. This system is backed up with secondary systems such as satellite and radio telephones.

Transportation and nuclear experts in Europe are always available to provide technical support to the ships and, in line with International Atomic Energy Agency (IAEA) recommendations a fully trained and equipped team of nuclear experts is available on a 24-hour emergency standby system. In the event of an emergency, this team would be dispatched to the ship and would direct and manage all remedial operations. INS / PNTL contracts with one of the world's most experienced international salvage experts, Ardent, which has operations in all regions of the globe and is able to respond quickly to requests for assistance.

A7 While there is no requirement for routine dose measurement on PNTL ships, all crew members wear individual thermoluminescence dosimeters (TLDs), to monitor individual radiation doses whenever casks of radioactive material are on board, in line with procedures at nuclear licensed sites.

During voyages, our crews live and sleep within just a few metres of their radioactive cargoes. Because of the excellent protection provided by the transport containers, the crews' annual average radiation dose is lower (0.08 mSv/yr) than the average additional dose due to a return air flight from the UK to Los Angeles, USA (0.11 mSv/yr).

Other dose comparisons from sources of exposure include:

Dental X-ray	0.005 mSv
Chest X-ray	0.02 mSv
135g bag of Brazil nuts	0.005 mSv
CT scan of the head	1.4 mSv
UK average annual radiation dose	2.7 mSv
Average annual radon dose to people in Cornwall	7.8 mSv

A8 No. Emergency plans already exist for a wide range of accident scenarios at land and sea and are exercised regularly by relevant agencies. Information about specific movements is shared only on a “need to know” basis, in compliance with regulations governing the safety and security of nuclear material in transit.

A9 We believe this is a question for the Department of Transport.

A10 DSRL confirms that 21 shipments of radioactive waste were collected from Dounreay by the Belgian authorities between 2012 and 2014 and transported by sea from Scrabster.

A11 We believe this is a question for the Department of Transport or the International Atomic Energy Agency.

A12 All organisations involved with the transport of nuclear materials have tried and tested emergency planning arrangements covering the complete route.

Examples of this include:

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 Schedule 2 paragraph 4 places a duty on the consignor and carrier with regard to the preparation of emergency arrangements: 4. (1) Before the carriage of a package begins, the consignor of that package must ensure that there is a plan in writing setting out such emergency arrangements as are appropriate for the carrier of the that package.

IAEA Safety Standards Series *Planning and Preparing for Emergency Response to Transport Accidents involving Radioactive Material (TS-G01.2 (ST-3) Section 1 para 1.3*

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PM's Office

Under the agreement, which will be announced by the Prime Minister at the Nuclear Security Summit in Washington later today, the UK will transfer around 700 kilograms of excess Highly Enriched Uranium (HEU) from the Dounreay nuclear site on the north coast of Scotland to the US.

<https://www.gov.uk/government/news/uk-us-and-eu-sign-landmark-deal-to-turn-nuclear-material-into-cancer-fighting-treatment>

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Nuclear Security Summit 2016

<http://www.nss2016.org/document-center-docs/2016/4/1/joint-statement-on-eu-us-heu-exchange>

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Nuclear Security Summit 2016

<http://www.nss2016.org/document-center-docs/2016/4/1/fact-sheet-eu-us-exchange>

[http://nnsa.energy.gov/sites/default/files/nnsa/05-13-multiplefiles/2013-05-02%20Euratom\\_123.pdf](http://nnsa.energy.gov/sites/default/files/nnsa/05-13-multiplefiles/2013-05-02%20Euratom_123.pdf)

A16 When Wick John O'Groats Airport was identified as an option for the transport of the HEU, it was recognised that the infrastructure would need strengthened to meet the standards required for nuclear transport. This has been done.

A17 Staff at Wick John O'Groats Airport are fully qualified for responding to a range of aviation accidents. Where additional training is required for any hazard specific to a nuclear cargo, this is provided by DSRL.

A18 DSRL and its partners are required to ensure appropriate security arrangements are in place for a transport of nuclear material. For some cargo, this includes the deployment of armed police to protect the public from those who may seek to use this material to cause harm. Temporary road restrictions can assist the police in their duty to protect the public.

A19 DRS has operated 52 services in and out of Georgemas Junction Railhead since it opened

A20 We suggest the Department of Transport, the Civil Aviation Authority or the International Atomic Energy Agency.

A21 All organisations involved with the transport of nuclear materials have tried and tested emergency planning arrangements covering the complete route. These arrangements are verified by the appropriate regulatory bodies.

A22 The NDA engages regularly with Highland Council and other stakeholders on its exotic fuels consolidation programme. DSRL invited local authority emergency planning officials to a workshop during the planning phase of the Dounreay Exotics Consolidation Programme and gave a presentation to elected members and officials in Caithness at the request of Police Scotland prior to the first shipment. Information about specific movements is shared only on a “need to know” basis, in compliance with regulations governing the safety and security of nuclear material in transit.

A23 The NDA engaged extensively with stakeholders on the options for the exotics material, before reaching a decision in 2013 to remove them from the site. DSRL’s priority is to comply with the regulations governing the safety and security of nuclear material. The regulations require DSRL and its partners to protect information about routes, locations, date and timings.

### **Rail transports**

A24 The NDA respects the opinions of MPs and MSPs. On matters of rail safety, we refer to Network Rail, the owner of the track. Network Rail advise the track is safe to use.

A25 DRS provide training for the traincrew and the on-board staff, which covers roles and responsibilities in the event of an operational or security incident. These are tested by an exercises programme, with other associated agencies.

Both DRS and Network Rail monitor the location of trains so that the precise position is always known. If an incident occurred both DRS and Network Rail control staff are trained to initiate the UK wide emergency plan 'RADSAFE' involving multi agencies. The RADSAFE arrangements provide a 24-hour emergency response system with fully trained and equipped expert teams. In the event of an emergency, this team would be deployed to the train.

A26 Track safety is the responsibility of Network Rail.

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A27 Information about cargo volumes at Wick John O'Groats Airport should be sought from Highlands and Islands Airports Ltd, the airport's owner. NDA is not aware of any radioactive waste being transported through Wick John O'Groats Airport.

A28 ONR is the Competent Authority for road and rail. Reporting was covered in the ONR presentation to DSG – see <http://www.onr.org.uk/documents/2016/events-reported.pdf> and <http://www.onr.org.uk/quarterly-stat/index.htm>.

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- INS / PNTL ships are classified by the International Maritime Organisation (IMO) of the United Nations at its highest level of INF3. The INF Code regulates shipments by sea of packaged irradiated nuclear fuel, plutonium and high level radioactive wastes.
- As the carrier of nuclear cargoes, INS has direct responsibilities placed on it for emergency planning, preparedness and response by the transport regulations set by the International Atomic Energy Agency (IAEA), and International Maritime Organisation (IMO). The top level emergency plans are approved by the Maritime Coastguard Agency (MCA) in the UK.
- The INF Code contains information on the development of “shipboard emergency plans” and highlights the generic requirements for carriage of INF cargo. The plans are approved by the independent UK Maritime and Coastguard Agency (MCA) and detail the action to be taken by the ship’s Master in the event of an incident. These plans would inform MCA response to any incident.
- An INF3 incident at sea would be handled in line with the National Contingency Plan for Marine Pollution from Shipping and Offshore Installations (NCP). The MCA is responsible for counter pollution operations including clean-up at sea. The Secretary of State’s Representative for Salvage and Intervention (SOSREP) controls any salvage operation.
- The ships used by INS are purpose-built to meet the highest standards for transporting specialist nuclear cargoes. These standards are set by the IMO and are applied in the UK by the MCA. Each vessel is essentially a ship within a ship, with double hulls, double engines, and duplication of all vital systems, steering and navigation.
- Vessels are monitored by a 24-hour report centre in the UK, allowing unforeseen events to be evaluated and responded to quickly.
- In the very unlikely event of a vessel sinking, it can be accurately located to depth of around 8,000m using special transponders which can be interrogated from the surface to gather information on the orientation of the vessel, extent of damage and whether any radiological containment has been breached.
- If any vital equipment were to breakdown, duplicate equipment is available on board. Despite this built-in redundancy, INS emergency response procedures would immediately be activated to monitor and respond to the situation as necessary.
- INS also has the permanent support of salvage experts, Ardent, who are also available to respond 24-hrs a day and have global resources for maritime emergencies.

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The NDA has published a notice on its website regarding the NDA's undertaking to an initial feasibility study on spent nuclear fuel management. Stuart Chalmers responded that this was primarily for new build and should not impact on the Dounreay site.

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George Farlow noted that at the DSG meeting in December Shetland Islands Council had written to DSG and the site on the transport of enriched uranium to the USA from Wick by air. DSG(2010)C095 refers. The site had responded (see DSG(2010)C107). As per the action placed at the September December the issue had been placed on the agenda for discussion.

Rick Nickerson re-iterated that Shetland Islands Council had serious concerns about the shipment of fuels. He thanked Simon Middlemas for his comprehensive response. He further added that this was perhaps not an issue for DSRL as they were probably told what to do with this material. He did feel, however, that this was a matter for DSG as the shipment of fuels could have the potential to overshadow the good work of the site. Concerns from Shetland Islands Council relate to the potential number of shipments that may take place over the lifetime of the decommissioning programme. There was a potential for 100s of movements.

Rick added that given the National Security Council's recent announcement that the biggest threat is action from terrorists and given the recent activities of terrorists, targeting cargo shipments of fuels could add another dimension for terrorism.

Simon Middlemas responded that this was exactly why information on any movements would not be provided in advance. Security was taken very seriously and the Office of Civil Nuclear Security take an active involvement in this issue.

Rick Nickerson recognised this but stated that he knew colleagues in Shetland and Orkney had concerns in this area and this was something that would continue to be raised as an issue.

Hamish Pottinger disagreed. He personally had been delighted to see the fuel go back to the USA. He added that he had seen the police cars etc but no-one in the area was aware of what was happening and given the security measures this was only right and proper. He added that the quicker the material was removed from the site the better.

Simon Middlemas clarified that the site is not allowed to ship waste because it would be against Scottish Government policy. However, the shipment of fuel is a different category and this is sanctioned by Scottish Government. If the fuel remains on the site then new fuel stores would need to be built. He further added that by having fuel remaining on the site meant that there had to be a police presence which meant a high

proportion of the site's budget would be spent on security. For clarity, un-irradiated fuel can go by air while (almost all) irradiated material goes by surface transport. While recognising the issues surrounding terrorism he personally felt that it was detrimental to have material dispersed across the UK and the material could be better defended if it was all in one place. In the case of the USA material this had been an instruction from Government to the NDA and the site was obligated to fulfil this commitment.

Rick Nickerson stated that he understood why there were differing views but added that there was a need to look at the risk assessment. Simon Middlemas responded that there were three potential routes out – by air, sea or rail. Rick Nickerson asked whether DSG had a view on shipping since there had been a couple of near misses in the Pentland Firth in recent times and Shetland islands Council were opposed to this. Given the reduction of tugs in the vicinity this could also add to the detriment potential for shipments.

Bob Earnshaw noted that Rick's comments were specific to Shetland. Most of those living within the local community agree that materials should be removed from the site.

John Deighan added that while he understood Shetland's concerns he did not remember a time when Shetland invited people from Caithness over to discuss areas of concern from potential developments. Rick Nickerson responded this had been raised on numerous occasions and if there was a major incident in Shetland it was unlikely to impact on Caithness while a major incident at Dounreay would have a potential detrimental impact on Shetland. He re-iterated that there was a potential environmental impact if rescue tugs were unavailable in the area.

Phil Cartwright noted that any shipping routes were carefully planned with due regard to different scenarios which could potentially happen, together with contingency plans.

Following discussion it was agreed that the sub group should consider the removal of the tugs which could potentially impact on the Pentland Firth. It was agreed that this would be flagged up to the DSG Socio Economic sub group to consider the impact of the removal of the tugs. Rick Nickerson agreed to send information on the proposals to remove rescue tugs to the Secretary.

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Rick Nickerson stated that he was aware of the plutonium management credible options analysis which the NDA had published, in particular Mox fuel. He noted that the Sellafield Mox plan had never worked efficiently. While he was aware that it was not a particular issue for Dounreay he noted that if the option goes ahead he could see impacts on the NDA's revenue which may have a detrimental impact on Dounreay in terms of annual site budget. He suggested that the DSG Socio Economic sub group consider this as there is a potential to impact on the short-term socio economic impacts of the Caithness and North Sutherland community.

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George Farlow noted that the NDA had now published the credible and preferred option for the Dounreay Fast Reactor Breeder fuel (DSG(2011)C222 refers). He noted that the

Socio Economic sub group had discussed the paper during their meeting in the afternoon and had agreed to go back to the NDA for further information on the lifetime costs for each option.

Bob Earnshaw stated that it was important for DSG to consider this paper and understand the impacts that the different options will make on the community.

Anne Chard said that she felt that the information in the document was incomplete, it was a poor document, very light on detail and inaccurate, or confusing, information. Road and rail were mentioned as possible transport mechanisms but sea was not considered. The document moved from exotic fuel, to spent fuel, to fuel, to material which helped to confuse the reader. She felt that the terms were not defined and all options were not covered by this document.

George Farlow declared an interest because of his SNP alliance and noted that if further debate on this subject took place at future meetings he would wish to hand over the chair to Anne for this specific topic.

It was agreed that members would consider the options and provide the Secretary with comments by the 19<sup>th</sup> August.

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DSG(2011)M007/A043: ONR to provide a response as to whether risk assessments for nuclear shipments consider the removal of the emergency tug vessels.

Email from Peter Dickenson on 10<sup>th</sup> October 2011 as follows "It is my understanding that risk assessments for shipments are not a matter for ONR. However, my transport colleagues have taken the matter up with the Maritime and Coastguard Agency (MCGA), who replied to the question as follows: Risk assessments for shipments are for the consignor of the cargo. The ETV [emergency tug vessels] service has been withdrawn and although we [MCGA] are involved in the efforts to fund and provide a short term service in Scotland post-withdrawal we cannot comment on the impact of these arrangements until the contractual arrangements have been completed."

Steven Heddle noted that DSRL had a milestone for the shipment of fuel to Sellafield. Simon Middlemas confirmed that this was for the DFR breeder fuel movements. Steven Heddle asked how many shipments were expected. Simon Middlemas responded that there would be about 90 shipments in total and would consist of 1 flask per shipment. [Secretary's note – this has been corrected since discussion at the meeting]. Steven Heddle noted that he was delighted to see that this would be going by rail and not sea. Rick Nickerson noted that Shetland Islands Council was opposed to all transport of radioactive material.

[NDA] Confirmed Simon Middlemas' statement that the NDA Executive was likely to approve the business case for DFR breeder fuel.

Bob Earnshaw noted that DSG had not yet received a response to their submission on DFR Breeder Fuel. Rick Nickerson said he was not aware of a response to Shetland Islands Council. [Secretary's note: NDA's response to stakeholder views was received

on 14<sup>th</sup> November and confirmation of the approved business case was received on 21<sup>st</sup> November.]

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John Deighan noted that Direct Rail Services had been awarded a contract to build a railhead siding at Georgemas Junction. David Flear added that NDA were meeting with Highland Council on 19<sup>th</sup> January to outline its plans for the transport of Exotic fuel from Dounreay to Sellafield. The railhead at Georgemas was part of that plan and consideration was being given to leaving a legacy for future use.

A meeting with the Highland Council had been arranged for the 19<sup>th</sup> January to outline the NDA's plans for the transportation of DFR breeder fuel and the potential to move Exotic fuel.

An engagement paper on Exotic fuels will be published at the end of January.

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David Flear asked how safety and security would be reflected in the movement of DFR breeder fuel from Dounreay to Sellafield. He particularly emphasised the need for safety issues to be considered for road transport between Dounreay and Georgemas.

Peter Dickenson introduced a briefing paper on safety and security responsibilities of the Transport of Radioactive Material (including nuclear material) in Great Britain – DSG(2012)C037 refers. He noted that the action placed on ONR (Transport) was about the removal of the emergency tug vessels which ONR did not regulate. Following a discussion it was agreed that the secretary would write to the Maritime and Coastguards to clarify the issue of the removal of emergency tug vessels related to safety of transportation of waste by sea.

On a related issue regarding transportation of nuclear materials it was agreed that ONR would be asked what consultation would be undertaken on the various bodies, along proposed routes.

Alastair MacDonald (Dounreay) also invited George Farlow and David Flear to visit site to discuss DFR breeder fuel moves with site management.

George Farlow noted that, at a recent Highland Council meeting, Dr Adrian Simper, NDA had taken an action to provide information on the Community Councils that would be consulted with for the transportation of DFR breeder fuel. Stuart Chalmers noted that Direct Rail Services (DRS) would be engaging with communities along the route.

Anne Chard noted ONR's concerns regarding DSRL bringing equipment back into service after maintenance. She asked if this was a process or human issue. Peter Dickenson responded that this actually could be both; the process was the first thing that is looked at which normally goes along with people not following the process exactly. In this case the site had undertaken a great deal of effort to get the equipment back into operation but the system did not recognise when a piece of equipment was redundant and this was where the site put some effort in to rectify this.

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Peter Watson responded he had been unable to respond formally in time for this meeting. He did, however, have a provisional view which may change following further advice from colleagues in ONR Civil Nuclear Security and ONR Radioactive Materials Transport. At present, Peter had been advised that there is no requirement to mention emergency tugs or similar in a Transport Security Plan, which is the mechanism by which ONR Civil Nuclear Security regulates the movements of nuclear materials. He has also been advised that there is no security risk which could be mitigated by a tug which is not mitigated by another method. Peter indicated he would discuss this further with ONR and provide a formal response.

A trial of the transport arrangements for DFR breeder fuel to Georgemas took place in July.

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DSG(2012)M002/A012: Secretary to write to ONR to request information on what consultation ONR will carry out between various bodies along a transport route for nuclear materials. see DSG(2012)C071.

The physical facilities at Georgemas are now complete and are ready to transport fuel from Dounreay to Sellafield.

David Flear stated that having seen a brief on the report it did give some concerns about the preferred option for DFR breeder fuel going to Sellafield. He asked if NDA had concerns and whether they would be reconsidering this option. Nigel Lowe responded that Sellafield was a very large and complex site with a mixture of old and some state of the art facilities. He agreed to provide an update to DSG members when NDA's response was finalised.

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: Nigel Lowe to provide a written statement on commitments made by NDA with regards engaging with communities along the railway line for fuel transports.

The NDA wrote to all the local authorities in Scotland offering engagement on fuel transport. Highland Council alone sought further information/contact. NDA's Head of Strategy attended The Highland Council PED committee – the meeting was webcast live and gained considerable press coverage including a live interview with BBC Highland and several local press articles.

David Flear asked whether transport of DFR and Exotic fuel would be carried out in parallel or whether DFR fuel was to be completed first before the exotic fuel was transported. Nigel Lowe responded that the fuel movements were not dependant on one programme being completed before the other could start and hence scheduling

would be based on an optimised shipping site, receiving site and transportation solution.

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Tom Smith provided a verbal update. Of note:

He briefly summarised the contents of the December presentation noting that the current operational reactor was scheduled to shut down in around 2015 and that the announcement that there would be no prototype for the next generation had been made in November 2011.

The project is in an Assessment Phase and a decision on the future of the site will be made in around 2016. At present preparations are ongoing for the Vulcan Post-Operational Phase (VPOP), i.e. getting the fuel off site. Also options were being considered for the decommissioning and future of the site (options range from prompt decommissioning to placing the facilities in long-term care and maintenance whilst retaining the sites strategic capabilities).

Safety Justification Plans (SJP's) have been produced to demonstrate to the regulators that safety considerations are being taken in the VPOP phase. In support of this technical assessments have also been undertaken on the key equipment to be used.

In parallel, a fuel movement capability is being developed to allow the fuel to be taken off the site. This includes the definition of the process required, along with SJP's. An extension to one of the buildings is also being designed to allow for fuel flask handling and this is currently with Highland Council Planning for consideration.

Discussions are in place with NDA and they have agreed to provide support to decommissioning planning for the site. A statement of requirements has been issued and discussions with the NDA are continuing.

Cllr Roger Saxon asked if Rolls Royce have the contract for the post operational phase. Tom Smith responded that discussions were on-going for Rolls Royce support to the Assessment Phase and that the contract signature was imminent (PMN: The contract has now been signed).

Cllr Roger Saxon asked whether more use could be made of the site following the defuelling programme. Tom Smith replied that during the Assessment Phase they were looking at possible future uses for the site. Cdr Ken Dyke confirmed that this was for MOD's use and that if the site was not required by MOD it would be returned to the NDA and its future use would be a decision for them.

Alan Scott asked whether a resource plan had been developed. Tom Smith responded that at present the resource requirements for the next 2-3 years were well understood. It was more difficult to predict the numbers working on site after this but this would be something that would be considered following options appraisal.

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Tor Justad stated he had visited the Vulcan site that afternoon and found it very useful. Everyone who they had met on site had been very open and had explained things very well. He noted the work being looked at with regards fuel and asked whether that fuel was also destined for Sellafield and what the timescale was. Ken Dyke responded the defuelling programme was scheduled for 2016 onwards. At present there was no capability to move fuel from the site. Tor Justad asked whether the fuel would be transported by train. Ken Dyke responded that this was the current plan.

Tor Justad said he noted within the nuclear regulations guidance that significant transport incidents or accidents must be reported to ONR so that they can be investigated and appropriate lessons learnt and acted on. He asked if there was an incident surrounding transport of nuclear material what ONR's role would be. He also referred to the Barrow derailment and asked whether ONR had done their own investigation of this incident.

Peter Watson confirmed that ONR did regulate transport and were also interested in the security aspects dependent on the type of material. Tor Justad asked what action ONR would take if there was an incident in the area when transporting material from Dounreay to Sellafield. Peter Watson responded that this was not his area of expertise and would check the details and respond appropriately.

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DSG(2013)M004/A006: Nigel Lowe, NDA Head of Programme, to provide a comprehensive briefing on fuels strategy and the engagement process undertaken.

*June Love noted that she had sent Tor Justad all DSG correspondence relating to fuels. Tor, after reading this information, would come back with specific questions for NDA to respond to.*

Roy Blackburn noted that there was £200M additional work within the programme. Nigel Lowe said that the additional costs were driven by security enhancements and exotic fuel movements, neither of which were mature enough at the time of competition to be included in the contract. Dyan Foss added that this work had been fully scoped out following contract award. Bob Earnshaw acknowledged that DSG had been kept updated on the changing requirements for security enhancements which was driven by UK Government. John Deighan felt that additional funding should be made available for the additional work. Nigel Lowe responded that there would not be additional funding and that the work would be carried out within the funding limits agreed by UK Government. David Flear added that this was no different from other government bodies.

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David Flear noted that the media had been in touch with him, as DSG chairman, asking about nuclear fuel being transported by sea. Radio Highland, Radio Scotland and Moray Firth had also requested interviews and he had re-iterated the fact that the DSG had

received a presentation on Exotic fuel in March and that the sea transport was being trialled to ensure an alternative route.

June Love noted she had received correspondence from Councillor George Farlow on the transport of fuel by sea and also the recent Herald article regarding the Highland Council and safety measures. George had asked that the information below was passed to the group. This was as follows:

- Highland Council was reviewing its position to see whether they can come into line with other local authorities, while complying with all regulations. Highland Council agreed they should be as transparent as security and safety will allow.
- Highland Council was currently updating its website and all web pages are migrating to the new site as part of a cycle.
- Suggested that the DSG Business meeting may consider inviting Donald Norrie (Highland Council Emergency Planning) to the next DSG meeting in September.
- With regards, ETV (Emergency Tug Vessels), the Council's position remains that there should be a second vessel actively patrolling the Minch.
- Personally, Cllr Farlow was against any transshipment of nuclear fuel or waste by sea, whilst there is a rail option.

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Cllr George Farlow asked whether transport of nuclear material was allowed through the Channel Tunnel. Phil Cartwright responded that he understood transport of hazardous substances was not allowed and while this had been looked at a number of years ago it had never formed part of the tunnel safety arrangements. Cllr Farlow asked if that meant that the transport of nuclear material was not safe through tunnels. Nigel Lowe responded that the two were not related. The Channel Tunnel was operated by a private company who had taken the decision not to include nuclear as part of their permitted cargoes just like some tunnel operators elsewhere have placed restrictions on such cargoes as edible vegetable oils following their contribution to a severe tunnel fire in mainland Europe.

David Broughton noted that the MV Parida incident had been a perfect case of the media raising this because of its nuclear cargo. Phil Cartwright noted that the vessel had recently been through re-validation and was accepted by the authorities in UK and Belgium. However, this was the result of a fault which was not uncommon with heavy oil fuelled vessels. Phil pointed out that this was a marine incident as opposed a nuclear one. This vessel was INF1 compared with the INF3 class which would be used for the movement of nuclear fuels.

David Broughton acknowledged this but stated that to the public it was a nuclear incident. Phil Cartwright agreed this was the initial focus of the incident. There was a team of people from the site, including NDA, who provided support to firstly the MCA and then to Police Scotland and there had been really good co-operation between the multi-agencies. The incident had been co-ordinated well however this did not stop the

story from being widely distributed and for other dimensions to be included such as the provision of emergency tug vessels. The evacuation of the oil rig was decided following the enactment of their own emergency procedures. Overall the incident had highlighted a number of issues that needed to be brought to the table.

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John Deighan noted the recent announcements regarding termination of the NMP contract at Sellafield and asked whether this would have any bearing on the programme for fuels from Dounreay being transferred to Sellafield. Nigel Lowe responded that there should be no impact on the fuels programme as a result.

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Work continued to progress the transport options and regulatory registrations for fuel movements.

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The priority for the site at present (noting that Safety is always the priority) is to get the programme back on schedule for the fuel transports to Sellafield.

Bob Eanshaw asked whether the removal of nuclear material was still the site's priority. Nigel Lowe responded that safety and security were always the over-riding priorities for all NDA sites. The removal of the fuels would be taken into account when the extent of the spending review was known.

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Bob Earnshaw welcomed everyone to the meeting. He introduced Dr David Knowles who was attending on behalf of MOD to provide a presentation fuel transports. He also welcomed Brian Mutch to the meeting who had taken over from Ian Lesley, SGRIPD. Introductions were made round the table.

- David Broughton asked whether, on the basis of Sellafield decommissioning timescales, the fuel transports to Sellafield fit with Sellafield's schedule. Cdr Ken Dyke confirmed that this was the case. Dr David Knowles added that the WIF pond on the Sellafield site was used for MOD fuel only. The fuel transported from Vulcan would go into the WIF.
- David Broughton asked if there was fuel already at Sellafield. Dr David Knowles confirmed that there was and the management of this was under contract with Sellafield Ltd.
- David Broughton asked how many Used Fuel Flask containers did MOD own. Dr David Knowles responded that there were three containers, all MOD owned.
- David Flear asked if Georgemas railhead would be used if the fuel was transported by rail. Dr David Knowles responded that he could not be explicit about the mode or

route of any transportation.

- David Flear asked whether the MOD had held discussions with Scottish Government on this. Dr David Knowles responded that letters had been issued before Christmas to specific Scottish Government Ministers, MSPs, MP and other officials outlining fuel movement plans.
- Roy Blackburn asked what MOD's interactions were with ONR. Dr Knowles responded that there was a Letter of Understanding between DNSR and ONR colleagues which covers transportation. There is a high degree of equivalence between ONR Licence Conditions and DNSR Authorisation Conditions and due to the uniqueness of the MOD's use of nuclear power for submarines, this had resulted in four additional Authorisation Conditions.. David Flear noted that previous discussions with Nigel Lowe had confirmed that conditions for the movement of fuel were almost identical to that of Dounreay.
- David Broughton asked whether it was envisaged to hold any local consultation or engagement. David Flear added that at the NDA National Event there had been a Fife Councillor who had raised his concerns relating to the transport of radioactive material, especially in light of the recent floods. The question of weather conditions had been raised at the December DSG and ONR had provided assurances that the weather conditions had been taken into account.

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No further questions were raised. Bob Earnshaw handed over to Dr David Knowles to provide a presentation on the movement of Vulcan fuels. See DSG(2016)C004 for the presentation.

Questions arising from the presentation are below:

- David Broughton asked whether the 12 moves over next six years was the totality of the fuel moves. Dr David Knowles confirmed this was correct.
- David Broughton asked what WIF stood for. Dr David Knowles responded it was an abbreviation for Wet Inlet Facility.
- David Broughton asked whether, on the basis of Sellafield decommissioning timescales, the fuel transports to Sellafield fit with Sellafield's schedule. Cdr Ken Dyke confirmed that this was the case. Dr David Knowles added that the WIF pond on the Sellafield site was used for MOD fuel only. The fuel transported from Vulcan would go into the WIF.
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There being no further questions, Bob Earnshaw thanked Dr David Knowles for his presentation. He confirmed that the presentation would be circulated to all DSG members for information and published on the DSG website.

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A number of issues had been discussed at the meeting including transport of materials, particles update and low level waste issues.

Strategy issues would be the main focus over the next few months with the NDA looking to co-locate spent fuels within the estate. At this time, no decisions had been made and currently this is at the stage where feasibility studies are being undertaken along with discussions with regulators, etc. Stuart re-iterated that no decision had been made and consideration to this was at a very early stage.

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UK Government is currently considering the future of the UK nuclear regulatory body. It was announced to Parliament in February that the Government intends to create a new Office for Nuclear Regulation which brings a number of departments together including Nuclear Directorate, Transport, Security and Safeguards into one department. There would be no effect on the legislation but does mean some internal re-organisation for HSE on the 1st April 2011. In the future a statutory corporation would be created once the legislation had been passed. The key message was that there will be no change to how sites are regulated or the standards expected.

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Bob Earnshaw noted that over the past few months the NDA had informed DSG members that NDA would be undertaking an options review for fuels. This was now moving forward and a presentation from DSRL would be provided to update members further.

Stuart Chalmers noted that the NDA's objective was to ensure that all exotic fuels are managed in a safe and secure way for the lifetime of the fuel.

The NDA manages a small inventory of approx 500 tonnes of non-standard fuels (known as exotics) and while smaller in quantity than the bulk fuels, exotic fuel presents their own particular management challenges due to their diverse properties.

These fuels, include metallic, oxide and carbide materials, and are a legacy from earlier nuclear industry activities such as the development of research, experimental or prototype reactors, all of which were undertaken at Dounreay in the past.

Examples of exotic fuel types on the Dounreay site include:

- Dounreay Fast Reactor (DFR) breeder material
- Dounreay Prototype Fast Reactor (PFR) spent fuel

A number of facilities exist across the NDA estate that could potentially be used to manage these fuels.

The NDA plan to treat exotic fuels to achieve a final disposition form as soon as reasonably practicable. This may entail reprocessing, conditioning or immobilisation, as appropriate. The disposition forms will then be stored prior to re-use or consignment to a disposal facility. NDA will ensure the continued safe management of these fuels, maximising opportunities to use existing facilities where value to the UK taxpayer can be secured. This may involve consolidating material at one or more locations for storage and treatment, and storage may be needed for several decades.

ND are currently developing business cases for the management of each fuel group. These business cases will determine the future management strategy for each exotic fuel and our aim to align the exotic fuel families with other strategies, specifically those for oxides, Magnox, uranics, plutonium and higher activity waste (HAW).

It will not be possible to reprocess many of these exotic fuels using existing facilities, and so alternative management options are being developed. The challenge for the strategy is the current lack of technical underpinning for the options to manage many of the exotic fuels. For each option NDA are working to better understand these technical issues (eg corrosion resistance and fuel behaviour during reprocessing) alongside the security, safeguards

The NDA's business plan states "establish site capability for Dounreay Fast Reactor (DFR) breeder fuel transfers to Sellafield".

DSRL have been working with Sellafield Ltd, Magnox and the NDA to establish the credible options going forward.

At this point Stuart Chalmers handed over to DSRL's Alex Anderson who provided a presentation to the group. See DSG(2011)C204 for presentation.

Following the presentation questions were raised as follows:

- Bob Earnshaw asked how long it would take to construct a facility to store the fuel. Alex Anderson responded that the Sellafield Product Residue Store (SPRS) had taken about 5 years. The timescales included the consent required for safety cases to provide robust arrangements which would satisfy both regulatory authorities.
- Peter Dickenson, ONR noted that the presentation did not make mention of safety. Alex Anderson responded that they had been engaged with both regulators with regular meetings to discuss processes and progress. He emphasised that safety was not something that had been taken lightly and the input from regulators had been welcomed.
- Peter Dickenson noted that with the recent re-organisation of HSE and the amalgamation of safeguards, security, safety and nuclear transport under one roof should lead to a more effective and efficient approach in regulation. He confirmed that discussions had been ongoing with regulators regarding the fuel options. Alex Anderson agreed and added that he was aware that both ONR and SEPA would need to be satisfied that every consideration was taken seriously and could be justified in safety cases.
- In response to a question regarding the railhead Alex Anderson confirmed that these options were still being looked at and Direct Rail Services would be considering all options. Alex confirmed that Thurso railway station had been ruled out while Georgemas was one of the options being considered.
- Anne Chard asked whether sea transport had been considered. Alex Anderson responded that it had been but that Sellafield does not have the capability of handling sea transport. He added that sea transport was considerably more expensive than rail.
- John Crowden asked whether ongoing security requirements had been factored in when considering the options. Alex Anderson confirmed that this had been the case
- Alan Scott asked whether the Dornoch rail link could benefit from the rail transport option. Alex Anderson responded that this was a good question and was something that Direct Rail Services could consider.
- Koreen MacDougall asked whether CO2 emissions were being taken into account. Alex Anderson confirmed that all environmental impacts were part of the business case and this included Co2 emissions.

- Koreen MacDougall questioned whether Scotrail had been approached and were agreeable to the potential rail shipments. Alex Anderson noted that Direct Rail Services, as part of the freight haulage requirements, would be contacting Scotrail at an appropriate time.
- Koreen MacDougall noted that, through the Caithness Transport Forum, they would be happy to provide support relating to the transport issues if required.
- John Crowden noted that some new infrastructure would be required at the railhead. Alex Anderson responded that there would be a requirement for lifting and therefore a mobile crane would be required. John Crowden asked whether the crane would be temporary or permanent. Alex replied that this was something that required further discussion but there was a possibility that consideration could be given to leaving something as a legacy and potential benefit for the future. John Crowden added that this could allow other users to benefit.

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On the NDA's credible and preferred options for DFR Breeder Fuel DSG representatives attended a meeting, facilitated by Caithness Transport Forum, to meet with Direct Rail Services to discuss the potential move of fuel to Sellafield by train.

Rick Nickerson noted that the Shipping Minister had removed funding for the emergency tug vessels. Despite robust campaigns by Highland Council, Orkney, Western Isles and Shetland Islands Councils funding would now cease at the end of the month. The removal of these tugs passes on a risk to the coast of Caithness whether it be salvage or safety of life. He questioned the agencies present whether the removal of these tugs will be considered when carrying out risk assessments.

Rick then questioned SEPA as to whether they had been consulted on the shipment of radioactive steam generators which were being shipped from Canada to Sweden. Linda Buchan responded that it was not SEPA that would regulate the transport but agreed that she would clarify whether SEPA had been consulted.

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NDA provided Highland Council with a presentation on plans to transport DFR breeder fuel and the credible options for the Exotic fuel. DSG members were currently considering the options paper for Exotics. A presentation was provided to DSG members (see agenda item 9).

Bob Earnshaw noted that the next agenda item was for NDA to provide the group with a presentation on Dounreay's Exotic fuels. Due to illness, Stuart Chalmers could not attend the meeting and Simon Middlemas, DSRL had agreed to provide the presentation on behalf of the NDA.

Simon Middlemas stated that this was an NDA presentation and the NDA were currently engaging on this topic. He emphasised this discussion was about fuels and not waste.

The presentation was provided – DSG(2012)C024 refers.

- Bob Earnshaw noted that DSG were currently considering a response to the Credible options for Dounreay's Exotic fuels and thanked Simon Middlemas for providing the presentation. He asked members to consider this information and provide comment to the secretary to allow her to finalise the response.
- Rick Nickerson asked whether the regulators or NDA determines the definition of whether it is a fuel rather than a waste. He understood that if the material goes to Sellafield it would not be reprocessed but stored on the Sellafield site. In his opinion that would determine the material as waste. Simon Middlemas responded that this was fuel.
- Anna MacConnell thanked Simon Middlemas for giving the presentation at very short notice. She noted that this was an important issue and encouraged views to be made to the NDA. She also noted that Andrew Sumners (Direct Rail Services) would be meeting with the Chamber Board to discuss developments at Geogemas for the transportation of DFR breeder fuel to Sellafield.
- Rick Nickerson stated that DSG members should consider the issues around strategy, finance and security when drafting their response. He also pointed out that there were no environmental conditions featured in the NDA document.
- David Flear noted that NDA were attending a SCCORS meeting on the 23<sup>rd</sup> March to present the credible options.
- Tor Justad, Ross-shire, introduced himself and stated he was attending the meeting to raise some points on the transportation of fuel. From a personal basis, he was opposed to transporting fuels to Sellafield and this was also opposed by the Nuclear Free Local Authorities (NFLA), The Green Party and Friends of the Earth. He questioned how transporting hazardous material was safer than storing the fuel on site. He expected that Councillors would want to see new employment in the area as jobs would be at a premium by retaining the fuel on site. He emphasised that he believed that it was far safer to store the fuel on site than to transport it 100s of miles away.

The transport infrastructure (considering this between Kinbrace and Forsinard) was not particularly good and he asked how the emergency services would deal with an accident on the rail track.

He noted that, at the Highland Council discussions, there had been reference to few accidents relating to nuclear fuel transport. He pointed out there had been accidents and this could have severe consequences for the local population. He had been surprised that the only question raised at Highland Council was a question on why it was classed as exotic fuel.

Tor, went on to say, he felt that the NDA's credible options paper was not particularly informative and felt it was making the case for transportation in any shape or form with the underlying reason being the £100m's of savings which can be made. While he recognised that there would be a legacy, in the form of a crane,

which could potentially be used for other civil uses he felt the investment was not enough.

He asked that his comments be noted and added that transporting fuel could involve human error. Looking along the route proposed the train will go through populated areas, near to schools. His view was that the fuel should remain stored safely on the Dounreay site.

Bob Earnshaw thanked Tor for his comments. He noted that several points had already been raised and would be included in the DSG's response to NDA. He stressed that this was an important issue and urged members to provide the secretary with any further comments or issues to be raised as soon as possible.

Anna MacConnell recommended that if anyone had issues to be raised they should submit a response to the NDA's engagement.

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It was noted that some members had visited the Georgemas railhead on 18<sup>th</sup> July followed by a discussion with Direct Rail Services. This followed visits from Chamber members and Caithness Transport Forum members. Direct Rail Services have indicated they have ambitions to grow their commercial freight route to Caithness and a number of suggestions were made to them which they are pursuing.

- A full discussion on fuel transports took place and a couple of issues were raised relating to the road safety of commercial freight at Georgemas.

Nigel Lowe, NDA stated that the points raised relating to road safety had been well made and the NDA/DRS were fully on board with the need to do something. A dialogue had commenced and an update would be provided at the next meeting.

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He welcomed Mark Rouse, Managing Director, Dounreay (designate), Mike Turner, ONR (Transport) and Rob Campbell (ONR) to the meeting.

Bob Earnshaw also noted that since the last sub group meeting NDA has announced that the Exotic fuel will be transported to Sellafield and that the NDA briefing for March had just been received and circulated to members (DSG(2013)C018 refers). Both these topics would be the subject of discussion at the next sub group meeting.

Before consolidation the shaft and silo was the critical path for the decommissioning programme. This had now changed with the DFR breeder fuel moves and breeder fuel reactor dismantling now on the critical path as a result of the delays in fuel moves. The first transport of breeder fuel had taken place in December 2012 and so far four moves had successfully taken place.

Tor Justad noted that he, along with David Broughton and Roy Blackburn, had visited site during the afternoon and thanked Mark Rouse for a very informative presentation. He noted that while he sat on DSG as an individual member he also was involved with a group of residents in Ross-shire who had raised concerns about fuel shipments by rail. He asked where responsibility for fuel transports began and ended.

Mark Rouse responded that he was the consignor of the fuel and it was his responsibility until the fuel had reached its destination.

Tor Justad added that the group were in the process of setting up a meeting with NDA and Direct Rail Services.

Bob Earnshaw noted that the DSG had been fully engaged with the NDA on the transport of fuels and had questioned aspects of transport as it moved forward. NDA had responded to queries and as far as he was concerned, on behalf of DSG, this had been covered.

Cllr George Farlow stated that Highland Council had also been engaged by the NDA on this matter and Adrian Simper (NDA Strategy) had attended a Highland Council meeting and gave a presentation which had been webcast. George added that Adrian Simper had given assurances that he would engage with communities along the railway line although George suspected that it would be quite difficult to ensure inclusiveness of the population.

David Flear asked whether the commitment had been made to ensure engagement with every area along the railway line. Tor Justad responded that was what the group was campaigning about as consultation was not simply about one meeting with Highland Council. Tor added he had attended the Highland Council meeting as a member of the public and believed that engagement should have been at community council level given it was local communities that were most affected.

Nigel Lowe, NDA suggested an action be placed on him to speak to Adrian Simper to clarify the commitments made at the Highland Council and respond in writing to the DSG. This was agreed.

Transport Scotland's accident investigation team had completed their report into traffic calming measures at Georgemas. DRS were currently in discussion with Transport Scotland on the most appropriate option.

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Tor Justad noted in relation to DSG(2013)M002/A005 (fuel transports) that there had been a recent derailment of a nuclear train at Barrow which highlighted that incidents can happen. He asked for this item to be kept on the agenda so that it can be kept under surveillance. He also noted that the Nuclear Free Local Authorities (NFLA) had recently held a seminar on post-Fukushima nuclear matters and emergency planning in relation to transportation.

Nigel Lowe responded that on the 16<sup>th</sup> September at 1400 hrs a 3 carriage train carrying empty fuel flasks had derailed. It had been travelling very slowly (walking pace) and

had jumped the track. An incident investigation team were currently investigating and will report back in the next 2-3 weeks. He confirmed he would provide DSG with the findings once the report was finalised.

Tor Justad responded that he felt that this emphasised the need for local community consultation so that more information was available. Nigel Lowe responded that this would be part of the investigation.

The 9th fuel shipment had been undertaken by rail. DSRL stopped the transportation of fuel until they had received assurances about the recent derailment at Barrow.

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Tor Justad noted that there had been discussion on fuels transport. He asked if there had been any update to the investigation carried out on the derailment at Barrow. Nigel Lowe, NDA Head of Programmes responded that an interim investigation had been completed and that the final report was still being finalised.

Tor Justad noted Vulcan's future plans for movements of materials from the site around 2016 and asked when further information would be available about timescales, quantity of movements and transport arrangements. Ken Dyke responded that there was a requirement for new build on the site to ensure the capability of fuel movements and noted that it would be about 3 years before the site was in a position to move fuel. He added that it was too far in advance to identify detailed plans and believed that more information would be available in 2015 but information would be restricted due to security reasons. Tor Justad asked whether the fuel would be transported to Sellafield. Ken Dyke responded that this was correct.

Tor Justad noted the comment made by NDA that there had been a change in the strategy for Exotic fuel and wondered if this had any link to the article that had been in the Press and Journal (Monday 9<sup>th</sup> December). He asked whether a decision had been taken to transport the fuel by rail or sea and asked when the NDA would be in a position to inform the DSG and others.

David Flear noted that he had read the Press and Journal article and had found some anomalies in the reporting. He noted that DSG and other organisations had been engaged with the NDA on the subject of fuels for some 2 years and more and felt the best way forward was for the NDA to provide a briefing to Tor Justad so that he was aware of what had been done in earlier years. Nigel Lowe agreed to do this.

Tor Justad stated that he was aware of the engagement undertaken by the NDA and this related to discussions with Highland Council about ongoing engagement given that these fuel moves would continue for a number of years. He continued that, in the opinion of the group that he was a member of, consultation was never carried out by the NDA and this had been confirmed by a Councillor. David Flear responded that perhaps Highland Council should take this up with the NDA. Tor Justad noted that, the group he was involved in, would be following this up with Highland Council and already had held discussions with the NDA and DRS (Direct Rail Services).

Nigel Lowe stated that at present no final decision on the transport route had been made. Any decision would need approval from the regulators and he anticipated that this decision would be made in 2014. There are only certain practical transport options and people could extrapolate these, however Nigel Lowe emphasised that no decision had been made and discussions were ongoing regarding the detailed proposals and security plans with regulators which take significant time to review to ensure all information is accurate. Tor Justad responded that it was surprising about the news in the Press and Journal. Nigel Lowe stated that work was continuing and having read the article thought it was information previously published on the fuels programme. Tor Justad asked whether there would be an opportunity for organisations to voice their views. Nigel Lowe responded that there will be stakeholder engagement activities put in place.

Councillor George Farlow noted that in relation to the engagement on the DFR breeder fuel there had been little objection for moving the fuel out of Caithness but queried what a change of transport mechanism would mean in terms of whether it impact the practicality of moving the fuel.. Nigel Lowe responded that he was not aware of any impact the method of transport would have on the practicality of moving the fuel.

George Farlow said that during the NDA's engagement there was specific community benefits identified in relation to Georgemas junction and other issues. There had also been specific suggestions given to DRS. Nigel Lowe responded that in addition to the economic benefit at Georgemas with the development of the siding and the installation of the crane, DRS were very eager to develop other commercial work for Georgemas. Tom Curry, DRS who had been looking at options and also identifying commercial freight had recently left DRS and his activities were currently being redistributed within DRS. Nigel Lowe agreed to ask DRS for an update. Tor Justad asked whether his suggestion of speaking to the Co-op had been taken on board. Nigel Lowe confirmed that this had.

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Alex Anderson presented – DSG(2014)C019 refers. Of note:

- DFR breeder update
  - Transport by rail going well
  - Trial run in July 2012 to test route
  - 16 shipments now undertaken
  - Expected completion is 2019.
  
- Exotic fuels
  - Covers fuel which is not Magnox or Thermal Oxide fuel (which is standard fuel for Sellafield).
  - Legacy material held in different containers in several storage facilities at Dounreay.
    - Irradiated Exotic Fuel
    - irradiated PFR fuel
    - DFR Breeder fuel

- metallic fuel shipped in large shielded flask
- Un-irradiated exotic fuel
  - Legacy material held at Dounreay.
  - Will construct characterisation and packaging facility
    - Will confirm fuel data
    - place material into one standard long term storage can (THORP can).
  - Regular engagement with safety, security and transport regulators throughout the process.
- Fuel Shipments
  - Public engagement had been carried out by NDA
  - Different types of fuel to be co-located.
  - Different transport routes dictated by fuel type and characteristics.
  - All transport containers, transporters and proposed transport routes will be assessed and approved by national regulators.
  - Shipments have been given Secretary of State approval.
  - For un-irradiated exotic fuel: Two transport routes available:
    - Rail route: proven and routinely used for DFR Breeder fuel.
    - Sea route
  - Enabling work at Scrabster to verify harbour capability.
    - Trial run to verify viability of sea route
      - planning to trial in early autumn.
  - For irradiated exotic fuel:
    - Will follow the DFR Breeder Fuel transport routes.
    - Heavier flasks involved (80–100 tonnes) but road, bridges and rail infrastructure rated above this.
    - New flask and flask loading facility will be designed and manufactured/ constructed.
    - Around 35 rail shipments in total, starting in 2019/20.

Tor Justad noted that mention had been made that transports would be reliant on the ability of Sellafield to cope. He asked whether DSRL was confident that Sellafield could cope with the transports from Dounreay. Alex Anderson responded that DSRL, along with Magnox and Sellafield, have regular meetings to ensure capacity can be met. The Magnox fuel reprocessing plant will process over 400 tonnes of fuel this year and has operated up to a maximum of 1000 tonnes.

Tor Justad noted that the infrastructure in the county had been reviewed and considered capable. He asked whether a similar review had been carried out across Scotland, especially with Network Rail to ensure viability of the rail transport route. Alex Anderson responded that this had been done. Tor Justad asked whether this information was available publicly. Alex Anderson stated he would check and confirm.

Tor Justad asked whether the proposed new flasks will be put through the same rigour of testing of previous flasks. Alex Anderson confirmed that this would be done to ensure regulators were satisfied with these proposals.

Tor Justad asked what factors would be considered if the decision was to transport by sea rather than rail. Alex Anderson noted that it was intended to test the capability at Scrabster Harbour given that the ship that would potentially transport this fuel had never been into Scrabster before. Discussions were ongoing with Scrabster Harbour about this. Tor Justad noted the recent press regarding the existing boat which had been described as a 'rust bucket'. Alex Anderson responded that this would not be the ship that would be used. David Flear added that the ship in question was now being decommissioned.

Tor Justad re-iterated his question as to what the differentiating factors would be to make the decision to transport by sea rather than rail. Alex Anderson responded that he did not want to prejudge the outcome of the sea trial. Tor Justad asked whether it was the quantity of fuel that would be a deciding factor. David Flear noted that until the sea trial had been carried out it would be difficult to identify these factors but asked that this be discussed in full with DSG at the appropriate time. Alex Anderson confirmed he would continue to engage with DSG and others as this progressed.

Tor Justad asked about safety issues regarding sea transport, including safety for the ship, flasks and for other sea users including fishing etc. Alex Anderson responded that safety would be scrutinised and considered by the Regulators before any transports would be made.

David Flear noted that, in the past, the Highland Council had set up a Highland Council/Minch Group to ensure all these issues were covered before transports of any kind of nuclear material was made. Councillor George Farlow felt that it would be better if KIMO UK (Local Authorities International Environmental Organisation) were engaged with this and perhaps it would be useful to ensure this was brought up at the Highlands and Islands Convenor's Group. He agreed to take this forward.

Tor Justad noted that he had completed the action placed on him regarding nuclear transports. The secretary noted that the action status would be updated before the next sub group meeting.

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DSG had submitted a response to DECC's consultation on the management of overseas nuclear fuels held in the UK.

SEPA were also involved with NDA strategy meetings including the NDA spent fuel and nuclear materials oversight group and Magnox Regulatory forum. Last week meetings with ONR and SEPA in relation to Exotic fuel had also been held.

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: Cllr George Farlow to raise with Highland Council the transport of fuel by sea. This action was now complete with a written response provided by Councillor Farlow as follows:

"Highland Council has two main priorities in regard to the nuclear industry in the Highlands:

1. The Council recognises the world-class skills of the workforce of Dounreay. We will work with the Nuclear Decommissioning Authority, the Cavendish Dounreay Partnership, the Scottish and UK Governments and Highlands and Islands Enterprise to ensure Caithness and North Sutherland reap maximum social, community benefits from the decommissioning process.
2. The Council will work with the Scottish Government to press the UK Government for the same level of protection as previously provided by two emergency towing vehicles covering the Minch and Northern Isles.

Those priorities were re-affirmed in 2013. I [George Farlow] have not been made aware of a recent, specific approach to the Council by the NDA with regard to the shipment of nuclear fuel by sea through The Minch. At first sight, this new approach to remove nuclear fuel off site by sea would appear to have implications to our first priority by reducing planning gain and community benefit. The environmental gain of removing nuclear hazard from Caithness and North Sutherland maybe improved, but to the potential danger elsewhere in the Highlands.

As well as being an active member of the Caithness and North Sutherland Regeneration Partnership and the Dounreay Stakeholders' Group, The Highland Council remains active in KIMO, the local authority organisation for the prevention of further marine pollution. I [George Farlow] am aware as an elected member for North West and Central Sutherland the potential dangers to our very long coastline from the unnecessary shipments of dangerous cargoes.

So, with regards to the second priority, unless the full complement of Emergency Tug Vessels were in place along the route, the Council would not be able to fully support at present movements of nuclear fuels through The Minch. There have been, both in fair and foul weather, many incidents of potential devastation to the environment and the economy of the west coast and Western Isles.

In conclusion, in regard to transportation of spent nuclear fuel, local consultees are of the view that ships should always be double-hulled and at the absolute "top end" of secure design. A non-negotiable part of the programme must be the permanent deployment of suitable Emergency Towing Vessels based in Wester Ross, Sutherland or Stornoway and capable of total patrol of The Minch, north and south, and, therefore, the Pentland Firth.

Following receipt of this response clarification was sought as to whether this was a Highland Council view and further response was provided by George Farlow:

The Highland Council hasn't had a vote on this specifically because we have not been asked to as far as I am aware.

[http://www.highland.gov.uk/downloads/file/4611/programme\\_of\\_the\\_highland\\_council\\_2012\\_-\\_2017](http://www.highland.gov.uk/downloads/file/4611/programme_of_the_highland_council_2012_-_2017).

However, this was cleared with the Chief Executive's office on 04 Sept 2014 before a recent meeting of KIMO, which was subsequently cancelled because of purdah conditions. As part of the Highland Council administration, the response is within the

parameters within which I can work. The council's representation at DSG is of elected members representing their wards. My response is also in the best interests of my ward.”

Nigel Lowe, NDA Head of Programme, to provide a comprehensive briefing on fuels strategy and the engagement process undertaken. This action was ongoing. Tor Justad had been provided with all DSG correspondence relating to the fuels strategy and had provided written questions following a review of the documents provided.

David Flear stated he believed that Adrian Simper, NDA Strategy and Technology Director had met with Tor in Inverness to discuss this issue.

David Flear noted that Tor had provided NDA with written questions. He noted that Tor had recently met with Adrian Simper and some of these points had been raised. David added that he believed that the NDA would be responding in writing to these questions in due course and asked that the NDA response come through the DSG secretariat to allow all members to see the response. Nigel Lowe confirmed that a written response to Tor’s questions would be provided.

Tor Justad acknowledged he had met with Adrian Simper regarding shipments by sea and had asked a number of questions on that specific subject. David Flear noted that Adrian Simper had also met with representations of Orkney, Shetland, Western Isles and had also held a local meeting with DSG and Caithness Councillor representation.

Maurice Davidson, Orkney Islands Council (OIC), stated that for a number of years OIC has had a policy to object to all sea transports of radioactive material especially through the Pentland Firth which is a high risk area. At a meeting with Adrian Simper the Council representatives had understood that the boat would take larger cargoes of material and therefore shorten the timescale with much less numbers of transports. Adrian Simper had indicated approx. 30-40 transports whether it went by rail or sea and would take 5-6 years to complete. This would be a long term use of the sea (proposed) when the alternative is rail. Considering the investment in the railhead at Georgemas it was surprising that a sea route was being considered.

Maurice indicated that OIC had a few questions that they were looking for answers to and he invited Nigel Lowe to provide his thoughts. Maurice continued that while talking about rail there had been a recently derailment at Barrow and he wondered whether this had any bearing on a decision to consider a sea route instead. The sea was not a very secure or guaranteed method of exporting exotic materials. What would happen if the ship went down, how would the material be retrieved, what would be the recovery time? The ships are owned by NDA, they are well structured with 2 layers of protection but despite this there had been no testing of any sort of protection for exotic materials and no testing of what would happen if the ship went down.

David Flear asked whether OIC had questioned Adrian Simper on these issues. Maurice Davidson responded that they had asked Adrian Simper to meet with the full council because of the number of years this will take. Adrian had indicated he would consider sending someone else because of his diary commitments but then indicated that a

decision would be taken within the next few weeks. David Flear noted that it would be unfair to ask Nigel Lowe to respond to some of this as he had not been present at the OIC meeting and that OIC had raised their concerns on timescale and movements with Adrian. He asked Nigel to make sure that Adrian Simper was aware of all the issues raised and to follow these up. He also suggested that OIC put in writing their concerns to NDA requesting Adrian to come back with responses.

Maurice Davidson responded that he found it confusing that sea shipments were back on the agenda when for many years now discussion had centred on rail movements. He believed an answer had never been forthcoming on why the sudden change from rail to sea.

Nigel Lowe responded that the NDA fully understood the concerns people had and added that the NDA were keen to help communities understand the modes of transport being considered and why the NDA believed them to be safe. He added that he would ensure that Adrian Simper was indeed aware of everything that had been discussed this evening and would get on to that first thing in the morning. Nigel then went on to describe that :

- the vessel being proposed for the exotics is designed to INF3 standards (the international Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and
- High-Level Radioactive Wastes on Board Ships). This standard requires a high degree of redundancy across a number of systems e.g. double hulled, twin engines, twin steering, twin radars, qualifications and experience of crew etc. Detailed information on these ships was available from the INS website.
- The NDA was exploring whether it would be feasible for a small group of stakeholders (DSG and Council representatives) to visit the ship when it was in Scrabster which would allow them to speak to the captain and crew.
- The possibility of using sea had never been taken off the table and therefore it has not been suddenly re-introduced. Furthermore, recent derailments had not influenced the on-going analysis other than to ensure that any relevant lessons from such incidents were acted on.
- Dounreay has a variety of materials of different categories to move. Certain modes of transport are more suitable for certain materials than others. To date, the focus has been on rail because of the nature of the materials being moved. However, sea has always been an option we would look at as we approached the time we would move materials more suitable for sea transport.

Nigel Lowe noted that Maurice Davidson had indicated that the number of shipments may be between 30-40. Nigel added that transporting by sea gave the largest capacity for a single move which, amongst other things, was an attraction of this method of transport since it would reduce the total number of movements.

David Flear asked Nigel to ensure that Adrian Simper was also aware of the Highland Council position.

Nigel Lowe noted that one area of concern was the lack of tug boat vessels which had been raised at various meetings held with Adrian Simper. The provision of a standby

tug boat was outside of the remit of the NDA or its sponsoring Government department DECC. Furthermore, the vessels being proposed by the NDA have successfully navigated oceans and some of the most notorious coastlines in various weather conditions without the aid of tug boats. Nevertheless, Adrian had indicated he would write to relevant Government departments to reflect the concerns raised with him on this topic.

Maurice Davidson noted that the ship would be double hulled, etc and that there were life boats on board but these were only on boats in case of the boat running into problems. He added that a double hull had not saved the Titanic. The protective shield for radioactive materials has not been tested and it is totally unknown how it would react under water pressure/corrosion etc if containers were rumbling around the Pentland Firth and will affect under sea activity.

Nigel Lowe stated that SIC had raised similar points and he replied:-

- The ship carries life boats not because the NDA expects it to sink but because international regulations require ships to carry life boats if they are to be deemed sea worthy.
- The containers which would be used on the ship have been tested for submersion in the case of the ship capsizing. If they had not been tested they would not be capable of being licensed by the regulators and therefore could not be used. Further details on their testing regimes would be provided.

Nigel Lowe indicated he would be happy to provide a briefing addressing the issues raised. He re-iterated that the NDA fully understood the concerns that had been voiced at DSG and at other meetings. The NDA intended to be as open and honest as it could be recognising security related matters limit what can be said publicly. He emphasised that before the shipments could take place the Regulators, who have access to all safety and security information, would be fully involved and would have to give their approval before any moves can be made. Furthermore, in the final analysis the regulators were there to protect everyone and DSRL could not do anything without regulatory approval. To come back to an earlier point about the length of time decisions would be made in (quoted as within a few weeks) Nigel clarified that this was with regard to the NDA's preferred shipment modes (i.e. road / sea or road / rail or a combination thereof). Permission from the regulator would still be required before any shipments could take place. This would take a considerable longer time as the detailed information was reviewed by the regulators. Tor Justad asked that if Adrian Simper was to respond to all questions raised at this meeting and at previous meetings with the local authorities whether all information can be sent to all four local authorities involved (Orkney, Shetland, Highland and Western Isles).

Tor asked what ideally would be the NDA's view as a starting time for these shipments. Nigel Lowe responded that the starting date was a security matter and could not be discussed however he did not believe the timescale would be within weeks. Ronnie Johnstone asked whether NDA was now talking days or months. Nigel Lowe confirmed it was most probably months.

Tor Justad asked whether it would be possible for DSG to have a full presentation on the facts that NDA could report on and added that this was such a huge issue for the 4

authorities and the DSG. Tor also requested that fuels become a standing item on the agenda.

David Flear asked Nigel to ensure that Adrian Simper was updated on these discussions and that a response was forthcoming through the DSG.

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Cllr George Farlow asked whether he was right in saying that delivery of exotics by rail is not an option because it would not meet Sellafield deadlines as opposed to sea transport where the volume could be greater. He asked whether the NDA was prepared to supervise those shipments in the absence of emergency tug vessels. Nigel Lowe responded he was not aware that rail had been abandoned as a transport option. He added that the emergency tug vessel was outside of the NDA's remit and Adrian Simper had written to the Department of Transport expressing the views of the local authorities and the DSG on this matter, as he had undertaken so to do. Adrian Simper was currently awaiting a response to that letter and this would be circulated as soon as it was received. David Flear noted that information had already been circulated by DSG on this following his attendance at the NDA National Stakeholder Event where he had raised the question.

June Love noted that Cllr Maurice Davidson had tendered his apologies for this event. He had asked for the following statement to be read out "Please indicate to DSG that our [Orkney Islands Council] fears of the use of ships for your [NDA] exotic material are shown true through recent fires on boats [i.e. The MV Parida] and now tugs towing big salmon boats in the Firth. Ships are not safer than trains here. We ask you to reconsider your NDA proposals in light of experience and hopefully the DSG agrees with us."

Nigel Lowe replied that the NDA were of the opinion that the type of vessels it would deploy, if using a sea transport option, were different to the MV Parida. The NDA vessels supplied by its subsidiary, INS, were designed, built and maintained to INF-3 standards while the Parida was not. He encouraged DSG members to study the standards of INF-3 vessels via the INS website and other public domain sources. In addition, he added that when one of the vessels had recently visited Scrabster, an offer had been made to relevant stakeholders to visit the vessel and see some of her features. Unfortunately, this invite had not been extensively taken up. In response to questioning, Nigel Lowe confirmed that if there was sufficient interest and timings could be co-ordinated, a similar visit to the vessel when in Barrow could be arranged.

David Flear noted that Scottish Government were now talking to the UK Government regarding devolved powers including the transportation of nuclear material, DSG members had voiced their concerns on these issues and until such times the Government's agree a way forward DSG's involvement would be that of a watching brief.

Tor Justad asked what the position of Scottish Government was. David Flear responded that as far as he was aware Scottish Government had made a statement with regards to the Parida and had indicated they would be looking to devolve powers to Scotland on the movement of radioactive material. This had also been mentioned at the Scottish

Government's Scottish Nuclear Sites meeting and that discussions would be ongoing for a while regarding the devolvement of powers. David Flear added that if Scottish Government were looking at sea transports they would need to look at all shipping. Tor Justad said that information on shipping was publicly available however information on nuclear shipments was not, due to security reasons.

Tor Justad stated he believed a number of stakeholders bordering the route of the Parida would be relieved to hear that her voyages relating to Dounreay waste were likely to be completed before Christmas, particularly in view of a number of poor safety observations of both the Parida and similarly with INS vessels. Nigel Lowe stated he was not aware of such observations and requested Tor Justad to forward the observations to him for further investigation.

Cllr Roger Saxon noted that the options for the movement of nuclear materials were both rail and sea. He understood the need for different options because of security implications. David Flear noted that the trial shipment of nuclear material by sea had been to ensure that this option was viable. In response to a question from the chair, Nigel Lowe confirmed that the safety case to the regulators was still a work-in-progress for the exotics moves. He further clarified that :-

- rail had never been dropped and still remained, in the opinion of DSRL and the NDA, a viable option
- Even when the safety case is made and regardless of which transport option maybe exercised, neither the NDA nor DSRL would declare the mode of travel, nor timings on security grounds and he requested the DSG to respect this.

The regulators are there to protect the general public and they would take a view on the safety, security and environmental matters, which, in his opinion, the public could take confidence in. Trudy Morris thanked both Nigel and Mark for their presentations. She asked if there would be a further update for supply chain contracts going forward. Mark Rouse responded that this would be carried out early next year. June Love agreed to confirm date of local procurement event once identified.

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John Deighan noted the recent announcements regarding termination of the NMP contract at Sellafield and asked whether this would have any bearing on the programme for fuels from Dounreay being transferred to Sellafield. Nigel Lowe responded that there should be no impact on the fuels programme as a result.

He then handed over to Andy Beckwith, Project Director Fuels who provided a short presentation. See DSG(2015)C024.

During the presentation, Andy Beckwith explained about the cans used to transport the material and handed around an example can so that members could see the integrity of the containment.

Tor Justad noted that while he understood the containment associated with small cans placed into flasks it still required transportation by rail or sea and accidents could still happen. Andy Beckwith responded that once the material goes into the container all

aspects of transport could be feasible and the route and mode would not be identified in advance of the movement.

Roger Saxon asked what the life span was of the fuel cans. Andy Beckwith responded that the cans had a 100 year life expectancy.

Cllr George Farlow noted the 100 year life expectancy of the cans and asked how long they would last if they came into contact with the sea. Andy Beckwith responded that he couldn't answer that question as he could not provide an exact answer however he did know that the can was extremely robust with various standards associated with the shipping of such material.

Roger Saxon also noted that Tor Justad and David Broughton had both visited Barrow, facilitated by the NDA, to see the Ocean Pintail which is the vessel which would be used in the transport of nuclear material. The two representatives had both submitted a written report which would be taken at the next sub group meeting.

David Broughton said it had been a very good visit and noted that the people involved had been very professional. The boat appeared to be extremely well design, with 'double up' everything. He felt those who provided the information had been very honest without breaching security. They had heard about the safety case and interesting accident scenarios and he had come away with full confidence in the operations of the physical assets of the boat. He thought it was important to point out that it had been made clear they did not operate under cost and time pressures.

Tor Justad agreed with David's comments. The Captain showed them as much of the boat as possible and it was basically a ship within a ship. There were also tugs that the company could call on if required. While the boat was 28 years old there had been a lot of refurbishment work and appeared to be managed well. He added that questions raised previously still remained, ie how long would a container survive if they could not be retrieved from the seabed (if an accident occurred). There had been three recent incidents of ships sinking or running aground, all of which has been reported and there is still a concern from the general public especially with fuel movements. He recognised, however, that the ship was as good as these ships can be but it did not mean that accidents could not happen. He also recorded his thanks to INS people and the Captain for a well organised visit.

David Flear stated, on the subject of fuels, he believed NDA and DSRL had held a meeting with Orkney Councillors and senior officials and were provided with a DSRL update and a presentation from INS on the vessel. Given these discussions he had been led to believe that the Council's policy to oppose either sea or air shipments would be put on the agenda to be considered at a subsequent meeting.

It was also noted that DSG had submitted a response to the UK Government's review of CoRWM and a draft response to the UK Government's consultation on low level waste was currently being finalised in time for submission.

- That Orkney Islands Council had no proposals to change their views for sea or air transport for radioactive fuels.

At the sub group meeting a response from government was tabled regarding the decision not to commence with trialling PWR3 reactors. Following receipt of this letter David Flear had met with Steve Firth, MOD and asked when it would be convenient to come back to DSG with an updated MOD presentation setting out the timelines for defueling etc. DSG had received a presentation on this before but David felt it would be useful for DSG members to have a reminder of the detail.

- MOD continued to monitor the contract with Rolls Royce including delivery of a fuel movement capability and the defueling of the PWR2 reactor.

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Cllr Roger Saxon stated that there was nothing new in Government's overriding local planning. On spent fuel, he noted that while some fuel may not be reprocessed this would not be an issue for Dounreay as the fuel would be transported to Sellafield. Mike Brown responded that the current plans were all Dounreay's fuel would be transported to Sellafield as fuel was seen as a re-usable asset.

Site representatives presented at a seminar in Lerwick organised by Nuclear Free Local Authorities on the ongoing removal of nuclear materials and also spoke at a meeting of Highlands Against Nuclear Transport in Dingwall.

Tor Justad noted the discussions with Highlands Against Nuclear Transport and said that he had found it a very useful briefing as had others who had attended.

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On exotic fuels, Nigel Lowe announced that while he could not go into detail on mode of transport, route and dates he was pleased to announce that the first movement had been successfully transferred. There had been no issues relating to the transportation and there had been a lot of work to pull this together. This programme would continue for a number of years. However, he reassured members that prior permission from independent regulators under a number of regulations is required, including the safety cases before transports are allowed. The Dounreay.com website published a message once the material had been safely delivered to Sellafield.

George Farlow noted an article in the Sunday Herald which had been an in-depth report from Cumbria regarding people's antipathy for receiving fuels from the rest of the UK and asked whether emergency tugs had been provided down the West Coast when the fuel was transported.

Nigel Lowe responded that he had not seen the article being referred to but understood that the NDA was aware of this view from Cumbria. NDA had consulted extensively and the programme was now being implemented. However, the matter of a tug was for the Department of Transport and not DECC (the sponsoring department of the NDA.)

The programme is back on schedule for the fuel transportation to Sellafield.

The successful transportation of nuclear material to Sellafield which had been previously covered in discussions.

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Tor Justad noted that he had previously raised a point regarding emergency tug vessels. Nigel Lowe responded that he had gone back to the NDA Executive and raised this again. The Executive had previously spoken with the Department of Transport on separate occasions and therefore did not see any merit in raising this again. Therefore this was not taken any further.

David Flear noted that Cllr George Farlow had raised a motion through the Highland Council. Cllr Farlow also noted that an extension had been provided for the emergency tug vessel in Orkney and further decisions would be made at the end of September by UK Government. Any mention of a second boat would require partnership working and some organisations felt this was essential for the Minch particularly with nuclear fuels transportation. Because of this a question was raised with Highland Council many months ago in the community and it was recognised that it would not be possible to condone transportation through the Minch for nuclear fuel without an emergency tug vessel on hand. The Highland Council minutes reflect this discussion. David Flear asked whether the motion had been accepted by Highland Council. George Farlow agreed to provide the minutes of the meeting which reflected this discussion.

Tor Justad noted that there was an action to reflect the timeline for nuclear transportation. Nigel Lowe responded that this information would be provided at the next meeting but for clarity re-iterated that this information would be in terms of broad timelines already in the public domain. Tor Justad noted that HANT had asked Paul Monaghan, MP for his views on transportation. Paul Monaghan had responded that there was a need to balance transparency within the nuclear industry against security issues.

Questions then returned to Phil Craig's presentation. Tor Justad noted that while he understood that nuclear transports could not be announced before these happened he asked if Mr Craig could confirm that a shipment had recently arrived at Barrow even given there was no second emergency tug vessel on the west coast. He asked whether the NDA or DSRL would continue with these transports and questioned whether this was a responsible decision. Nigel Lowe responded that they could not discuss issues like this in public meetings on security grounds.

Cllr George Farlow stated that he quite liked the presentation and asked who would tell the Captain of the Ocean Pintail when it was not safe to sail down the Minch. On a different note he asked if there were any shipments planned to route through the Sutherland coast. Nigel Lowe responded that no-one would tell the Captain about when it was safe to sail as this was the Captain's sole responsibility and the transport safety plan, approved by the regulators, had to be adhered to. On the second question Nigel Lowe re-iterated that they would not discuss any transport routes due to security.

Tor Justad noted that at the last meeting there had been some discussion about the transport issues and emergency tug vessels. He asked the NDA and DSRL whether they were aware of the new position taken by the new Coastguard agency in relation to emergency tugs, where at a meeting in Edinburgh they were now recommending there should be additional towing emergency vessels. Mark Raffle, NDA responded that he was not aware of this and added that any decision on emergency tug vessels would be one for the UK Government.

Ronne Johnstone stated that the whole issue of transport was of concern adding if he lived in Thurso he would be concerned what was being transported through the town and in Wick where they had seen non-nuclear transports having to manoeuvre tight bends. He asked whether the NDA would consider providing information on nuclear transports in an informal arrangement to provide assurance. He added that if the DSG was to have any value it should be to ensure that these movements were safe.

David Flear responded that this was for the regulators (ONR) to ensure that there were robust safety cases for the transport of nuclear materials. He added that Nigel Lowe, NDA had taken an action to respond to questions regarding timelines and his response had been circulated earlier today (see DSG(2016)C024). He drew members' attention to the wording regarding the anti-terrorism, Crime and Security Act (Section 79).

Ronnie Johnstone stated that he did not want to prolong this discussion but felt that accidents could happen anywhere and it was difficult to predict all eventualities. He added it was essential that there was re-assurance on the safety and security of nuclear transports which could be of concern to people in this part of the world. David Flear noted that nuclear transportation had been well reported in the local paper but suggested that further discussion could be raised at the next sub group meeting.

Tor Justad noted the reports on the potential for nuclear transports from Wick JOG airport which was a new situation. He also noted that, if the press reports were accurate, there was some business disruption to those third parties operating out of the airport. David Flear noted that HIAL had recently been in the press saying that there was a long term community benefit from the works being carried out. Tor Justad questioned whether there were long term benefits as the work being carried out appeared to be for one issue only and that was for the removal of nuclear fuel. David Flear noted that air was only one option for transporting fuel and believed that the upgrade work being carried out at the airport would have long-term benefits as it would allow larger planes to use it. Again he noted this had been well documented in the local press.

No further business was tabled. Before closing David Flear noted the earlier discussion on nuclear transport and safety. During the break he had spoken with Dounreay and Vulcan to request a joint presentation between ONR and DNSR to provide information on the regulation for nuclear movements. Ronnie Johnstone responded that he would be happy if the regulators came forward and could outline how they regulate and how they satisfy themselves on the safety and security aspects.

***Minutes in draft – coming shortly.***

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DSG(2011)C154: Long term management of civil separated plutonium - consultation document

DSG(2011)C197: NFLA submission to DECC Consultation on long term management of the UK's plutonium stocks

DSG(2011)C198: SIC submission to DECC consultation on long term management of the UK's plutonium stocks

DSG(2011)C204: Fuel options presentation

DSG(2011)C216: Plutonium - current position, February 2011

DSG(2011)C222: Exotic fuels - Dounreay Fast Reactor (DFR) Breeder - Credible and preferred option

DSG(2011)C227: Exotic Fuels - Dounreay Fast Reactor (DFR) Breeder, Credible and preferred options, July 2011 - request for additional information

DSG(2011)C233: Response to NDA Exotic fuels consultation

DSG(2011)C239: DSG response to NDA's credible and preferred option for DFR breeder fuel

DSG(2011)C241: SIC support to DSG response to DFR breeder fuel

DSG(2012)C012: Exotic fuels and nuclear materials - Dounreay, Credible options paper

DSG(2012)C024: NDA presentation on Dounreay Exotic fuels, March 2012

DSG(2012)C028: DSG response to NDA on Dounreay Exotic fuels

DSG(2012)C029: SIC response to NDA on Dounreay Exotic fuels

DSG(2012)C031: SCCORS response to NDA Exotic fuel credible options

DSG(2012)C048: Exotic fuels and nuclear materials - stakeholder comments in response to Credible options

DSG(2014)C019: DSRL Fuels update, March 2014

DSG(2014)C022: DECC consultation on foreign fuels

DSG(2014)C037: DSG response to DECC's consultation on DECC's consultation on the management of overseas origin nuclear fuels held in the UK.

DSG(2014)C066: Response to Tor Justad/Maurice Davidson's questions on fuels.

DSG(2015)C020: Visit note to Barrow to see Pintail, March 2015

DSG(2015)C021: Visit note to Inverness (DRS) and Barrow (Pintail), March 2015

DSG(2016)C004: Presentation on Vulcan fuel movements, January 2016

DSG(2016)C024: Expected timeline

DSG(2016)C029: ONR presentation on regulation on nuclear transports, September 2016