

Appendix 1 – transcript of all questions raised and answers given.

Introduction and election of chair;

HW: Chairman if I could interrupt; we all got emails and were told we would have workshops, can we please have it explained to us what is happening, if anybody knows what is happening?

KC: We absolutely do know what is happening; There will be two workshops taking place, one to look at the membership of the main Site Stakeholder Group and subsequently the memberships of the sub committees and the other workshop will look specifically at the number and scope of the sub committees and how they align to the Sellafield plan, which was published last week. It is likely, and I don't want to pre-empt anything, but it is likely that there will be at least some movement or reorganisation of the sub-committee structure and so it follows that it is best to sort membership of those sub committees out after the committees themselves have been restructured.

HW: Times, dates, venues?

KC: The workshop dates have yet to be fixed but they will be happening very soon. All of you are welcome to attend those workshops should you wish to.

In terms of today's meeting, it was therefore decided that, as there is to be the review of the committees and their memberships, that we should hold off electing a chair and vice chair for this committee until after its future is determined.

EW: Can I have the reassurance that, if these meetings are every quarter, we will have the issue sorted out ahead of the next meeting and we won't have the usual Sellafield answer of delay after delay. Will the workshops be sorted out by then?

KC: The next scheduled meeting for this group is December – we meet twice a year – and I would anticipate that the workshops will have happened and we will have that clarity well in advance of the next meeting.

FW: Might I have the temerity to ask when you say “people” have looked at it who are the people you refer to?

KC: Members and chairman of the sub groups have been involved alongside representatives from SL, NDA, LLWR and other organisations represented within the WCSSG.

FW: And the elected representatives? Have they been consulted?

KC: They have.

Evap D presentation.

EW: Normally the plant internals would be built on site – has there been a change in the number of workers you would have used if they'd been done on site instead of off site. What I'm asking is would there be more work on site then what there is now?

AN: Yes, but the key constraint with this project is time; Evaporators A, B and C are aging facilities and so the key issue for us is to deliver the project in a timely manner and the strategy that was delivered was to fit that modular process.

IH: Just on the resources to be clear, for example, there aren't enough welders on site to deliver this project, so to do some of the work away from site is a sensible option.

HW: How successful was the barge transfer from Ellesmere Port?

AN: Very successful; we got the first models here and delivered as per the schedule.

HW: To understand the size of that, would it fit under a motor way bridge?

AN: No, the size of the biggest module is 30 meters by 12 meters, by six or seven meters, this (the one pictured) is one of the smaller ones.

PH: A typical motorway bridge Henry, for clarity, is just under four meters.

HW: How long does it take to sail up from Ellesmere Port?

AN: Ellesmere Port operates a similar system, only much bigger, to the one at Whitehaven so they can only sail on a high tide. It takes them about 18-20 hours to get here but they can do what they call stooage which means manoeuvre around in the sea just off the coast and wait for a high tide here in order to land on the beach. It takes roughly 24 hours in total from them leaving the Port until they land on the beach.

JK: Was a cost analysis done to see what the cost of construction locally was versus what it is costing to do at Ellesmere Port? You said the cost was £397 million?

AN: Yeah that is for the whole project.

JK: Well was there some analysis done on how much more it would have cost to have a local focus on the construction?

AN: I'm not aware if that cost analysis was done. It may well have been but I have no knowledge of it.

JK: Well, the second part of my question would be if it wasn't done why wasn't it? And what percentage of that £397 million is actually being spent locally.

AN: I will take those questions away and respond to them rather than me try and answer now and possibly not give you the correct information.

KC: I will work with Andy to come back with an answer on that John. I suspect part of it will be around capability and the capacity of the local supply chain to deliver the scope of work.

JK: I fully understand that but we need work here as well; we are not an economy to serve the rest of the UK we need to serve West Cumbria as well.

AN: There is certainly a lot of work going on on site as a result of this project. We have in the order of 140 craftsmen on the site on this project. Not all of them will be

local, some lads will be travelling in but you find that on any major construction project, there are always travelling lads who come in to the area to work.

FW: Have you had a PR campaign, has the project been out in the press?

KC: I think I'm best placed to answer that. There has been extensive publicity on the project and Emma Candy, the project's stakeholder relations manager, has spoken to this group and other WCSSG sub-committee's on several occasions. Tom McClain, who is head of the Evap D Project has presented at the main WCSSG and, as I said earlier, there is the website which I will send you all a link to which has some remarkable video footage and photographs.

We have had some great coverage in the local press and the engineering and construction magazines.

RS: Are you able to say whether you will have this completed to schedule?

AN: We are certainly aiming to deliver the project to the agreed timescales of July 2014. It is a big challenge and there is a lot of work to do but we are working towards it.

MF: There have been reports recently in various industry documents talking about delays to the project, and that those delays were caused at Ellesmere Port with the modules and getting them to site. What kind of delays are we looking at and what is your best guess as to when this evaporator will be actively commissioned?

AN: The delays are in various areas, there are challenges and within the overall project there are delays in various areas but in terms of the overall project we are still working to the same timescales. As a project manager when you have a delay in one certain area what you do is look and see what you can do to mitigate that delay in another area so you are still working to the same timescale for the overall project. In terms of the operational date we are still targeting hitting the date of July 2014. The project is reviewing those dates at the moment so I can't really commit to a date at this time.

MF: In 2014 you think we will be in operation?

AN: That is the date we are targeting.

MF: And the delays you have spoken about slightly are we talking weeks? Months?

AN: The delays can vary depending on what it is, we have had some of the problems with the vessels and within the modules and there are various areas where delays can occur. There have also been various areas in which we've been able to bring work forward and it's a case of looking at the project as a whole and identifying where we can bring work forward to mitigate any delays. That is what we are doing at the moment.

PH: I think it's fair to say that we've looked at the build schedule and sequence in some areas and where something has gone behind we've looked to try and revise the way we are putting things together to respond to that so there has been a range of normal project management activity that are the sorts of things you would do to stay on track with the goal of the date and to mitigate the issues as they arise.

EW and HW left at that point.

MD: Can you say something Andy about the design lifetime of Evaporator D and how it fits in with the Sellafield plan and the projected lifetime of Mox, reprocessing etc?

AN: I'd be happy to take a question on that because. It's more of an amount of product going through rather than a calendar date.

IH: The planned lifetime of Evaporator D matches the planned lifetime of Thorp plus Thorp clean up.

Japanese situation:

FW: Thank you for that excellent presentation. You talked about the environmental issues and what is happening; what is happening to the medical side of things, the people who are there on the scene?

PH: Two parts to this, if I deal with the workforce who have been on the site first of all. In an emergency situation it is possible to authorise one off radiation exposures much greater than the levels which you would normally work to. That is a provision inside the UK legislation as it is internationally. There are presently four people that we know of in the workforce at Fukushima who have exposures in excess of 600 millicieverts. For two of those 80 per cent of that exposure is believed to be associated with radioactive iodine and they were control room operators in unit two at the time. Of course they are being monitored carefully.

There are another range of exposures somewhat lower than that, and in the range of 100-150 millicieverts, and it's my understanding that that equates to about 40 people.

The Japanese public, particularly those people in or close to the evacuated areas, are being subjected to a lot of reassurance monitoring and those kinds of things. I think one of the great strengths of the response in Japan which is worth dwelling on is the prompt distribution of iodate tablets. The belief is that that action has saved an enormous amount of radioactive iodine uptake by the population, particularly young people and infants. It has been very very effective indeed.

We had a lot of co-ordinated activities very early on with the British Embassy in Tokyo to supply additional iodate tablets for UK nationals and that link worked very well indeed. So some of the things that you hope you never have to rely on, when you do test them for real, you find out how good they are and for the most part those measures work.

MF: I wonder whether Phil would like to comment on a couple of points which he didn't mention during his report on the accident, the two things were that Tepco had ignored, for years, regulators requests for safety improvements to be made across the site. The second thing is that its spent fuel ponds which we know and can see that one or two of them have disappeared completely in the explosions and that has made a significant difference to the severity of the accident and those spent fuel ponds again were stuffed to loaded capacity – I have got the figures somewhere but not with me – the third point I'd like to make in terms of human health, how would you comment on the Japanese governments approval, that in order to get Japanese school kids back to school the permit them a dose of up to 20 millicieverts which, as I understand it,

is way beyond anything that would be faced by a worker at Sellafield, it seems frankly criminal that kids should be allowed to be exposed to that kind of a level of dose, I wonder if you could comment on that. I just have to say that I accept most of what you say about the accident, we have got some very different information from groups we work with both in Japan and from non-nuclear groups and websites and so on, so I don't believe everything you say, I believe some, but I would be grateful if you could comment on those things I've raised.

PH: I'll take the middle one first about the fuel ponds; The Fukushima site has six reactors, therefore it has six spent fuel ponds. It has a centralised one as well which is a seventh pond and it also has some dry fuel casks. It was the lead site for Tepco in developing their approach to interim storage and dry fuel packaging. I don't recognise the ponds disappearing report they are all intact and I have to say that even unit four's pond now, which has been quite a concern, structurally, because unit three's hydrogen exploding underneath unit four's pond weakened the support wall, but that has now been reinforced and the integrity and support for that pond, physically, is back in place. Cooling has been restored to all of those ponds. There is certainly debris in units one, two and three ponds, from the over buildings that were damaged by the hydrogen explosions, so there is a mess in there, but the spent fuel itself is cool, it's shielded and it will be eventually retrieved.

There is no doubt that the presence of a full core in unit four's pond, which had been in power, prior to the earthquake, only about three or four days previously, gave a major challenge to what was already a very difficult set of circumstances. That was the pond the first to boil and it boiled for quite a long period and, at one stage, probably lost about a third to half the water depth. It was therefore crucial to get the water back in that pond to prevent the growth of a secondary boil. In that sense I think it's been something that has been dealt with quite effectively. The ponds themselves I don't recognise as other capacity either. They store their fuel in a different way to the way we store it at Sellafield, but they store it in a way which most commercial reactor operators store it around the world, which means they have a device called compact racks, which allow a greater capacity in a physical area than we would need for a pond. I think that's where we are with that. Certainly there is quite a lot of fuel at Fukushima and I think the origins and the reasons for that are known in confidence. I think it's fair to say that looking after such a large quantity of fuel has been a bigger challenge than if they simply had the reactors themselves.

In terms of Tepco's previous responsiveness to regulatory requirements I'm well aware that the web is full of all sorts of comments and I think it's probably difficult to be able to separate out, at this stage, fact from fiction. I think what we need to do is to leave a little more time to see what the Japanese government enquires continue to bring forward. There is a very voluminous – about 700 pages – report to the IAEA board of governors to the Japanese government which is quite candid but it does focus on the dynamics of the incident rather than the precursors to it. I'm sure that we will get into that in the fullness of time and I'd be more than happy to continue to talk to you about it, but when we have got a body of information that at least we would both agree on and has some proper prominence rather than me comment beyond that.

The issue around public health and radiation; we have a set of radiation protection standards, they are enforced under the ionising radiation regulations and they apply to (inaudible). Nationally the Health Protection Agency in the UK is the reference point for what are acceptable levels of radiation exposure for UK citizens including children. I think the issues around the consequential radiation exposure to going back into that zone are very complicated. I can see many sides to it – I can see that being

important socio-logical and emotional element to try to get some sense of routine back into peoples lives, that has some value, it is a very very difficult judgement to weight that against potential downstream radiological consequences, I don't know how the Japanese health authorities are balancing that judgement, but it is certainly one of the issues because the emotional strain on people and the associated potential for poor health from that alone, is a significant factor in considering some of these elements. I know there have been parallels drawn between Fukushima and Chernobyl, and I can understand why those are drawn out there, I think its quite constructive that some 25 years after the Chernobyl event, and I've been there now twice, to the IEAA Conference on Decommissioning but also to talk to people in the associated area, including in the exclusion area, to look at that and people are re-evaluating now – and you can only do it now that we have some evidence over 25 years – but to look and see what the longer term effects have been about something like that and for the most part I think it's now believed that the emotional and stressful physiological element of being excluded from your dwelling place is at least as significant if not more so as an impact on health as anything associated with additional radiation exposure. Those are very difficult issues to deal with and I think we just have to see how this one plays out, but I can understand why, to some extent, there is a great encouragement towards trying to get some sense of structure back into place, even if that leaves us with some difficult decisions.

MF: Have you any idea why Tepco should hold such a large amount of spent fuel at the site rather than send it to Okasho and the storage ponds there.

PH: I think it's a matter for record that currently Okasho is experiencing some operational difficulties, particularly with regards to its vitrification capability, and as a result of that the front end of Okasho, the fuel storage ponds, are pretty full, and as a result of that Tepco took a business decision some time ago, from a risk management point of view, to explore dry fuel storage. A pioneering area for that was Fukushima, and therefore I think it has been a combination of circumstances there which has seen quite a high inventory of fuel at Fukushima. That I think is the underlying reason for an unfortunate combination of circumstances.

FW: Might I ask a question about Mox and the contracts at that point. Looking at the last minutes, and we are here as the commercial organisation to look at commercial matters. During the last meeting Ian Gordon (Head of Japanese Fuels, Sellafield Ltd) announced that the deal had been agreed with Japan securing the future of the plant. My question is that, in the commercial aspect of things, are we receiving anything back by way of recompense. I don't mean for that to sound hard hearted, I have every sympathy for the Japanese and their situation, but first and foremost I'm an English woman and a Cumbrian, and I want to know what is happening in my corner of the world, and is there some legal financial recompense that needs to come back to our area or our NDA or whatever now that they have pulled out of the contract.

PH: I think we need to be very cautious with our wording; it is not the case that the Japanese pulled out of any contract, I think that is an important part that we need to clarify. I think in essence the levels of uncertainty associated with the full programme for production in SMP, associated with the customers capability to receive and utilise that fuel, became so uncertain that the NDA board view was that there was a real risk of additional burden falling on the UK taxpayer, and that it was no longer prudent to carry on with the current approach and therefore the recommendation was that the plant was closed as soon as practicably possible. It is not that the Japanese have pulled out and we still need to carefully look after the Japanese plutonium while it is

here but our current strategic approach right now is to revert back to interim storage for a further period of time.

IH: I think Phil describes it extremely well because it is the uncertainty of being able to identify the times for people to be able to receive the fuel and from a regulatory perspective and from a practical dose perspective you can't make fuel when you have nowhere to put it. It is unlikely that the regulators would allow you to do it and nor would you expect to do it under normal operating practice and so it's the lack of a definable period of time in order to resolve this position that lead to the decision to close SMP for the purposes of generating MOX, so that's exactly right as Phil has said.

Within the original deal that was announced there were a whole series of clauses and means that reflect on what may happen and interestingly the vast majority of them are really around protecting against the plant not actually being able to deliver performance which turns out not to be the issue. There are in the contract means to protect UK government and NDA as you'd expect in a normal commercial contract, so the details of those are, reasonably, extremely sensitive and confidential.

RS: It's my understanding that these contracts are with INS is that correct?

IH: The way they work is that there was a consortium of Japanese users of MOX of which Tepco was one and Chubu was another and they were the buying part of it, INS were the people who did the deal and really negotiated it, and Sellafield would be the provider or supplier if you like and we revert back to, as explained, long term storage.

What they have said, the Japanese, is that in their present strategy they intend at some stage to go back to recycling at some stage, now they'll have to readdress that themselves in the fullness of time so we have to wait and see, but at the moment the contracts allow for their material to be sent back to Japan at some point, presently in the form of MOX but I would guess if we had to change the form it goes back then there would have to be a renegotiation but we have some protections within that.

JK: So are you saying that in reality the contract hasn't been cancelled it has been deferred?

PH: I think we have to be very careful about which contract we are talking about. If we are talking about the reprocessing contract, what we call the service contract, that is unchanged by anything. What Ian Gordon was here talking about was the agreement to have Japanese Utilities make some additional investment in SMP to allow it have a new rod line and to increase the throughput at the plant. So the overall service agreement for the return of the products of reprocessing and the residues, because as we all know now the return of the residues is well on its way now, as part of the ongoing service agreement continues. The policy around the Japanese use and reuse of the products of reprocessing remains a matter for the Japanese and for now reverting from returning it in the form of MOX made in SMP to interim secure storage at Sellafield while they determine the way forward, all of that is within the original service contract which dates from the 1970s. The other contract that Ian Gordon was talking about when we were here in December was all about the Japanese investment in the rod line and the issue with that is largely the ongoing uncertainty around when anyone could use the product from that and it has a duration that was envisaged – because this was all about get a move on, get this plant demonstrated, show that you can make us some fuel – and therefore that duration was envisaged, and we are now looking at great uncertainty which is many

times the originally envisaged duration. The original period would have been covered by Japanese investment, which would have been covered by payment for fuel to be delivered. What is not acceptable is for this period to be covered by the taxpayer.

FW: That is a lot clearer, but if one looks at the minutes of the meeting of the last meeting of this committee that is not clearer. As a representative of Copeland Borough Council sitting on this committee I need to be aware and reading that I look at the implications on the British tax payer, I look at the implications on previous colleagues on site as does everybody in this room. I apologise if I used the wrong phrase.

PH: When we sat here in December – because I was here with Ian Gordon at that time – I think we all had a very different view of the world and what was reflected in those minutes at that time was a fair reflection of what was said, but things have changed significantly since then. It's now looking at what's in front of us. We must minute this thing very carefully to provide clarity.

JK: Given the circumstances in Japan there must be a delay in any shipments back to Japan is there?

PH: The high level residue returns shipment programme, the next voyage is currently underway John, and that particular programme of voyages is envisaged to continue for about another decade, to support that the Japanese have invested in three new vessels which have been brought into service and are based at their home port of Barrow in the normal way, they are staffed by the normal experience and trusted sea-fairers, managed by a local supplier, Fishers, who have demonstrated this capability over the last 35 years and that is continuing. Now clearly the details of any individual (inaudible) and in particular making sure that the conditions at the port of arrival, as we have the consigners responsibility at Sellafield Ltd, so our duty of care is from when it leaves the gate at Sellafield until it arrives at the gate at Okasho, so we need to be satisfied that the capability at the port of ?? is undamaged by the effect of the earthquake or tsunami or for that matter any other cause of equipment unavailability, and therefore any timing around that would be governed by those factors and nothing else and that programme will carry on in the normal way.

JK: The point I was trying to make was that if, through no fault of our own, we have to store the fuel longer, are we being compensated for that.

PH: In terms of plutonium? Well, we are pretty well through the reprocessing programme. Clearly we have obligations under the service agreement either to make the products of reprocessing available in the form that they wish and until such time as they are ready to receive those products we need to have safe and secure storage of those products, and the obligations there are many and various. We have obligations under the site licence, we have obligations as the UK under the various IAEA UN treaties on how we deal with the safety and security of nuclear materials, and we are continuing to provide our customers with a service. The recompense for that is covered under the service agreement so long as that service is being provided.

JK: So yes is the answer.

PH: Yes.

JK: If we are going to be recompensed for it and I thought we would be, what percentage of that is going to be used in the community. Rather than the

companies taking a slice of it and it never coming back into the community, if you imagine it like a cake what is the community getting from it in terms of a slice given the circumstances where we are with Mox?

IH: So, if you think about funding that goes into Sellafield there is a combination. NDA funding is made up of two parts, one which is there ongoing income from deals like the service agreements and other income that comes from things like reactors because we still have some power generation, so that income. Any other things like sale of land would be an income as well. Then when you look at the overall plan for the NDA estate and what happens is that the thing that makes up the difference between what we have as income and what we spend is granting aid, basically the commercial income is a whole lot less than the amount of money needed to carry out work and the balance is made up by granting aid. If you then take the total pot that sits within the NDA business plan and look at what percentage of that comes in to Sellafield and pays for the decommissioning so, in terms of what comes in to West Cumbria, what slice of the cake, you are getting the whole cake, plus a whole lot more that comes as granting aid so you are not losing out in terms of a percentage of what comes in you are gaining, I would say, probably twice as much.

JK: I think if there is a business plan produced, and there is money allocated, the business plan has now changed, and we are operating in a different way and as a result the implications are that we have shut down the Mox plant, which I can understand, but if there is extra funding coming in because we are having to store fuel for a customer, bringing in another channel of money, how is that money being dealt with if it is over and above what is already pre-planned for?

IH: It is not over and above what is pre-planned for it is all part of the same pot. All that it affects is the cash flow difference and things like that.

PH: In a sense John it is instead of, it isn't over and above

IH: It'll just be used on other NDA activities, including at Sellafield, there is no slight of hand that there is money coming in and it disappears off into the coffers at Westminster or anything like that. Nobody is taking money off Sellafield as a result of that.

LLWR:

JK: Do you still handle and manage university and hospital waste?

JE: We do, but there is a bit of a myth that we take it directly. We do handle university and hospital waste, because they tend to generate such small volumes it's not feasible that they could ever really fill an entire isofreight containers worth so what tends to happen is that they will employ someone in the supply chain who they know has a contract with us and they will create a drum or a package and the supplier will fill the isofreight container.

JK: What I'm driving at there is that we do actually provide a national service don't we?

JE: Yes we do, to a range of different customers through defence, to others such as one of our big customers, GD Health Care and most of their waste arises from medical treatment, cancer treatment technologies, so yeah, we play a significant role in decommissioning but also in general society if you like.

FW: Looking at your forward plan, I suppose it must be very very difficult to plan for the next 100 years or so with the vagaries of life, everything changes. Could you let me know; the repository is owned by the NDA, and therefore the government, have you got enough capacity at the repository to build the 14th vault should you get permission to build it?

JE: There are a number of different things to say in answer to that. There is enough physical space at the repository to build the volumetric capacity that we would need and probably more, if that was ever required. But the space is only one aspect; in order to do that we will need both an environmental safety case that is strong enough to satisfy the environmental regulator, the Environment Agency, so that they can say "yes, we can give you a permit for that capacity," And that the challenge of the safety case that we submitted that to the EA in May 2011 and the EA will be reviewing that over the next two years and ultimately we hope to get a new permit that says the site has the capacity to dispose, from a radiological point of view, of that waste. So then we would have volumetric capacity and we'd have the EA saying we had the radiological capacity. The third element then is that you then need planning permission in order to have permission to build the vault. In line with the environmental safety case we recently submitted a planning application to Cumbria County Council, who are the waste planning authority, that explores the long term development of the site, so it does look at those 14 vaults. Essentially the planning application that has been submitted looks at what capacity we would need to fill that and then it will have staged into it, because 100 years is a long time, so that each time we come to build a vault we do come back to that planning authority to seek approval. I think to put that altogether then, yes there is, potentially, enough capacity at the repository to meet the demand and avoid the need for a second repository in the UK. The only other proviso on that is that you have to do all that volume reduction, otherwise there is too much to fill the space, hence we continue to think about this in two ways, it's about reducing volume and increasing capacity. If you do both of those things, the line will meet somewhere in the middle.

The other thing to remember is that it is all built around existing technologies and obviously we don't know, something wonderful could happen that changes the position again in the future.

FW: Well, that brings us on nicely to my next question, it's obviously very much reliant on EA and their permissions and then on the council and their permissions, have you enough margin built into your programme if there is a delay in them coming back to you, as perhaps there was with the previous vault?

JE: Vault nine has helped the short term situation immensely, but it is important to remember that it is, at this stage, for storage only and not for permanent disposal, not until the safety case is approved, but certainly there is now enough capacity there to support everybody else in the estate continuing to decommission or power stations to continue generating, so yes, there is contingency there if you like in the processes, although clearly, depending on how long it went on, it would continue to be eaten up.

RS: The inventory of waste now at LLWR is it all fully identified?

JE: The safety case has spent the best part of the vast majority of the past five years in development has been spent focused on what's already there, as well as what's to come, so when you look to demonstrate the case for the whole site it has to consider

what's been disposed of there since 1959 right up to what might be disposed of up to 2120.

RS: You've done a tremendous amount of work over the past few years then?

JE: Yes it has been a significant piece of work to go back and look at the records that we have and also some of the, if you like, anecdotal information that we have and that is out there saying what may or may not have been disposed of at the repository over the years so an awful lot of effort has gone in to reconsidering all the records, and there are some reasonable records looking back on what we've got, but then also to the extent of talking to ex-employees and people who may have generated waste and try to understand, some of the things you hear, are they true or are they not and we believe that we have been able to demonstrate a pretty strong case to say that it's a site that has a long term future.

MD: There is a comment first of all, can I say that the current policy of diverting very low level waste to municipal waste sites is not really acceptable to many people who live and work in the vicinity of those sites. Given that, as a commercial waste disposal company, should you not be actively seeking to expand your capacity by finding additional sites within which you, as a trusted organisation, could dispose of this material, in a safe and controlled manner.

JE: I think in some ways that is what we are trying to do; so rather than us saying, it would be very easy for us to write into our acceptance criteria that we no longer accept very low level waste, and just leave it at that, let customers go their own way to do that. We haven't chosen to do that, what we have chosen to do is to say well, commercial operators are going to set up landfill to respond to that policy decision by the government that says there is very low level waste. The one thing we can do is go out and procure that service and test that they are reputable companies, that they are permitted appropriately to do that and that they are authorised to do that and then we can amalgamate the customers requirements and send it to that landfill so in some ways I hope we bring some assurance to that process. The other aspect is clearly that those landfills don't operate in some strange environment they are also regulated by the EA in the same way that we are so they, they hold the permits, they have a form of safety case that says that it is safe to dispose of that waste. It is, and I know it's hard to articulate, but it is very – the clue is in the title with the very low level waste it is right at the bottom one percent of the activity range of what can be disposed of at the repository.

We are not looking to build our own VLLW disposal facility, that is just the way it is, but what we can do is assure ourselves and, in doing so hopefully stakeholders, that where we do choose to dispose of that waste is appropriately permitted and regulated.

MD: The public out there do not recognise the difference between very low level nuclear waste and any other sort of nuclear waste, as far as the guy in the street is concerned it's nuclear waste, end of story and now they are finding that nuclear waste is being dumped – and I use this phrase very carefully – is dumped at landfill sites adjacent to industrial estates, adjacent to (inaudible) and it's causing a great deal of distress. If you, as the known operator and accepted and trusted operators of the site near Drigg where to be controlling this there would be a much greater acceptance of this process out there in the community. However, if I may ask a second question, quite early on in what you were saying you said you were spending taxpayers' money and I wondered why, as a commercial operation with the monopoly over your

product why aren't you setting your prices in such a way so you do not have to spend taxpayers' money?

JE: I'm sorry, perhaps it's the way phrased it, the money is indirectly taxpayers' money in that our major customers are actually NDA funded organisations so, no they are spending taxpayers' money with us.

MD: So you are in fact a profit making company?

JE: From the customers that are outside the NDA estate, the likes of GE Healthcare or EDF Energy then yes, we have a revenue stream that comes from them in the same way that we talked earlier about Sellafield Ltd having a revenue stream that comes from MOX work etc, etc, so yes, we have a similar income stream that supports the NDA programme but our model is exactly the same; we have funding from the NDA and we pass revenue back to the NDA and there is a balance between the grant aid piece and the income that comes from the customers.

MF: A follow up to Mike's question. It's very heartening to hear you say there will be capacity at Drigg in the future to take all the waste that is going to be within the site.

JE: Subject to approvals.

MF: Of course, approvals which I'm sure you'll get. What was not clear, you also referred to waste reduction in terms of sorting out what very low level waste you had at Drigg, do I take it that the sufficient capacity you talked about in the long term, is relevant whether or not you sort out the very low level waste at Drigg, in other words, without sorting it out, and with retaining what there is in terms of VLLW at Drigg, you will still have sufficient capacity in the long run for all the waste that needs the repository?

JE: I'll explain that a little bit. When I was talking about very low level waste I wasn't really at the repository site I was talking VLLW that the generators have, our customers, it is waste to come, in the future. So I think to address your question though there is no need to remove any waste from the repository in order to fulfil those objectives, so the capacity that we have will take all the future waste plus what is already there but it does rely on our customers, with us helping them, to reduce the volume through things like treatment and very low level waste disposal.

MF: Can you say why Studsvik did not set up its metals recycling facility at or near to Drigg, rather than at Lillyhall. It seems such a nonsense that that facility should be way away from Sellafield when you have the ideal site at Drigg? What was the reason behind it, it has upset a lot of people.

JE: Studsvik's decision to set up their facility predates anything of their involvement in (the parent body of) our organisation, so it's simply that they made a commercial decision to establish the metals recycling facility and I don't know the process they went through to choose the site but they decided to base it at Lillyhall, and it's as simple as that really. It was a commercial decision by a different organisation. Let me also be clear that, in that capacity, Studsvik are a supplier to us the same as anyone else, we haven't given Studsvik a load of metal to treat; they have to compete through the procurement process the same as any other company.

MF: Could I just make one final observation in relation to what Mike said. The whole business of using land fill sites – the view outside the industry is that it

is a really retrograde step, because it is seen as letting the nuclear industry off the hook in terms of producing waste, if there were no land fill sites available, if it wasn't that they could be used and the industry had to deal with its own waste then not only would they have to pull their socks up in terms of waste reduction strategies and everything else but they'd have to stop doing some of the things that they do, like the commercial operations, and a lot of people think that would make complete and utter sense, and that the industry for once should face its responsibilities and not pass it on to the wider public through the use of landfill.

JK: I thought I heard in the presentation that with the improvements in technology from where we were thirty years ago to where we are today the intention is to reduce the volume by 90 per cent is that through compaction, through reduction?

JE: Some of the technology will help us reduce it be 90 to 95 per cent yes.

NDA:

FW: You have highlighted where sites have been achieving, are there any areas of concern and what's basically happening in those areas that you need to do things about.

IH: It's a good question because how do you judge good performance when you are trying to move Sellafield through a curve, to become a really top notch delivery site? When you look at the last couple of years the site for the first full year NMP were there they had 44 what we call operating plan targets. We had more than that but those were the ones that were worth pulling out and highlighting and they achieved 41 out of the 44. The areas that they didn't achieve in that particular year, they were behind on Magnox reprocessing, they had an exceptional year in HAL, but Magnox reprocessing was behind, and in terms of some of the other ones they came in legacy ponds and silos in restructuring some of the projects didn't come in on the timescale that it really wanted to. If you look at last year, Thorp continues going really well, Magnox continued not to perform very well, which is kind of interesting because it started off very well, and then they had an issue with one of the pipe bridges which transfers liquor between plants, and what site were doing was they were doing an infrastructure assessment of the pipe bridges and if they were fit for purpose for the mission, and they found that there was an issue with the secondary containment on one of the pipe bridges so they had to stop. Now I actually think that's good behaviour because they checking the state of the asset but, guess what, they didn't do very well from a fee perspective because they didn't achieve their target.

The most disappointing aspect last year was the HAL, the Vittrification process. It went into outage sooner than expected and continued in outage more than you would have expected. My sense is that there was quite a lot of work that needed to be done around HAL to improve it, but what I'm seeing this year is that they have a really good improvement plan and it's ticking along pretty well. Underlying issues, well, we still have difficulty delivering projects reliably, so when you say there is a cost and a schedule and it's going to come on a date, we still think there is a fair amount of work to be done around that. So when you take SPRS for example, it was good in that it came in on time and its commissioning programme has been pretty good, but if you look at projects generally around the site there is still cost and schedule slippage, which is not great. If you take safety and environmental performance the site last year posted figures which were as good as you've seen for five years plus, in terms

of safety and environmental stats, it's pretty hard to compare more historical figures but the safety stats have shown a good marked improvement in safety performance.

The areas we are really driving now are delivery of projects and the legacy ponds and silos area, that's an area of concern. We want more reliability in the manufacturing plants, where we hope we will see improvements this year and I think the overall thing about the integrated change plan was about how the site engaged the hearts and minds of the workforce to really drive this change and I think for me there is still a lot of work to be done in that process. One of the things I've said to the site that I think was one of the biggest secrets on site for a while, I think the site has done a whole lot better now but we still have to do a bit of work on the hearts and minds stuff.

FW: It's a heart warming answer to the question because it shows that NMP and Sellafield Ltd are looking at the asset, you know, they are not being driven by that performance target to the point of ignoring any imperfections or defects along the way, so I am massively reassured – they may not be with reaching their fee targets but I am.

IH: Where I want them to be in a few years time is a whole lot better than they are now, but you can't just turn a switch, there is a journey to be taken.

JK: I have a number of points Ian, I'm not the sharpest knife in the draw but I'm not flat tyre either; I was in 205 with Phil when we were reprocessing 1200 tonnes a year, through Magnox. Most of my questions relate around financial things because as the commercial sub I think that's what we are here to do. Can I ask how many people actually work for the NDA?

IH: Just over 200 people, outside of RWMD, RWMD is about 110, 130, something like that.

JK: In your figures on your first slide, I think it was roughly about £52 million a year, or 2 per cent of the NDA budget for the year, £2590million, which is £20 million more than LLWR get, so it's quite a high figure. I also note with interest that in The Whitehaven News today the remuneration package of £9.5 million, which is a third of what LLW get, just for your corporate team, do you think you are value for money?

IH: Okay, so, there is a couple of things; the £52 million that NDA spend, which is the figure you've taken from the first slide, doesn't just cover costs associated with people, it covers things like R&D, it covers some of the socio-economic stuff, it covers the skills budget, so for instance the money that went into Energus and other kinds of things, so I think it's quite a broad church, for me I think it's a fairly good spread.

What NDA did, and has done this last couple of years, there is a couple of things that have happened, NDA itself has gone through a pay freeze, so we have had a two year pay freeze, we have reduced our numbers by a third and so we've actually done quite a lot of work in terms of what NDA does, and a third reduction in numbers at NDA is quite a lot by comparison to the rest of the estate I think, and I think that's okay. In terms of the remuneration, you talk about NDA work on Sellafield and value for money and, the processes NDA go through is that people have to apply for the jobs, there is competition, and people go through that normal process, I think that's okay I think it's a fairly standard approach.

JK: I think where I'm coming from is that, in my time there, we had what I thought was a good senior management team, and the remuneration package was nowhere near. How you get to that position when, to me, in terms of commercial activity, we aren't delivering?

IH: So if you get to Sellafield the remuneration package is made up of three elements, it's made up of a base salary, it's made up of (inaudible,) and it's made up of the cost to pay for the person to be in the place, the location that they are at okay. All the bidders when they went through the commercial, the competition, that was one of the things that was tested in terms of is it the right value, value for money and things like that so NDA did test that value for money in the market and so it is competitive, it's value for money. We test the amount that is spent in remuneration we do go through that we go back and, through audit, we test that it is matched onto the original bid, we do also audit the bonuses against the delivery of targets as well, we have given some feedback around some of those issues as well. If you look at a straight comparison of base salary and profit and compare it to what the previous management team was doing, if you take the components away, that is the package for having people there, I'm not convinced its that significant a difference as the figures would suggest in the papers, I think that's really the crux of it in lots of ways. I think in terms of Magnox reprocessing and what goes through, you did 1200 tonnes, my sense is that it was really nice, clean fresh fuel and I understand some of the people went through it, my sense is that the plant didn't work for another two years after that, and the problem is that you are comparing not like with like, the fuel and the circumstances are different, Magnox is now 20 or 30 years older than it was when it reached those kind of things, the infrastructure is a lot more aged, you need to do a lot more maintenance and things like that to it, its not the same comparison, and I don't think you can pick up 1200 tonnes from Magnox, from 20 years ago and say you'd expect the plant to do the same, I don't think that's a fair comparison. Again with the Thorp incident, the Thorp feed clarification cell you've reduced effectively two lines into one, so you are not going to achieve the same rates you had on Thorp ten years ago. So the issue is more complicated then 'pick out a target' and say 'it's better or worse', it is a whole lot more complicated then that. We absolutely compare historical performance of Sellafield against what they are achieving today, there are some things that I would say are better, quite a lot better, there are something things very similar, and some things that aren't as better, that probably haven't been improved as well, you've got to be balanced about it, SMP performance, hugely better, Thorp, getting better, so I don't know, its hard to compare.

JK: To me, there has always been, in the last few years, don't get me wrong, I like what you said about the high level waste and the historical waste and dealing with the high level waste, that's crucial. But there has been an over emphasis to me on conventional safety as opposed to radiological safety, whether we like it or dislike it a broken leg isn't going to close us down, but a radiological incident could, that's you know, you seem to be driving the targets more towards and audience, that to me, it isn't as crucial as the radiological side is.

IH: So, safety incidents, one of the measures we use is INES level events, and you know the INES level scale one to whatever and Fukushima, one to seven, and that was a seven, INES level events at level one (at Sellafield) have reduced over the last year and a half to two years as well.

JK: I agree with that, and I think there has been a great focus, but your still paying big money out on conventional issues to me that are standard practice

at work, nobody goes to work to get injured, no one in this world goes to work to get an injury but you place great emphasis on it in terms of financial rewards for certain people, which I think is.

IH: They don't get fee for achievement safety targets. On safety, we have what's called abatement criteria, so if they fail to achieve, if they have safety incidents, then the abatement criteria will actually take fee off them, so there is not positive reinforcement on site of safety targets there is a negative reinforcement, so you know, they will lose fee for events, they would lose fee if they hit thresholds, and things like that so we don't positively reinforce it its negative, and it's a negative reinforcement.

JK: I watched that programme the other night, undercover boss, did you see it? With the lift that had been out of action for eight years, can you imagine that at our spot? They were carrying boxes up and down stairs, it was absolutely ridiculous, and they weren't getting criticised at all, we would get slaughtered.

IH: I think its, I find it fascinating to be here today, given the article in The Whitehaven News I sensed there would be some discussion around, but you've gone through a competitive process to measure the value and you can measure against that, you then get to the question is it the right model and things like that, well this is the model we are using and that was the approach we are taking, but I appreciate the points that you are making and we do look at it very closely, we really do.

JK: It's just a tester for you because I'm sure you'll get it a few more times.

IH: I will and it's a fair comment

PH: I think what is significant John, from the days when you and I did 1200 or 1300 tonnes in Magnox the pattern of work on the site now is different. BNFL board signed of the first decommissioning plan for B30, in 1989, the fact of the matter is not a lot of that plan got implemented in 1989, or in 1990, or indeed many years thereafter. Where we are now is that there is actually a lot more work, physical work, being done in these high hazard facilities to prepare for retrievals, and I think that combined with the age of the infrastructure, there has been no real inhibition to reprocessing arising from the unavailability of reliable (inaudible) hence the justification for the investment in Evap D, its really the overall pattern of work that has changed.

JK: Plus the move away from cost plus contracts to fixed price contracts, which gives you more time.

PH: Yeah, there is a complex set of factors there but certainly the pattern of work has seen a much greater emphasis on physical work and areas that were previously, a man and a dog walked around to make sure it was all still there, large numbers of people are there now actively pursuing the preparation for retrievals.

MF: Ian could you say when these appendix figures are going to be available, that's what I've been waiting for for, six years?

IH: We made a commitment last week to put something out in two weeks so, I imagine that leaves next week.

MF: And could you just confirm those figures are not available in any other current NDA documents, you business plan or your strategy?

IH: That would be correct yes. I think it is the case however that some of the timescales map back to those targets as well/

MF: Next question, what is the status of the oxide fuel strategy please?

IH: The status of it?

MF: Is there a report available is there a strategy document? a recent one? are you thinking about reviewing one? There is some mention in the performance plan about a new oxide fuel plan.

IH: So, one of the things NDA has done, trying to get a more consistent approach about reprocessing and about strategy, is we have mapped in to the plan a number of activities. One of the ones if you look at our strategy, which is go and complete the missions as quickly as possible, which is the fuel manufacturing strategy, the other things which we've done is that in line with the options papers that we've look at on fuel, spent fuel management, we have carried out assessments on some of those options to see if they are a viable alternative to what we have got, you know, so we have looked at what it looks like from a long term storage perspective in ponds, we have looked at options such as dry storage as well, one thing Sellafield has been doing in the last 18 months is getting those options up to a level that allow you to make a reasonably well informed judgement about whether those things could be done or not.

I think we've flagged that over the next few months, towards the back end of this calendar year, the intention was to revisit and see whether or not those options were possible alternatives to (inaudible) but that maps into government policy so the interactions are against government policy, I'm just not quite sure of the timing, but certainly I think we flagged the fact that we'd be looking at those options some time in the autumn to see what the alternatives might be, if they are the right things to do, but its not simply a decision for NDA it's a policy decision for government.

MF: You mentioned dry storage at Sellafield, I can't find any reference anywhere in the Sellafield plan, to dry storage of AGR fuel and the way I would read the plan suggests you are going to go on shearing, reprocessing AGR, to keep enough pond capacity to receive incoming fuel from the power stations. No reference to dry storage at all.

IH: So, okay, well it probably should have been in the plan, but there has been activity looking at drying of fuel in cask and re-drying of wetted fuel as well, to see what technology lends itself to and to inform some of those strategic options and you'd kind of expect us to do that because Sellafield is probably the best place to access those options.

PH: I think what you'll find is that it probably isn't as explicit as it could be, but we recognise it currently as the safety case for long term storage of AGR fuel that's the badge and within that there is obviously the issue of moving to nitrate dose water in the short term and then exploring this contingency of dry store, so, yeah, as a point, I guess we could have been more explicit.

MF: Just a final point please, and maybe I should have raised it before when Fee raised a question about SMP, but can you tell me why it is not possible, or perhaps it is, but why its not possible to use SMP for immobilisation of plutonium. Put it this way, NDA documents going back five of years now on plutonium management have specifically mentioned SMP as being a

possibility, no more than that, for the drawbacks, that they do mention, but if it is a possibility you do wonder why on earth you can't convert it if that's the right word, the plant, for immobilisation purposes, retain the workforce, use them for that. It just seems an absolute waste of, a waste of a facility.

IH: The thing about reusing facilities, it's difficult to say that nothing is impossible or that something is impossible because if the will is there and you want to re-use a facility such as SMP if you've got a unlimited cost infrastructure and all those kind of things and if you were to look at immobilisation you would have to do a comparison between the existing facility and the cost of refurbishment and the associated performance of a refurbished plant versus what a new one might look like and, often, its my sense, my experience, is you might spend eight to ninety per cent of the money you might spend on a new facility and you may not get the performance in terms of timescales or quality or whatever, that you need. So I don't think it's as simple as is it possible to do it I think it's a question about which is the best option if you were going to go down that particular path. But in terms of, from a UK perspective, you know you are pre-judging the decision or pre-judging some options that government is looking at in respect of managing plutonium, in that consultation.

MF: But the NDA accepts that there is a certain percentage of that stockpile which will have to be immobilised.

IH: Yes I agree with that.

MF: And you don't here at all how far the refurbishment has gone on SMP, paid for until the Japanese until recently, I mean, presumably, that refurbishment must be at least a step towards putting the plant into a state where it could be used for immobilisation.

IH: Yeah but the percentage, the amount of material that might need to be immobilised would be things like chlorine contaminated PCM, is small volumes and low feed through in terms of risk so you know, as a straight forward comparison would you maintain the full infrastructure of an SMP with all the associated costs where as a smaller existing plant or whatever might actually be more appropriate in terms of cost, so you are trying to compare a really small operation that's not time scale driven against a bigger production mission and they don't compare. So if you look at the overall costs of the infrastructure and then at the requirement to do it.

PH: I think where we are Martin is we need the outcome of the government's decision, there are technical approaches then depending on the scale of that, an example would be hot isostatic processing, to deal with relatively small volumes of residues in that way would be exactly the right technical solution, and I don't think that would be a sensible thing to try and install in SMP. On the other hand if there is a different approach that looked at a waste form, if that would be the route we are going down, we'd need to understand from RWMD, what the characteristics were of that waste form, and then we'd be able to evaluate the potentiality of SMP versus a blank sheet of paper to see what the right thing to do is.

CG: If I may, just an observation, I was sitting right at the back of the larger stakeholder meeting last week and I thought I heard Todd Wright say that Sellafield Ltd would be considering all options regarding SMP in a series of workshops with staff and some stakeholders, etc at some time in the future. It might make sense to just note that.

IH: I think that's fair as well, I think you've got to wait and see, it's just not as simple as saying it's impossible to use SMP for that.

PH: There is intrinsic value in the people, potentially in some of the equipment, certainly in the knowledge, certainly in the skills and we need to make sure we get the right outcome for the use of that intrinsic value in the future. I know Martin would support that.

CG: Todd certainly said he had some good suggestions from the workforce already.

IH: I think the other part of it for me, having spent my time dealing with legacy facilities for many years, I think it's important that you get the material sort of wrapped up and put in nice packages and sorted out. POCO is essential and we will make it quite a priority to stabilise and get that plant sorted out.

FW: Can I ask, where you Ranald invited to the briefing on SMP last week?

RS: No, the first I know about it was at the stakeholder meeting when it was announced.

FW: I would have expected that you, as the chair of this sub-group, and given that it was clearly an announcement with great commercial impact, the fact that nearly 700 people have got to be redeployed on the site. I would have expected that there should have been a strong presence.

KC: I think, the way the announcement was made was that, in recognition of the fact that the most important people in all this was the SMP workforce, the information was kept very very tight, it was an NDA announcement rather than a Sellafield Ltd announcement but the two organisations, as you'd expect, worked together and coordinated timing so that key stakeholders were informed after the programme of work to inform the workforce had begun. John Clarke was on the site and he hosted various meetings and workshop briefs with those people who were affected. The stakeholders were told just in advance of the stakeholders meeting.

IH: If I can just add to that, the order of events, as Tony said, the board took the decision on the Thursday, the week before the announcement, and we had to write to DECC and get some confirmation of certain issues from DECC and the timing of it was as quickly as we could get the information out. You get to the situation where you need all the answers and you are damned if you do and damned if you don't, and in terms of key stakeholder we do normally have a set of people we would phone up before key events and try and just give them a heads up so its not such a surprise if people from the newspapers pick up the phone and things like that, we were, I was, very very concerned that the workforce didn't read it in the Whitehaven News, or the Times and Star or hear about it on the radio so we took a decision, and I was completely party to that, to let people know fairly close to the last minute, so that there was absolutely no chance the workforce wouldn't hear it in the proper way, as I was driving in on Wednesday morning I was so pleased it wasn't on the radio. I think we have taken a little bit of comment and criticism that we didn't quite get it right, and I apologise if people felt a little bit disenfranchised, it certainly wasn't because of any lack of respect, but to some extent it was so crucial to me that we got it right with the workforce.

RS: I endorse that.

FW: I would never disagree with that, not at all, but I think we have a hierarchical society of stakeholders and I think sometimes it does not equip itself well because there is no opportunity to debate and discuss within the stakeholder fraternity what options are, there is no opportunity to ask the questions that we have been fortunate to have had this week, but we are lucky that by chance we have had this meeting this week, its been quite timely that we have had our committee meeting this week, I have welcomed that opportunity but that isn't always the case these meetings are bi-annual, we meet twice a year, so there isn't the opportunity to have a debate and discussion and I know its probably quite laborious to you chaps that have had to answer the questions but its really important to me and to other people round this table that we get this opportunity and I think it would be a sad day if we lost it, so what I'm saying is we cannot rely on the fact that we have had this meeting this week.

RS: Can I just say that you are quite right, these meetings have taken place twice a year, but I had been having discussions with the previous chairman and we have felt that maybe we are getting to the situation that we maybe would have these meetings quarterly.