The Environment Council

BNFL NATIONAL STAKEHOLDER DIALOGUE

# Co-ordination Group

**December 2004**

# *Overview of the BNFL National Stakeholder Dialogue 1998-2004*

# FINAL REPORT

212 High Holborn
London WC1V 7BF
tel 020 7836 2626
fax 020 7242 1180
email info@envcouncil.org.uk
www.the-environment-council.org.uk

Registered Charity Number 294075 Certificate of Incorporation Number 2004003 VAT Number 577 8121 11

Produced by The Environment Council

December 2004

If you have any comments or queries regarding this report please contact:

Rhuari Bennett
Direct Line: +44 (0) 20 7632 0134
E-mail: rhuarib@envcouncil.org.uk

The process was designed and facilitated by Richard Harris of RJH Associates for The Environment Council and by Helen Ashley and Rhuari Bennett of The Environment Council.

212 High Holborn
London WC1V 7BF
tel 020 7836 2626
fax 020 7242 1180
email info@envcouncil.org.uk
www.the-environment-council.org.uk

Registered Charity Number 294075 Certificate of Incorporation Number 2004003 VAT Number 577 8121 11

# *Foreword*

### *Aim of the BNFL National Dialogue*

The BNFL National Dialogue involves a wide range of organisations and individuals interested in or concerned about nuclear issues. Its aim *is to inform BNFL's decision-making process about the improvement of their environmental performance in the context of their overall development.*

The Dialogue is open to national organisations and regional groups as well as well as expert and specialist concerns. If you would like more information, visit www.the-environment-council.org.uk or contact The Environment Council on 020 7632 0134.

### *Guidance on Interpreting this Overview Report*

The principal purpose of this Overview Report is to inform the deliberations of the Main Group of stakeholders in the Dialogue and any related decisions or activities they might undertake, while providing an overview across the past 6 years of the Dialogue process.

Participation (by organisation or individuals) in either the overall Dialogue or the working groups must not be taken as an indication of support or disagreement with BNFL's activities.

Any quotes from the reports used in talks, articles, consultation papers and/or other documents published on paper or electronically must be put within the context given within the relevant section of the working group's report. The Environment Council strongly advise those considering quoting from the reports to forward their proposed text for review to Rhuari Bennett (rhuarib@envcouncil.org.uk )

### *The role of the convenor*

The convenor of the Dialogue is The Environment Council, an independent UK charity. The Environment Council is responsible for designing and facilitating each stage in the Dialogue, and provides relevant support, like issuing invitations and booking venues.

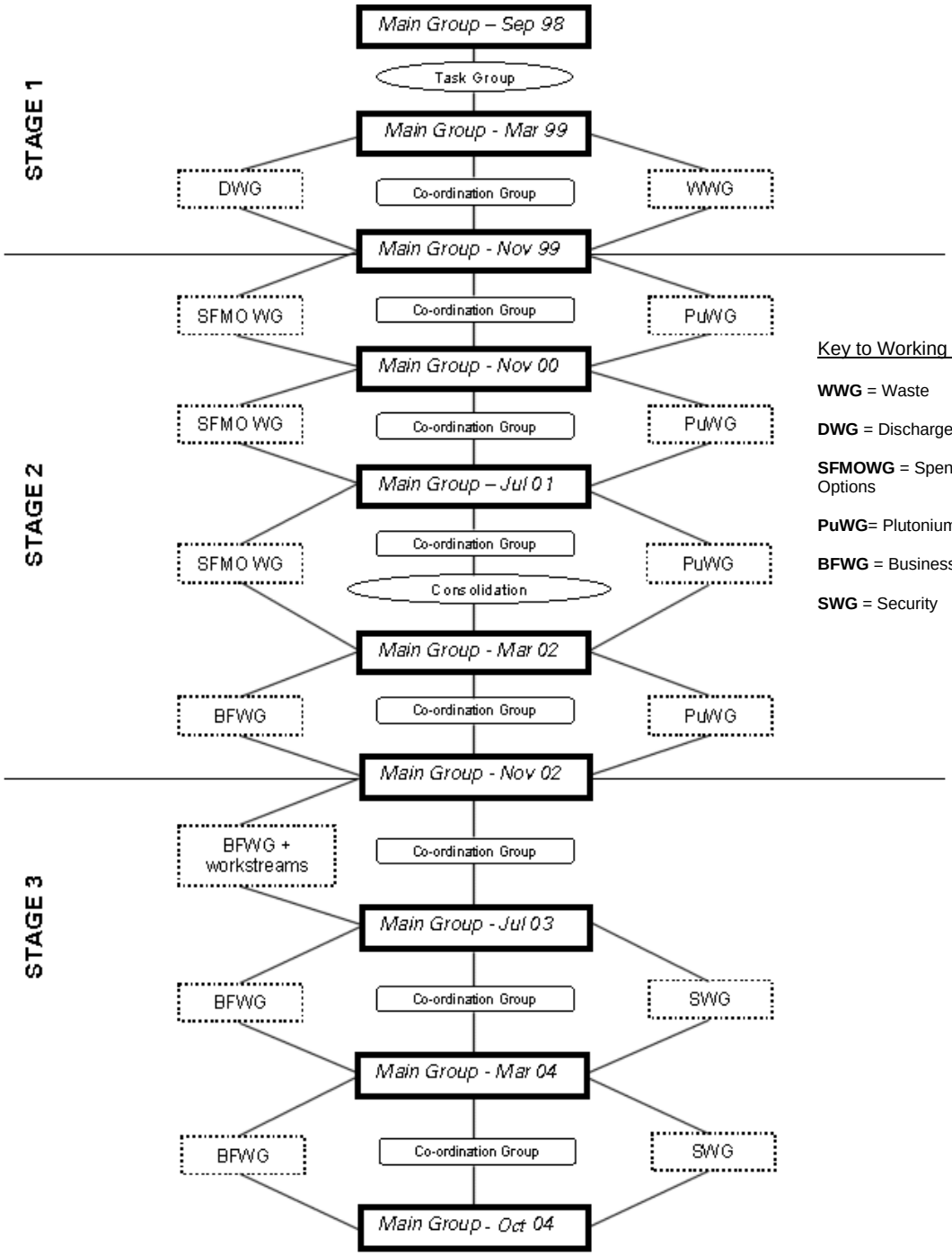
The Environment Council is not responsible for any issue discussed in the Dialogue, and holds no formal position on any of the substantive issues that are or might be considered. It is for the participants to decide what issues are raised, how they might be addressed and how any observations, conclusions and recommendations might be recorded and communicated.

The website of The Environment Council displays a full history and evolution of the Dialogue, as well as all of the reports that have been produced from the process.

The Environment Council, December 2004.

## History of the BNFL National Stakeholder Dialogue

The diagram below outlines the inception and evolution of the BNFL National Stakeholder Dialogue process. A more detailed history and explanation of each of the groups, together with the reports produced and lists of group members is available at www.the-environment-council.org.uk




Notes:

- The Coordination Group is responsible for providing guidance on linkages and continuity between groups, as well as identifying problems and "potential wobbles.
- "Socio-Economic" and "Transport" issues were discussed throughout the process.

*Contact Rhuari Bennett for more information on 020 7632 0134,* rhuarib@envcouncil.org.uk

# Table of Contents

Page intentionally blank

# 1.0 Introduction

In 1998, BNFL, recognising that the nuclear industry had a long history of unenviable relationships with many of its stakeholders, decided to pursue a policy to attempt to alter the situation. This recognised that the 'conversation' that BNFL had typically been having with its stakeholders should become more positive and less antagonistic.

Through The Environment Council, BNFL brought together a number of key stakeholders who agreed to explore the potential for working together on some of the most challenging subjects facing the industry.

This led to the formation of what became the BNFL National Stakeholder Dialogue, whose aim was: "*to inform BNFL's decision-making process about the improvement of their environmental performance in the context of their overall development*".

This report provides an overview of the Dialogue and proposes a suitably structured basis to close out this process. It also proposes a process to prepare the ground for the transfer of lessons learned to successor organisations.

## 1.1. What is the BNFL National Stakeholder Dialogue?

The Stakeholder Dialogue is a structured series of meetings that brings together a wide range of stakeholders[1] often with disparate views and interests to discuss environmental issues around BNFL's business. It is funded by BNFL but managed by an independent convenor, The Environment Council, on behalf of all the stakeholders involved.

This Stakeholder Dialogue process is unique; it is the longest, largest and most thorough Dialogue process ever undertaken in Europe. There are currently over 70 organisations involved, represented by some 200 individuals. It has been underway for 6 years and has covered in detail the main topics listed below:

- Waste
- Discharges
- Spent Fuel
- Plutonium
- Socio Economic issues
- Security
- Business Futures

[1] Stakeholder: Any person affected by, or with an interest in, the issues. In reality they also need the commitment to get involved as well. This Dialogue also has the requirement that stakeholders should represent, or reflect the views of, a formal constituency, as opposed to somebody just having a personal interest.

## 1.2. Approaches to Stakeholder Engagement

There are many approaches an organisation may adopt when working with stakeholders. These range across a spectrum from the "reactive" to the "interactive" as illustrated by the diagram below[2].

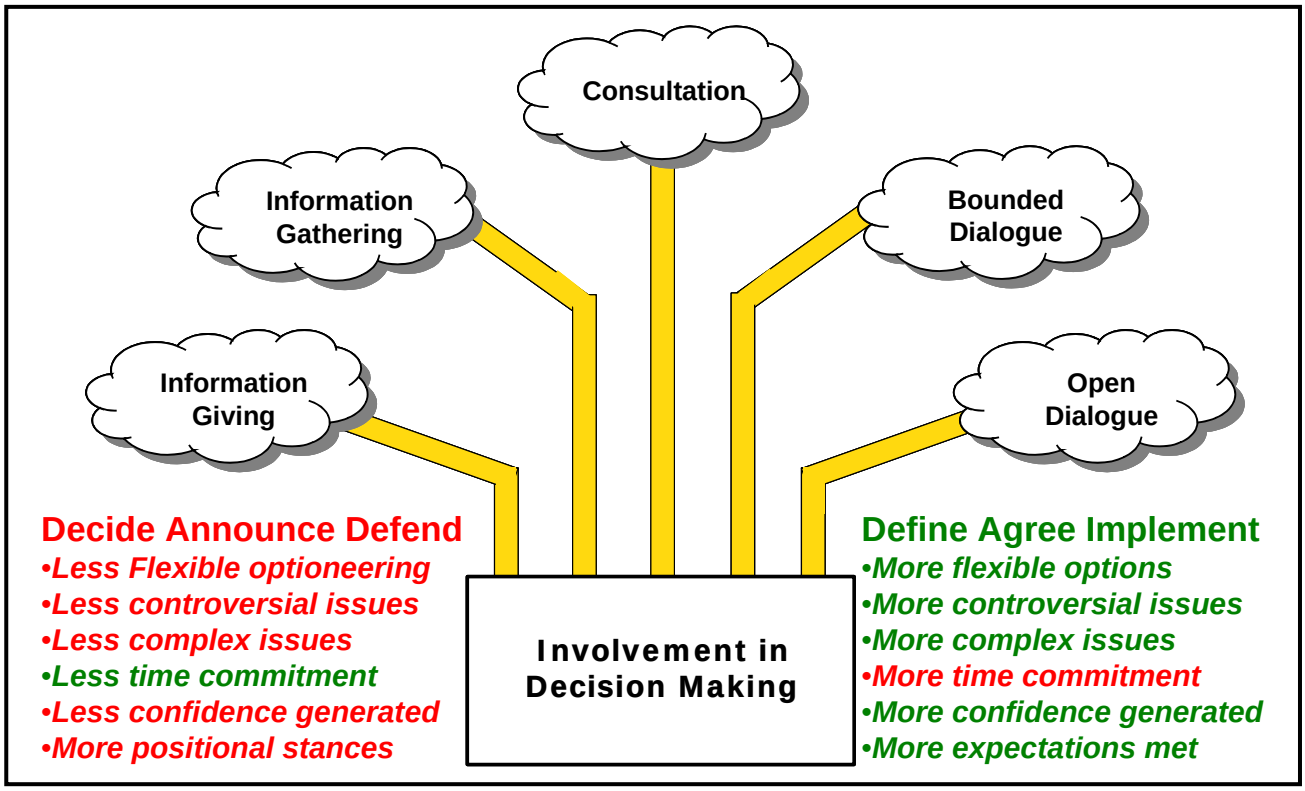



*Figure 1. Stakeholder Involvement in Decision Making*

Making the choice of approach from the spectrum requires careful thought about such matters as history, level of conflict, experience of stakeholders, technical complexity and so on.

The more reactive approaches include simple surveys, stakeholder research and relatively passive forms of consultation (for example, a questionnaire saying "here is our plan…what do you think of it?"). These approaches tend to work well in relatively straightforward circumstances where there is low conflict and a clear responsibility for decision making.

The more interactive approaches include more face to face work and typically have, to varying degrees, a "deliberative"[3] element – where stakeholders come together to think and talk through an issue and may even develop agreed responses and collaborative working. These approaches are most suitable for complex situations, often with many stakeholders and problem holders and where there is real or potential conflict; for example, where a company's activities are under question (a challenge to their social "licence to operate" if you like).

[2] © Richard Harris, RJH Associates, 2001

[3] A succinct definition for deliberation is offered by Bohman (2000): 'deliberation is a joint social activity, embedded in the social action of dialogue – the give and take of reasons… (with the goal being) to solve a problem together with others who have distinct perspectives and interests.'

## *1.3. Stakeholder Engagement as applied in the BNFL National Stakeholder Dialogue*

"Stakeholder Dialogue", as applied in the BNFL National Stakeholder Dialogue, is a deliberative process, seeking to build areas of consensus whilst recognising differences of view. Dialogue was selected as being particularly suited to the BNFL situation where issues involving conflict, complexity and uncertainty are present. By helping stakeholders work through difficult issues together it was hoped that a number of beneficial outputs would develop. These benefits could be both visible (such as reports, agreements etc) and invisible (such as change in relationships, common understanding, mutual respect etc).

In addition to the stakeholders, there are three key roles within any dialogue:

1. The Decision-maker(s) - who makes decisions informed by the process
2. The Sponsor - the organisation or department responsible for initiating the process
3. The Convener - an independent third party responsible for designing and managing the process. This usually includes one key individual with overall responsibility for process and running meetings, the facilitator. He/she is supported by others as co-facilitators, project co-ordinators etc.

The decision-maker and the sponsor are often the same – in this case both are BNFL. However, separating the role of convener from the decision-maker(s) and sponsor can be crucial when contentious decisions have to be made. If BNFL were also to convene the process the outcomes would likely be labelled by stakeholders as manipulated. The advantage of employing an independent convener such as The Environment Council (TEC) is that if their integrity is called into question they can ultimately be replaced and credibility restored – this cannot be done with either decision-maker or sponsor

The relationship between the BNFL and TEC is an unusual one. It is not a conventional client/contractor relationship because there is no detailed contract that guarantees the provision of certain outcomes, which would impact upon the independence of TEC as a third party convener and therefore the integrity and effectiveness of the process. The relationship is better characterised as a partnership where BNFL holds responsibility for resourcing the Dialogue appropriately while TEC holds responsibility for managing the process both effectively and efficiently.

In terms of the decision making boundaries, the BNFL National Stakeholder Dialogue can be considered to be in the region between 'Bounded Dialogue' and 'Open Dialogue' in Figure 1, with BNFL retaining ultimate responsibility for business decision making.

# 2.0 The Work of the BNFL National Stakeholder Dialogue

## 2.1. Overall Structure of Dialogue Process

Appendix 1 provides the Key Event Dates and activities during the BNFL National Stakeholder Dialogue process, while the following notes explain the Dialogue's inception and evolution over its 3-stage lifetime.

The Dialogue was structured with a 'Main Group' of stakeholders and smaller Working Groups. The Main Group comprised of around 200 people and had the opportunity to meet every 9 months, although only about 80 of these attended any particular Main Group meeting. The Main Group was responsible for deciding what issues were tackled within the Dialogue and how they were addressed. The Main Group was open to national organisations and regional groups as well as expert or specialist concerns provided that participants were willing to abide by agreed Ground Rules[4]. These Ground Rules were maintained as a living document to meet the developing needs of the process and reaffirmed at Main Group Meetings as necessary.

The Main Group formally mandated Working Groups of 20 or so representative stakeholders to undertake 'nuts and bolts' work on their behalf. This process is illustrated in Stage 1 of Appendix 1 which shows when the first two Working Groups were set up and mandated to work on Waste (WWG) and Discharges (DWG). Working groups reported back to the Main Group with their draft Interim and Final Reports (see Appendix 3 for full list), which were discussed, modified as necessary, agreed and published. The Working Groups in Stage 2 looked at Spent Fuel Management Options (SFMOWG) and Plutonium (PuWG); and in Stage 3 looked at Security (SWG) and the wider issues around BNFL Business Futures (BFWG).

## 2.2. Topics and Working Groups

The first Main Group of stakeholders in 1998 identified and prioritised a list of issues and concerns, headed by "Reprocessing" and "Trust" that could be addressed in further meetings. Early on it was decided that Trust could not be addressed as a separate issue; rather participants would have to see if it began to build through attempting to work together. A Co-ordination Group consisting of a range of stakeholders, was also established to oversee the effective operation of the process.

A Task Group of stakeholders recommended that the dialogue first address Waste and Discharges. It was thought these areas offered the best potential for finding some areas of agreement, however limited. These might in turn have an influence on related external developments like the UK National Discharge Strategy and the review of nuclear waste management, "Managing Radioactive Waste Safely". Also it was thought that, as such a nuclear dialogue was unprecedented in the UK, Waste and Discharges offered the best opportunity for learning about the strengths and pitfalls of working together before attempting to address even more contentious issues like Reprocessing. Reports of the Waste and Discharges Working Groups (WWG and DWG) were published in February 2000 and, as for all published reports, are available on the Environment Council web site[5]. The WWG and DWG were subsequently reconvened to address specific announcements by the Company, for example the May 2000 announcement of Magnox reactor closure dates.

[4] Ground Rules: 'rules of engagement' that stakeholders agree to abide by in order for the process to exist and function effectively. See Appendix 2 for full list of current Ground Rules.
[5] www.the-environment-council.org.uk

The 3rd Main Group Meeting in November 1999 established the Spent Fuel Management Options Working Group (SFMOWG), together with the Plutonium Working Group (PuWG). The SFMOWG looked at various options for dealing with spent fuel and made recommendations about further work and contingency planning that the Company should undertake. A Transport Sub-Group was set up by the SFMOWG to provide inputs on this specialised issue. The SFMOWG report was published in July 2002. SFMOWG and PuWG, in response to recommendations by DWG and WWG, set up a joint fact finding study into the socio-economic futures for West Cumbria. The study was carried out by ERM[6], overseen by representatives from SFMOWG and PuWG. The work was reported and published in November 2001, and an updated version of this socio-economic study was produced in August 2003.

The Plutonium Working Group looked at various options for dealing with the Company's Plutonium stocks, including immobilisation and Mixed Oxide Fuel (MOX) manufacture. The final PuWG report was published in March 2003 and has been the basis of subsequent presentations to the BNFL Executive and Board, various Government Departments and a No 10 Policy advisor.

The Stage 3 Working Groups have considered Security and BNFL's Business Futures. The BFWG has examined issues around the creation of the Nuclear Decommissioning Authority (NDA), including the submission of principles to DTI about what would constitute success for the NDA in the eyes of this cross-sectoral stakeholder group. These Principles were endorsed by the 7th Main Group Meeting in November 2002. The BFWG also provided advice to BNFL on the Key Strategic Issues for the original BNFL business structure, and, following the joint DTI/BNFL Strategy Review (December 2003), for the reorganised structure into which the Company is evolving. The BFWG also examined contractorisation, site remediation issues, diversification and stakeholder engagement frameworks. Links were developed with the DTI's NDA Team as the Group acted as a "sounding board" for the Government's emerging strategy on the management of nuclear liabilities.

The SWG has developed the principles that should be applied to security systems applied in a high hazard industry and has undertaken a gap analysis by comparison with the UK nuclear industry. Reports from both Groups will be taken at the Main Group meeting on 13-14 October 2004 and, once endorsed, will be published.

The completion of Stage 3 represents the culmination of the BNFL National Stakeholder Dialogue. It is anticipated that new stakeholder engagement processes will be set up under the auspices of the NDA, and by the restructured BNFL. There is therefore a need for the Working Groups and the Co-ordination Group to make recommendations to BNFL, the NDA and Government Departments to take forward the results of the Dialogue. To facilitate this, the Business Futures Working Group devised and carried out a methodology to consolidate all the recommendations from previous Working Groups. This consolidation was endorsed by the 9th Main Group Meeting in March 2004, which then mandated the Co-ordination Group to allocate the recommendations to the appropriate organisations, and where possible, to the individuals responsible for implementation. This is further discussed in Section 4 of this report.
BFWG and SWG recommendations, if accepted by the October 2004 Main Group, will also need to be consolidated and allocated as for the previous recommendations discussed above and in Section 4.

[6] ERM Economics, 8 Cavendish Square, London W1M 0ER www.erm.com/economics

## 3.0 Dialogue Evaluation

Dialogue evaluation in this section refers to the evaluation of the process and the satisfaction of stakeholders with this process. Evaluation of the content of the Dialogue is addressed in Section 4 below.

One of the challenging issues throughout the dialogue process has been the need to demonstrate whether BNFL's thinking and actions (and indeed those of stakeholders) had been influenced by the Dialogue. The costs of running such an extensive, innovative process are quantifiable and understandable, whilst many of the benefits are invisible, and identifying hard evidence of impact or influence can be difficult.

The process has approached this issue in a number of ways. Firstly, by undertaking regular, simple evaluations that inform the way the process is managed from stage to stage, for example Figure 2 below shows the feelings of stakeholders at the two most recent Main Group meetings.

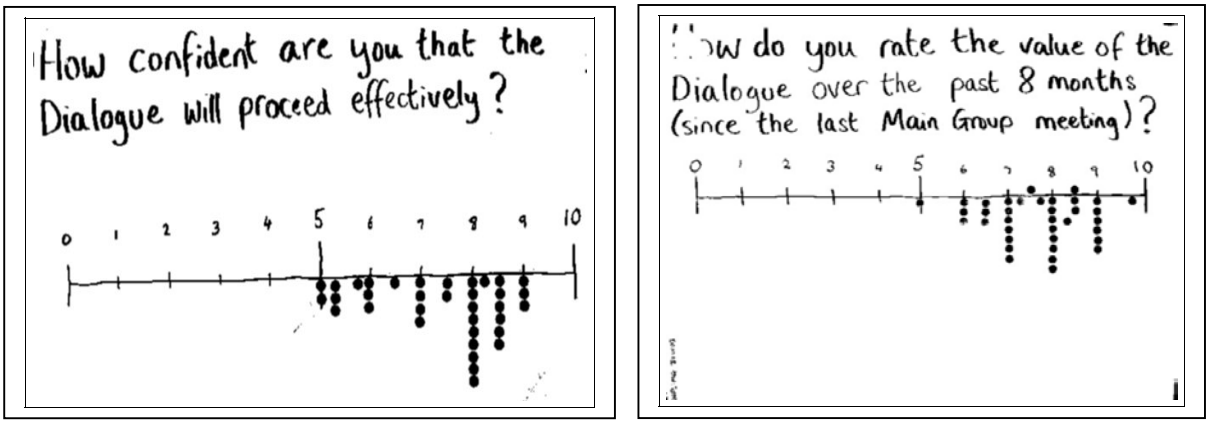
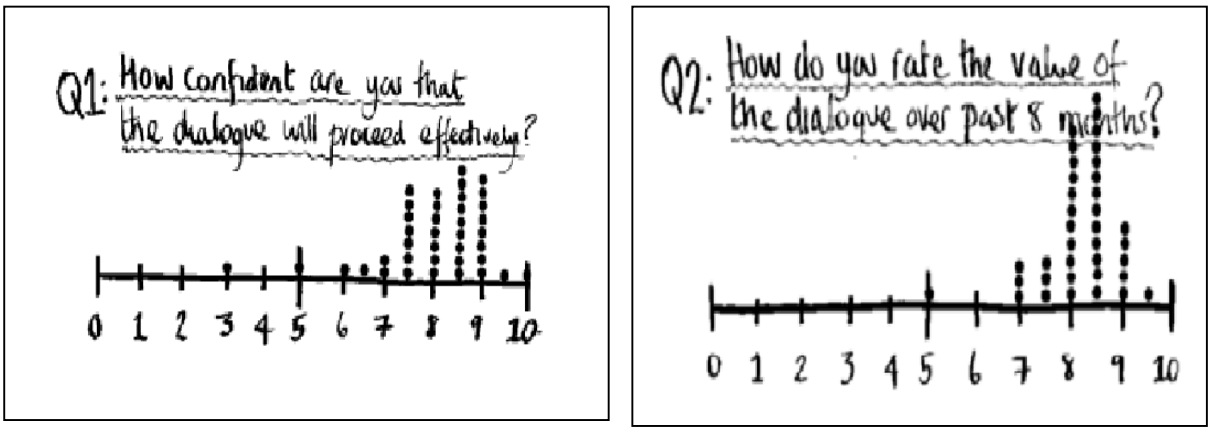



*Figure 2 - Evaluation flipcharts from Main Group meetings July 2003 (above) and March 2004 (below)*




Secondly, The Environment Council undertook a more structured "mid-term" review at the request of stakeholders, published in September 2002[7]. Lastly, an independent evaluation process, focused on learning lessons from the dialogue, was commissioned by the Co-ordination Group

[7] Evidence Report – Influence, Productivity and Impact of the Dialogue; Published Sept 02

from CAG[8]. The evaluation was overseen by a sub-group made up of Co-ordination Group members and volunteers from the Main Group with a specific interest in this area. The draft CAG report was endorsed by the 9th Main Group Meeting in March 2004 and the final report was published in July 2004[9].

The Co-ordination Group considers that the CAG evaluation report has identified important learning points, not only for the BNFL National Stakeholder Dialogue process, but also for dialogue processes generally. A key learning point is that evaluation should be planned into participatory processes at their inception, and should continue throughout the life of the process. The Co-ordination Group recognises that it has been difficult to conduct an evaluation of a mature and complex programme when it is in its final stages.

When the BNFL National Stakeholder Dialogue process began 6 years ago, nothing of this scale had been attempted in the UK to address such a long-running and entrenched conflict. Much of the knowledge required to implement and evaluate such a successful Dialogue process was gleaned along the way, often with the help of the stakeholders. It is therefore not surprising that the realisation of the need for ongoing evaluation has only become apparent at a relatively late stage.

The Co-ordination Group has reviewed the CAG report recommendations applying specifically to the last stage of the Dialogue and are satisfied that these have been adequately addressed. Additionally, the Evaluation Steering Group has reviewed the overall evaluation process so that they could identify what went well and what could have been improved. This review is given as Appendix 4 and highlights important learning for any organisation planning to evaluate a stakeholder engagement process in future.

The Co-ordination Group has noted the proposed range of dialogue tools identified by CAG in their evaluation report, which have assisted the support and delivery of this Dialogue and which may be universal to effective dialogue processes. The relevant section of the CAG evaluation report is attached as Appendix 5. The Co-ordination Group commends this information for the development of the new engagement structures by NDA and 'New BNFL'.

[8] CAG Consultants, Gordon House, 6 Lissenden Gardens, London, NW5 1LX www.cagconsultants.co.uk
[9] An evaluation of the BNFL National Stakeholder Dialogue, Final Report, CAG Consultants, June 2004 (see www.the-environment-council.org.uk)

# 4.0 Consolidated Recommendations

## 4.1. Main Group Actions

A complete listing of actions and recommendations from each of the Main Group meetings since 1998 was compiled and reviewed by the Co-ordination Group. All previous Main Group actions have been completed, and the list can be viewed on The Environment Council website.

## 4.2. Working Group Recommendations

At the 9th Main Group Meeting in March 2004 there was agreement to support the BFWG proposals for consolidating all historic recommendations and responses to make them transparent and accessible. The Co-ordination Group was tasked to finalise this work, and this has been done, see Appendix 6.

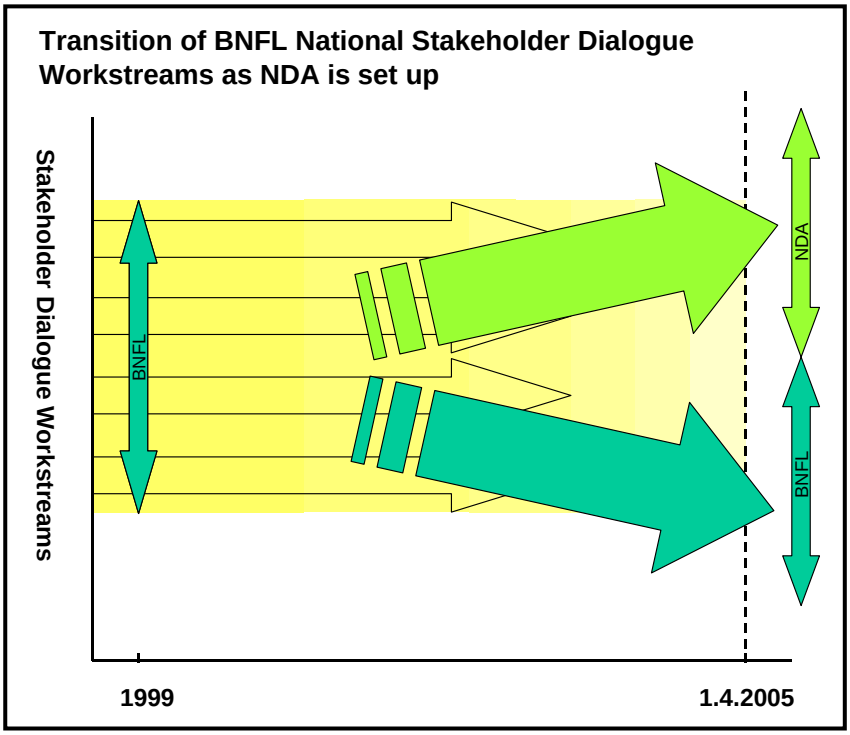
The recommendations from all Working Groups and the responses to them were brought together, with each recommendation or reply being given a unique identifying reference number. The recommendations and responses were then consolidated to remove repetition and overlap. The identification numbers have been retained throughout, so that it is possible to track back to the original recommendations and responses. A classification template was developed by the BFWG, enabling all the recommendations to be grouped into the12 categories shown below:

1. Thorp programme
2. Magnox reprocessing programme
3. Cleanup and decommissioning programme
4. Programme delivery
5. Contingency planning
6. Socio-economic impacts/mitigation
7. Vitrification performance
8. Discharges
9. Waste
10. Plutonium
11. Other BNFL Sites
12. Ongoing use of reports and methodology

Using this structure, the relevant parts on the November 2003 Company response, and the elements and dates of the SFMOWG Strategic Action Plans (SAPs), were added, together with a 'timeline' of programmed events (power station closures etc.). BNFL has used this format to produce the Company's responses to the Main Group Meetings, including the nomination of Executive Directors to respond to recommendations falling within their area of responsibility.

The Co-ordination Group has compiled the recommendations and identified the continuing responsibilities after the formation of the Nuclear Decommissioning Authority. These are detailed in Appendix 6.

The outcome of this consolidation and analysis identifies the recipient organisations for each outstanding Working Group action and recommendation. This is represented in the Figure 3 below.




The Co-ordination Group recommends that the recipient organisations acknowledge and take responsibility for progressing these.

Recommendation 1: BNFL, NDA and other identified organisations should acknowledge and commit to taking responsibility for progressing their respective actions and recommendations as identified in Appendix 6.

Recommendation 2: All stakeholders should monitor future progress by BNFL, NDA and other identified organisations against these recommendations, as identified in Appendix 6.

The Co-ordination Group further recommends that it is empowered to update Appendix 6 following the Main Group Meeting to take account of the agreed outcomes of the BFWG and SWG Reports.

Recommendation 3: The Co-ordination Group should update Appendix 6 with the agreed outcomes of the BFWG and SWG Reports and issue this as a stand-alone report.

### *4.3. BNFL Baseline Response to Consolidated Recommendations*

BNFL has produced responses to the consolidated recommendations in Appendix 6. These can be used as a "baseline" of information against which the allocation of the recommendations to their "new owners" can take place. This report is attached as Appendix 7. The Co-ordination Group recommends that BNFL updates Appendix 7 to take account of the agreed outcomes of the SWG and BFWG Reports and that this is published.

Recommendation 4: BNFL should update Appendix 7 with the agreed outcomes of the BFWG and SWG Reports and publish this as a stand-alone report.

## 5.0 Dialogue Impact

At the first Main Group Meeting in September 1998, a number of issues were identified as appropriate subjects for potential consideration within the dialogue process. These are given in Appendix 8, together with the weightings ascribed to them at that time and the actions taken by the Dialogue in response. The issues, as transcribed from the original wall record, were:

- "End of reprocessing or not"
- "Create trust, transparency and accountability through genuine dialogue, based on mutual respect, comprehensive and clear understanding"
- "What to do with the plutonium stockpile"
- "Global Clean-up"
- "Internal staff morale – ownership of environmental performance and corporate leadership"
- "Decision making on trade offs in society linked to costs and benefits to all stakeholders – what is society willing to pay for cleaner operations"
- "The impacts BNFL's operations will have on the health and environment for future generations"
- "Ownership of nuclear liability strategy, including disposal, closing the back end of the cycle"
- "Local versus Global environmental impact and benefits and to recognise regional diversity in global context and recognise responsibility to locality/region in which industry set eg local environment and local jobs"
- "Diversification both within and from the nuclear sector, using/building core competencies"
- "Changing course – the problem of momentum"

These issues constituted the starting point for dialogue and the basis from which subsequent agendas were developed and addressed by the various Working Groups. It will be noted that this list is a mixture of topics amenable to direct study by Working Groups (e.g. reprocessing, plutonium, diversification) and others (e.g. staff morale and changing course) which were taken into account by, and provided inputs to, the direct studies.

There is little doubt that the nuclear industry has had a long history of unenviable relationships with its stakeholders. In the past, trust has been lacking on all sides, adversarial and even aggressive "attack and defence" has often been the order of the day when dealing with external parties.

After 6 years the Co-ordination Group perceives that the Dialogue is taking place in a working environment which is now much more collaborative. Stakeholders feel able to participate with some confidence in their collective ability to tackle difficult subjects, find some common ground and reach some clarity in areas where agreement continues to be absent.

The Co-ordination Group believes that the following examples provide a flavour of the key achievements over the 6 years of the Dialogue, both from a stakeholder engagement process perspective and in terms of the issues which have been addressed.

- Accountability: during the Dialogue process, stakeholders have helped to create a climate of challenge for BNFL, examining aspects of its operations many of which were traditionally 'out of bounds'.
- New ways of research: who provides technical data remains contentious for stakeholders. The Dialogue has used Joint Fact Finding as part of socio-economic and diversification studies, allowing shared ownership of both the data and the research outcomes.

- Increasing transparency: the Dialogue has provided a framework to enable cleanup plans for nuclear sites to be more accessible for stakeholders.
- Promoting stakeholder engagement within Government: the Dialogue has helped to inform the DTI by demonstrating the benefits derived from proactively involving people and organisations. It has proposed frameworks for both NDA and BNFL future stakeholder engagement processes.
- Plutonium: options previously discounted for the future treatment of plutonium have become part of the research and development proposals submitted by BNFL to the DTI.
- Waste and Spent Fuel: the Dialogue agreed that radioactive wastes should be stored in a state which is passively safe, monitorable and retrievable. Contingency plans, previously deemed unnecessary, for dealing with the management of unreprocessed Magnox fuel have been adopted as part of BNFL's strategy.
- Overall Business Performance: the Dialogue process, through identifying the importance of socio-economic impacts, and by sponsoring studies, has been crucial to the understanding the close interaction of environmental, social and economic outcomes of business decision making. The results of the studies provided local stakeholders with the first assessment of the effects of operational plant closures.

A wider view of the overall impact of the Dialogue can be gained through examination of the consolidated recommendations and of BNFL's responses to them.

Recommendation 5: Stakeholders should use the consolidated recommendations and the BNFL response to assess the impact of the Dialogue.

The Dialogue is not alone in having changed over the six years, with the UK nuclear industry having undergone profound structural reorganisation. This is well illustrated by the dates and events listed in Appendix1. The Co-ordination Group acknowledges that the recording of external impacts is important when assessing and evaluating any dialogue process, as this provides a view of the changing context within which the dialogue is operating.

## 6.0 Way Forward

The agreed programme of substantial work of the BNFL National Stakeholder Dialogue ends with the final meeting of the Main Group[10] on 13/14 October 2004. In response to the action placed at the 9th Main Group Meeting in March 2004, the Co-ordination Group has developed recommendations for the transfer of experience gained during this dialogue to the relevant elements of the future stakeholder engagement structures in NDA and 'New BNFL'.

Whilst every effort is being made to manage the handover of previous work between this Dialogue and the new bodies, a need has been identified for a time-limited group to monitor the progression of the work of the Dialogue into these bodies to ensure the Dialogue's recommendations are adopted where possible. The Co-ordination Group proposes that it remains in operation until April 2005 with the revised Terms of Reference described in Appendix 9.

Recommendation 6: The Main Group should mandate the Co-ordination Group to operate under the revised Terms of Reference until April 2005.

The Co-ordination Group commends the development work by BFWG regarding input to and alignment with the proposed NDA stakeholder engagement processes and recommends that the Co-ordination Group should continue this work.

Recommendation 7. The Co-ordination Group should monitor the development of engagement structures by NDA and 'New BNFL', to encourage a successful transfer of the output from the BNFL National Stakeholder Dialogue and to provide feedback to Main Group Members.

The Co-ordination Group has noted the breadth of expertise that has been built up on stakeholder engagement within the Dialogue participants. This expertise extends both to the various engagement processes, and to a wide understanding of the issues associated with the UK nuclear industry. This constitutes a valuable and unique national resource which could be of use both in the future evolution of the UK nuclear industry, and in other stakeholder engagement processes in general.

Recommendation 8. The Main Group members should be encouraged to take every opportunity to share the expertise gained in the BNFL National Stakeholder Dialogue.

[10] Following this last Main Group meeting, there are already one-off meetings scheduled for the BFWG, SWG and Coord Gp to tie up reporting issues agreed at the Main Group meeting.

## 7.0 List of Appendices

Appendix 1. Key Event Dates and Activities

Appendix 2. Current Dialogue Ground Rules

Appendix 3. List of Working Group Reports and published outputs of the Dialogue

Appendix 4. Review of Evaluation Process – May 04

Appendix 5 Extract from the Summary of the CAG Evaluation Report – BNFL National Stakeholder Dialogue

Appendix 6. Co-ordination Group Report on Consolidated Recommendations from the BNFL National Stakeholder Dialogue and proposed Continuing Responsibilities in the NDA Structure

Appendix 7. BNFL Responses to the Consolidated Recommendations

Appendix 8. Review of the 1998 Resources, Issues and Values (RIV) analysis

Appendix 9. Co-ordination Group – Draft Revised Terms of Reference

## Appendix 1 - Key Event Dates and Activities

| Date | Non-Dialogue Event | Dialogue Event | Workstream |
|---|---|---|---|
| Sep 98 | | First Main Group Meeting | |
| Dec 98 | | Task Group Meeting | |
| Mar 99 | | Second Main Group Meeting | |
| ***Stage 1*** | | | |
| Jun 99 | | Discharges Working Group (DWG) Established | |
| Jul 99 | | Waste Working Group (WWG) Established | |
| Jul 99 | Third public consultation on Sellafield MOX Plant (SMP) | | |
| Sep 99 | MDF product quality problem reported | | |
| Nov 99 | | 3rd Main Group Meeting | |
| Feb 00 | | DWG Report Published | |
| Feb 00 | | WWG Report Published | |
| Feb 00 | | WWG met Secretary of State for the Environment | |
| ***Stage 2*** | | | |
| Feb 00 | | Spent Fuel Management Options Working Group (SFMOWG) established | |
| Mar 00 | | Plutonium Working Group Established | |
| May 00 | Magnox closure dates announced (BNFL) | | |
| Jun 00 | UK Discharge Strategy consultation document published (DETR) | | |
| Jun 00 | OSPAR Sintra statement | Socio-economic Steering Group Established | |
| Oct 00 | | Reformed Discharges WG DWG First Update Report | |
| Oct 00 | | Reformed Waste Working Group WWG First Update Report | |
| Nov 00 | Statutory Guidance on the Regulation of Radioactive Discharges into the Environment from Nuclear Licensed Sites - Consultation Paper published (DETR) | Magnox Task Group and Report | |
| Nov 00 | | 4th Main Group Meeting | |
| Jan 01 | Plans to use Magrox fuel in Magnox reactors abandoned (BNFL) | | |
| Mar 01 | Fourth public consultation on SMP announced | | |

| Date | Non-Dialogue Event | Dialogue Event | Workstream |
|---|---|---|---|
| Jul 01 | Fifth public consultation on SMP announced | 5th Main Group Meeting | |
| Jul 01 | | Pu Security Sub-Group established<br>Pu Technical Sub-Group established | |
| Jul 01 | Explanatory Document to assist Public Consultation on Proposals for the Future Regulation of Disposals of Radioactive Waste from British Nuclear Fuels plc, Sellafield (E A) | | |
| Sep 01 | Managing Radioactive Waste Safely – Proposals for Developing<br>a Policy for Managing Solid Radioactive Waste in the UK published (Defra) | | |
| ***Stage 3*** | | | |
| Oct 01 | | Business Futures Working Group established | |
| 3 Oct 01 | Government Sellafield MOX Plant decision | | |
| Nov 01 | | Socio-Economic Study of West Cumbria published | |
| 23 Nov 01 | | WWG Second Update Meeting | |
| 28 Nov 01 | Mrs Hewitt's statement to the House of Commons announcing<br>the proposal to set up a Liabilities Management Authority | | |
| 20 Dec 01 | SMP commences plutonium commissioning | | |
| Jan 02 | | WWG Second Update Report | |
| Jan 02 | | DWG Second Update Report | |
| Mar 02 | | 6th Main Group Meeting | |
| Apr 02 | | Socio-economic Steering Group reconvened | |
| Apr 02 | | Co-ordination Group met Secretary of State for the Environment | |
| May 02 | | Evidence Report published (Interim evaluation) | |
| Jul 02 | UK Discharge Strategy published | SFMOWG Report Published | |
| Jul 02 | Managing the Nuclear Legacy – a Strategy for Action (DTI) | | |

| Date | Non-Dialogue Event | Dialogue Event | Workstream |
|---|---|---|---|
| Nov 02 | | BFWG 1st Interim Report containing Principles for Liability Management | |
| Nov 02 | | PuWG briefing to DTI | |
| Nov 02 | | 7th Main Group Meeting | |
| Feb 03 | | PuWG briefing to BNFL Executive | |
| Mar 03 | Calder Hall closure (BNFL) | PuWG Report | |
| Mar 03 | | Security Working Group established | |
| Apr 03 | | PuWG briefing to Radwaste Policy Group | |
| May 03 | | PuWG briefing to BNFL Board | |
| May 03 | | Evaluation Steering Group established | |
| Jun 03 | | PuWG briefing to No10 Policy Advisor | |
| Jul 03 | Announcement of BNFL Strategy Review (DTI) | | |
| Jul 03 | Draft Nuclear Sites and Radioactive Substances Bill (DTI) | 8th Main Group Meeting | |
| Aug 03 | | Socio-economic Report Update | |
| Nov 03 | A Public Consultation on Modernising the Policy for Decommissioning the UK's Nuclear Facilities. (DTI) | | |
| 11 Dec 03 | Announcement on results of BNFL Strategy Review (DTI) | | |
| Mar 04 | | 9th Main Group Meeting | |
| Apr 04 | Consultative Document on a proposal to publish HSE licensing criteria for delicensing parts of, or entire sites licensed under the Nuclear Installations Act 1965. HSE | | |
| Jun 04 | Chapelcross closure | | |
| Jul 04 | Energy Bill (DTI) | CAG Evaluation Report | |
| Oct 04 | | Security Group Draft Report to Main Group | |
| Oct 04 | | BFWG Draft Report to Main Group | |
| 13 Oct 04 | | Final Main Group Meeting | |

**Appendix 2 - Current Dialogue Ground Rules**

# BNFL : NATIONAL STAKEHOLDER DIALOGUE

## GROUND RULES

## 13th UPDATE - Feb 2003

These ground rules are established and maintained by the stakeholders themselves to facilitate people's participation and maximise the efficiency of meetings. They are to be kept open, reviewed regularly and revised as necessary by all the participants.

### The Aim of the Dialogue

1) The aim of the dialogue is to inform BNFL's decision-making process about the improvement of their environmental performance in the context of their overall development.

### General

2) Participation in the dialogue does not imply endorsement or approval of any of BNFL's activities or future plans.

3) The dialogue will be conducted in a collaborative style. Outside the dialogue, and in every other respect, relationships between the participants will be on the basis of 'business as usual' - but any knowledge gained in the process should be treated in the spirit in which it is imparted.

4) The participants will be responsible for the substantive content of the discussions, while the facilitation team will be responsible only for the dialogue process.

5) Participants are expected to make available information needed by the group. The group will decide what information is necessary (rather then individual requests), where it should be sourced and how it should be used subject to the ground rules on confidentiality where appropriate (see Ground rules 23 to 26). Any participant who feels they cannot supply information which has been requested should be willing to explain why not, and such explanation is to be respected by the others. Any feelings of discomfort around discussions and requests for information should be similarly shared with the group. Participants may ask for a period of reflection if necessary.

### Project Roles

6) Participants are representatives of organisations or specialist individuals. Representatives have dual responsibilities. The first is to represent their organisation and inform their direct constituents of progress that is being made in the dialogue, subject to the ground rules on confidentiality. The second is to seek out the opinions of their constituents and to express them in the group process. This is with the objective of ensuring that, at each stage of the dialogue, consensus has been reached on the previous stage – or that concerns are aired and resolved before further progress is attempted.

7) The facilitation team conducts the interactive sessions in the dialogue process. Its members are independent professionals serving the group as a whole - they are concerned primarily with time control, grouping, spatial relationships and the style of interaction, and they only deal with substantive issues as they affect the interactive process.

8) The process managers who are responsible for conducting the overall dialogue process. They also are independent professionals (often sharing the Facilitation Team role) – their concern is for matters such as organisation, time planning, network management and communication strategy.

9) Independent advisor(s) may be asked to provide services and advice on content related matters. They also would be independent professionals and/or academics serving the group as a whole from time to time with the explicit agreement of all the participants.

**Participation**

10) Four types of stakeholder group will have a role to play.

- The Main Group which consists of all the stakeholders involved and meets on an annual or semi-annual basis.
- A Co-ordinating Group which is a small broadly representational sub-group set up to advise the facilitation team, process managers and content advisor(s) with regard to content aspects and stakeholder concerns in the dialogue process.
- Task Groups which are sub-groups set up to perform a single specifically defined task and are likely to meet only once.
- Working Groups which are representational sub-groups formed to explore particular aspects of the project, and to report back their findings to the Main Group.

(The criteria used for participation in the Working Groups are attached.)

11) There should be no absenteeism (except for illness, etc). Constantly having to help members of a group to catch up disrupts the process and is a waste of time. The process for informing absentees of progress will be agreed at each session. Failure to attend any two consecutive meetings of a group will be taken as resignation from that group.

12) Substitution of representatives is discouraged, deputising is acceptable only when it is absolutely necessary. The invisible benefits of the process, such as mutual understanding which is developed through the interactive process, are carried personally and cannot be easily transferred. Deputies must be fully briefed by those being deputised, and all new participants must attend an induction to the process conducted by the Facilitation Team aided by members of the Co-ordination Group.

12a) With the explicit approval of the working group, a 'rotating chair' membership arrangement can be used. This means that two people (and no more) are able to represent one constituency. It is up to the representatives to decide who should attend which meetings, based upon availability and particular expertise, but only one member should attend each meeting unless it is necessary that both attend simultaneously. For the sake of continuity (see Ground Rule 11) it is the responsibility of both members to keep up to date with progress to prevent their collective absence from disrupting the process.

13) There should be no casual observers. The act of volunteering for this dialogue implies a commitment to active participation while listening to others' points of view. Participants are encouraged to regularly brief key members of the constituency they represent: both to keep them closely informed of developments in the dialogue, and to be able to carry their constituency's concerns/issues back into the dialogue.

**Internal Communication**

14) Discussion is intended to be free and open without continuous resort to reiteration of well known negotiating positions. Such statements will be actively discouraged. They will be identified, and then they will have to be expressed again in terms of concerns and needs which are the true basis of consensus.

15) Participants who are representatives of their organisations (as identified on the *List of Participants*) wishing to speak, in any capacity other than as a representative, will be asked to be explicit about which 'hat they are wearing'.

16) Progress will be recorded on the wall. This is as an aid to communication in the group and provides a visible record of progress as it is made, the accuracy of which is the responsibility of all participants.

17) A photo-report will be made of the 'wall record' of each event. It acts as an "aide memoir" and provides a basis for interactive follow-up work between sessions. (**NOTE**: Photo-reports are very confusing for people who were not part of the process - they are designed for internal use only, and should not be used to inform others about the proceedings.)

18) A written report will be made of Working Group sessions, to be drawn up by the independent advisor(s). These will be relatively conventional documents which, apart from their use within the group, are intended for use in communication with the Co-ordination Group only. In addition each Working Group may appoint a *rapporteur* to attend the Co-ordination Group meetings.

19) Each Working Group will develop its own strategy for communication to the Main Group, which will include at least the Terms of Reference as soon as they are agreed, and a progress report after six months.

20) BNFL employees should not act as *rapporteurs* of a sub-group's work, though they may do so in support of others

**Decision-making**

21) Decision-making will be by consensus. This will be evaluated continuously within the group, and expressed ultimately by all stakeholders involved in the dialogue agreeing to any document which is put into the public domain. If, at that time the group members have agreed to disagree, consensus will be sought about a clear description of that disagreement.

22) Any report to be made available externally which implies any kind of consensus reached within the dialogue must have the prior permission of all the participants.

**External Communication**

23) Discussion of the issues outside the dialogue can be important. It will be particularly helpful in strengthening the links between representatives and their constituents, but this must be subject to the confidentiality ground rule (24).

24) Total confidentiality must be maintained when requested. This enables a more free exchange of views within the group sessions, but unnecessary secrecy should be avoided – in any case, statements made in the process may only be quoted without attribution, specifically or by inference.

25) Papers, which have been contributed to any group, will be classified by that group as either 'reference' or 'working' papers. 'Reference' papers are papers already in the public domain, and they can be referred to at any time by stakeholders. Working papers are other papers specifically made available for use in the dialogue, and they are confidential. They become reference papers only if used explicitly for reference in any reports put into the public domain by the group. (All unclassified papers must be treated as working papers.)

26) Participants' technical advisors, who are not otherwise part of the dialogue, may have to see working papers and be aware of otherwise confidential information. Therefore they must be named and agree explicitly to these ground rules.

**Status of these Ground Rules**

27) These ground rules are to be kept open, reviewed regularly and revised as necessary by all the participants.

## SELECTION CRITERIA FOR WORKING GROUPS

One output from Main Group meetings of stakeholders in the BNFL National Stakeholder Dialogue will be the formation of Working Groups. These Working Groups will carry forward more detailed elements of the work and report back to the next Main Group meeting.

Experience of Working Group meetings demonstrates that around 15 members provides a cohesive, practical and effective group. If there are more volunteers than places, a number of criteria will inform the Co-ordinating Group's selection from the volunteers.

People participating in the Working Groups must:

- represent a particular constituency and/or have relevant experience or expertise relevant to the Working Group;
- have been inducted into the process and style of working;
- accept and conform to the ground rules, and participate in their review and development;
- develop, observe and work in a co-operative spirit in the Working Group, while respecting that profound differences of opinion may exist;
- be a competent and collaborative negotiator (rather than a positional/competitive bargainer);
- be available for the full series of Working Group meetings (which may be 1 to 1½ days every month or 6 weeks) and Main Group meetings;
- be willing to undertake work between meetings, signposting or providing papers and
- reviewing information within the timescales agreed within the Working Group (this may be up to 1 week's work per month).

In addition to the above, the overall group profile will also influence Co-ordinating Group's choice. Ideally, each working group will need to contain representatives from the following sectors

- communities;
- company;
- customers;
- environmental NGOs;
- other NGOs;
- government;
- regulators;
- workforce;

and will need to be balanced in terms of the necessary skills.

## Appendix 3 - List of Working Group Reports and published outputs of the Dialogue (chronological order)

**Evaluation - Final Report**
Release date: 23rd July 2004. An evaluation of the BNFL National Stakeholder Dialogue.

**Main Group Summary Report - March 2004**
Release date: 29th April 2004

**Business Futures Working Group - Third Interim Report**
Release date: 30th April 2004

**Update to the Recommendations and Responses from Working Groups**
Release date: 30th April 2004

**Co-ordination Group Report - March 2004**
Release date: 30th April 2004

**Security Working Group - First Interim Report**
Release date: 30th April 2004

**West Cumbria: Socio Economic Study - 2003 Update**
Release date: 7th August 2003
Sets out the economic and social impacts of future business scenarios for BNFL's Sellafield site on the economy of West Cumbria.

**Main Group Summary Report - July 2003**
Release date: 7th August 2003

**Business Futures Working Group - Second Interim Report**
Release date: 11th July 2003

**Coordination Group Report - July 2003**
Release date: 11th July 2003

**Plutonium Working Group Report**
Release date: 31 March 2003. The BNFL National Stakeholder Dialogue identifies key recommendations to BNFL and the Government on management options for plutonium.

**Principles for Liability Management - Nov 2002**
Release date: Nov 2002

**Main Group Summary Report - Nov 2002**
Release date: 16 January 2003

**Coordination Group Report - Nov 2002**
Release date: November 2002

**Spent Fuel Management Options Working Group Report**
Release date: July 2002

**Evidence Report - Influence, Productivity and Impact of the Dialogue**
Release date: May 2002

**Waste Working Group Combined Report**
Release date: November 2002

**Discharges Working Group Combined Report**
Release date: November 2002

## Appendix 4 - Review of Evaluation Process – May 04

The Evaluation of the BNFL National Stakeholder Dialogue was started in the spring of 2003 and was finalised over a year later at the final Evaluation Steering Group meeting on 18 May 2004. At this meeting, the Steering Group reviewed the evaluation process so that they could glean learning points from their experience, to share with others for whom it may be relevant.

The review process asked two questions:

a) **What went well?** i.e. what would we recommend others do that we did…
b) **What could have been improved?** i.e. what would we recommend others change, given our experience…

These questions were posed with regard to, but not limited to, the following headings:

- Aim / brief
- Tender / recruitment process
- Methodology
- Stakeholders
- Steering process /roles
- Wobbles

The answers to questions a) and b) were discussed individually and framed as learning points, listed below. They are not in order of importance.

### *Learning Points*

1. Include a "tender development stage" in the tendering process, once only 1 or 2 tenderers remain in the process. This allows bidders to develop their understanding of requirements and the methodology best suited for the task. (Recognise that this takes time and money).
2. Allow sufficient time for the people commissioning the evaluation to develop the context, aim and brief for it
3. Decide, and then be clear about, whether focus of the evaluation is process, content, or both. Once decided, communicate this clearly.
4. Be realistic about what a 'content' evaluation can demonstrate, especially if doesn't start at beginning of process.
5. Start evaluation before dialogue process (see Main Evaluation Report[11] for more detail on this)
6. Ensure process managers and facilitators, including those who have left the process, are involved in 'context setting' for the evaluation process. By 'context setting' we mean informing the need for, aim, scope and nature of the evaluation.
7. Stakeholders who were involved in initiating the dialogue process should also be given the opportunity to be involved in context setting.
8. Set up a steering group as early as possible, perhaps including when defining the brief
9. Ensure adequate cross-representation on the steering group, as well as the commitment and capacity of these members. Cross representation should include a range of sectors as well as a range of levels of previous involvement in the Dialogue
10. Maintain a clear distinction between convenor and stakeholder roles if the convenor participates on the steering group; ideally by having different representatives for the two roles
11. Having independent evaluators is essential
12. Recognise that evaluation of this kind of Dialogue takes considerable time and money
13. Be clear about what costs exist, including stakeholder costs such as time

[11] An Evaluation of the BNFL National Stakeholder Dialogue, Final Report, Published Jun 04 by CAG Consultants. Available on www.the-environment-council.org.uk

14. Be aware that as/if the methodology changes, costs will change as well
15. Recognise that the people recruiting the independent consultants may or may not have the knowledge to inform their recruitment decision at the initial tender stage. This emphasises the need for the 'tender development stage' referred to in point 1 above.
16. Tender process must be jointly agreed and benefits from informal interaction with potential contractors
17. Consider using 'indicators' for both process and content issues, especially if baseline info is available. See Attachment1 for more detail.
18. When reporting, consider using quantitative data as appropriate, as well as qualitative data
19. Use *short* questionnaires (30mins max to fill in)
20. Use different techniques as appropriate e.g. meetings, questionnaires, interviews and dovetail these into stakeholders' normal activities
21. Wide ownership of the evaluation needs to be generated from the start, both in terms of its value but also its aim and scope
22. Questionnaire development is a difficult and time consuming process (but it needs this time to be invested)
23. Be clear about what response rate and data you expect/want from questionnaires, focus groups etc.
24. Allow for methodology to change; be flexible
25. Recognise that some stakeholders in the evaluation can find the evaluation threatening: the process must plan for this
26. Ensure clarity over:
    a. The function of interim evaluation reports
    b. The extent to which a report is to be written participatively (i.e. contractor writing it with considerable input from the steering group)
    c. How and when the participative drafting process is done (timing, nature)
    d. Be aware of the dangers of sharing draft reports with people/groups not directly involved in the evaluation
27. Agree a process and responsibility for managing 'wobbles' at the start to prevent knee jerk reactions. Consider carefully who should deal with each wobble.
28. Ensure audit trail of process decisions
29. If methodology changes, review the programme of steering group meetings. The steering group must have the authority to request this
30. Role for convening the steering group needs to be clear (i.e. who is responsible) and shouldn't be facilitated by contractor
31. Contractor should be responsible for updates and feedback to the group that mandated it (in this case, the Coordination Group).
32. Be realistic about programme timing and frequency of meetings and how this fits in with drafting cycles
33. Ensure clarity over who steering group members represent: their constituency, their own views, MG spread of views etc.

CAG
consultants

***Attachment 1 - Evaluation Indicators, Information Note***

***May 2004***

---

This information note has been prepared in response to a request for example indicators from the Evaluation Steering Group. Its purpose is to outline sample *process* and *content* evaluation indicators, within the context of outlining the purpose of indicators and briefly describing how they are developed.

The examples below have been developed to illustrate what evaluation indicators are and how they can be employed within evaluation processes in general terms. They have been developed retrospectively to both the evaluation process and the Dialogue and therefore are not necessarily indicators that would have been employed in either context.

**Preamble**

Indicators are used to shape and inform evaluation processes. They are intended to be statements against which progress, actions or activity can be measured in a rigorous, standardised way in line with the objectives and / or intentions of a programme.

They are developed through a review of the objectives and / or intentions of a programme. They are statements which breakdown the objectives and / or intentions into measurable points.

**Example process indicators**

In this setting a useful example process indicator could be developed to relate to the programme intention that the Dialogue would involve stakeholders from all identified stakeholder constituencies. In developing indicators that would demonstrate activity in this area we would investigate what constitutes involvement. On a basic level this might produce an indicator such as;

> *"All identified constituencies have stakeholders present at all Main Group meetings and in Working Groups."*

However, through looking at the term involvement in a more considered way a set of indicators including the following examples may emerge.

> *"Stakeholders from all constituencies contribute equally to activities and processes."*
>
> *"Contributions from all stakeholders appear equally valued."*

**Example content indicators**

Similarly content indicators can be developed. In this setting content indicators may have been based on the intentions outlined in the photo report of the September 1998 Stakeholder Workshop and subsequently transcribed into a work programme for the Dialogue by the initial Task Group.

For example the photo report states that Plutonium was identified as an issue to be addressed by those present at the Workshop and the Task Group prioritised this as an area of activity for the Dialogue process.

Therefore, in this instance, indicators could be developed that would measure progress, actions or activity in the around Plutonium within the Company. For example;

> *"Strategy for reprocessing has been considered by the Company during or since the activity of the Plutonium Working Group."*
>
> *"The Company's approach to, or strategy for reprocessing has been modified since the publication of the Plutonium Working Group report."*
>
> *"The Company has included Plutonium considerations in new Company strategies since the publication of the Plutonium Working Group Report."*

## Appendix 5 - Extract from the Summary of the CAG Evaluation Report – BNFL National Stakeholder Dialogue

### 5.3.6 Some tools are universal

There are a range of dialogue tools which have assisted the support and delivery of this Dialogue, some of which may be universal to effective dialogue processes:

- The development of a clear aim provides a foundation for dialogues. An uncontroversial aim needs to be linked to an understanding of what the Dialogue can achieve and stakeholders roles within it.
- Stakeholders require quality induction into dialogue processes
- The use of 'terms of reference' and objectives to set a clear mandate for the conditions of engagement are essential to the success for a working group or subgroups and when they are developed by working group members, participating stakeholders' feelings of ownership over them increase.
- Where, as in this case, content and process facilitation are kept separate, the need for up-to-date information briefings is particularly important for process managers.
- The process may have benefited from using a range of specialist advisers rather than a single content adviser. Where their views on a particular issue are regarded as independent, participants in the Dialogue could have been utilised to develop briefing material and methods other than 'briefing notes' could be considered for future activity. Appointment of all advisers needs to be transparent and the need for technical support may be as great among facilitators and convenors as it is among stakeholders.
- Scenario planning is especially useful in circumstances where strategic choices have to be made in the face of significant uncertainty and complexity. It is important to take a long-term view of strategy and where there are a limited number of key factors influencing the success of that strategy, there are a range of decision making frameworks available. This Dialogue has used two. After trust had been developed, Strategic Action Planning (SAP) with scenarios was considered to be much more successful than Multi-Attribute Decision Analysis (MADA). SAP appears to be particularly well suited to this Dialogue because it provided a framework for stakeholders, with diverse views on contentious issues. It enabled participants to think beyond their own positions and develop common understandings. The processes are time consuming, suggesting that they should be introduced at the earliest possible stage. Although time-consuming and laborious, SAP has enabled a consensual product to be developed on highly contentious issues. The end undoubtedly justified the means.
- The wall report is a useful live record, which needs complementing by more formal meeting accounts in working groups. Specifically, all agreements and actions should be typed and circulated, soon after meetings.
- The rigorous timescales of circulation maintained by TEC are a significant contributor to trust and responsibility within the process.
- An appropriate amount of time is needed to develop content capacity, this would be informed by an initial assessment of capacity and provision of technical supporters.
- Greater recognition, resourcing and practical support of the mandating and representing activities undertaken by stakeholders within their constituencies needs to be structured into the process.
- The joint fact-finding approach is important in addressing information needs, whilst avoiding potential disputes over the integrity of the results. This also contributes more broadly to achieving a balance in the sense of power and influence.
- Financial support is necessary for those participating in their own time.
- Financial support should be administered by an independent convenor in a transparent way and be widely publicised.

- Providing the room for expressions of strong feeling on issues is important, within the boundaries set in the ground rules.
- The importance of non verbal communication in dialogue should not be under estimated
- Embedding roles and behaviours in the ground rules is essential, especially for those around the use of power.
- Dialogue depends on collaborative negotiation and active and effective participation in good faith. Therefore, the processes and structures of the Dialogue need to encourage this, including ground rules, entry processes, induction, capacity building, participant selection and management of expectations.
- Stakeholders need to develop a respect for the views and the legitimacy of the contributions of other stakeholders before collaboration and complete inclusivity can take place. This is often described as major outcome of this Dialogue, but is, in fact, to a lesser degree, a process prerequisite.

### 5.3.7 Trust needs development within dialogue

Where there is a history of hostility, simply making the dialogue happen may need to take priority in the early stages, as happened in this Dialogue. Following this decision, focus was given to activities and processes that forged trust between stakeholder constituencies.

Thus the development of trust between previously hostile parties has been time consuming within this process, but one from which lessons can be drawn, including:

- Team building events need to be in built into dialogue events.
- Openness about the causes of mistrust will allow people to move on.
- Recognising ‘cultural’ differences and differentials in power will help to identify points of common interest.
- Informal contacts and events, designed around the culture of those involved, are as important as formal events.
- Continuity of involvement in the process builds relationships.
- The influence on dialogue of the principles of ‘exchange’ between partners needs to be explicitly recognised and formalised.
- Feedback on progress against recommendations is essential to maintaining trust
- Effective dialogue requires measures and actions that work within the constraints of the differing belief systems and organising principles of stakeholders, and encourages stakeholders to move beyond them

### 5.3.8 Considerations for the problem holder within dialogue

The problem holder is key to the effectiveness and outcome of a dialogue process, the findings from this evaluation indicate some significant considerations for them including;

- Transparency about activities that take place between the convenor and problem holder is essential
- There is a need for clarity and honesty about what information can and cannot be provided to dialogue participants
- Efforts to overcome confidentiality issues are required to build trust and cooperation
- Dialogue brings a heightened expectation of information-sharing responsibilities outside the Dialogue, mechanisms to share information outside the Dialogue need clear guidelines
- Problem holders need to recognise some basic issues on entering into dialogue, these include;
    - a recognition of their responsibility to engage with stakeholders
    - an appreciation of the value of engagement
    - a respect for opposing positions and views

- learning to present themselves in a less-technical way

### 5.3.9 Issues of time

The evaluation of this Dialogue has exposed many concerns about time within the process; the length of time the process has taken, the time expected from participants; the time commitment of keeping up to date with the process and of feeding back the process to constituencies.

Some of the time issues are outlined elsewhere in the learning points, others are summarised here.

- In developing a dialogue it is necessary to acknowledge the amount of time needed and whether this has implications for making the process more bounded and therefore less time consuming.
- The role of reflectors and other non-representative types of stakeholders could be explored further to address issues of time.
- Recognition of the time involved for mandating and representing activities is important.

### 5.3.10 On-going monitoring and evaluation is essential

Although there have been a number of process evaluations and a significant evidence gathering process, evaluation has been a weakness in this Dialogue. Lessons learned from this evaluation process include:

- Recommendations should be constructed in a SMART way
- Monitoring and evaluation need to be integral to dialogue processes.
- The value of monitoring needs to be accepted by all participants to ensure it is effective.
- Baseline process and content information needs to be recorded and updated consistently.
- External impacts on the process and content need to be recorded at the time.
- Evaluation management structures need to be incorporated into dialogue.
- Stakeholder, working groups and facilitator monitoring and recording responsibilities would benefit from being recorded in contracts and/or ground rules.
- Indicators, proxies and benchmarks need to be developed to effectively monitor and demonstrate impact.
- Evaluation data gathering methods need to be flexible and responsive.
- Evaluation data should be reviewed by as wide a stakeholder group as possible.
- Impact information needs to be shared with Main Group structures regularly.

## Appendix 6 - Co-ordination Group Report on Consolidated Recommendations from the BNFL National Stakeholder Dialogue and proposed Continuing Responsibilities in the NDA Structure

### *1. Working Group Recommendations Consolidation Methodology*

At the 9th Main Group Meeting in March 2004 there was agreement to support the BFWG proposals for consolidating all historic recommendations and responses to make them transparent and accessible. The Co-ordination Group was tasked to finalise this work, and this section fulfils that action.

The consolidation work was done in stages, which are described below. The stage reference documents were available to the 9th Main Group Meeting in March 2004, and can be found on The Environment Council website.

Stage 1

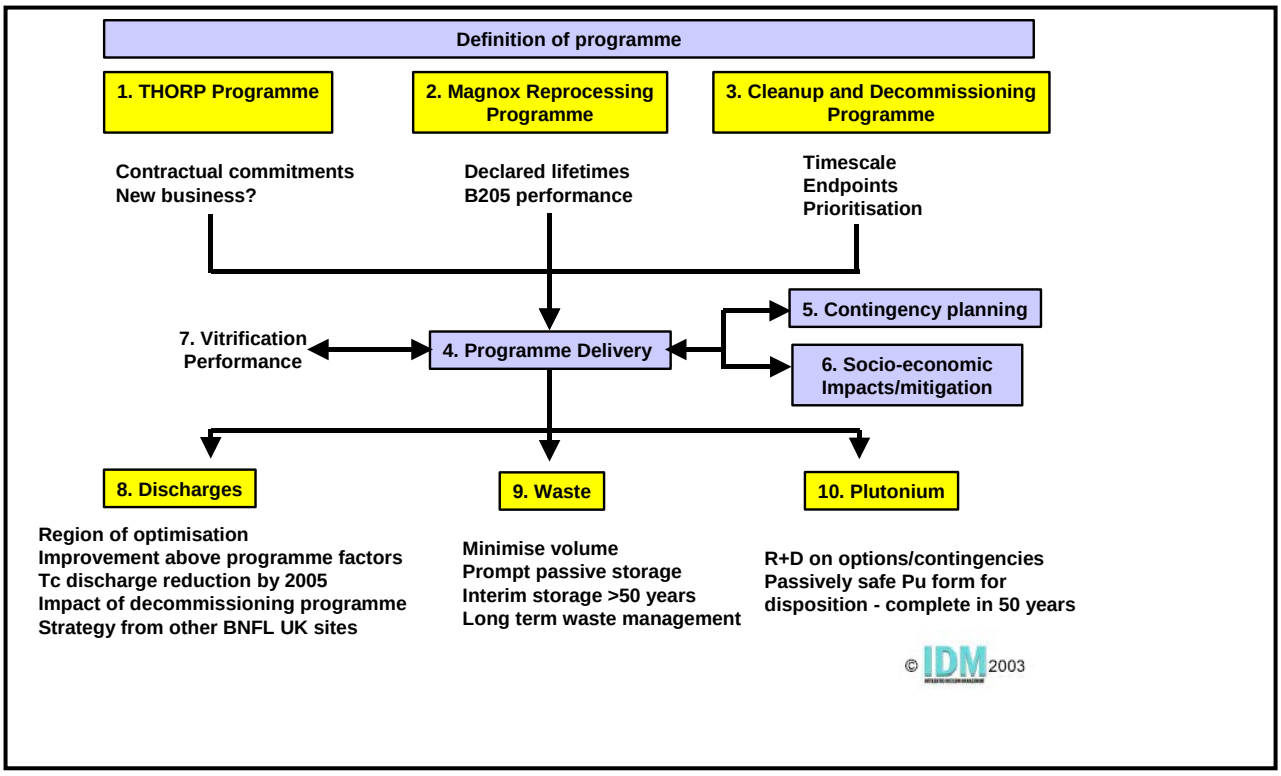
The recommendations from all Working Groups and the responses to them prior to the last Main Group Meeting were brought together, with each recommendation or reply being given a unique identifying reference number. In the case of the PuWG all recommendations from interim reports were wrapped into the final report, so only the recommendations from this report have been included. This gave a 20-page document with 139 recommendations and responses: '*Table of Working Group Recommendations and Responses – Jan 2004*' [Document 1]. Note that this document does ***not*** include the Company responses to the July 2003 8th Main Group, as these were given in the form of a commentary on each Group's work, underlining the need for the simplification carried out in this consolidation.

Stage 2

In this stage, the recommendations and responses were consolidated to remove repetition and overlap. The identification numbers from Stage 1 were retained, so that it is possible to track back from this shortened form to the original recommendations and responses in Document 1. It was not possible to condense the recommendations of the PuWG, because of the amount of detailed drafting required to gain agreement. The result is the document '*Summary of Recommendations and Responses – Jan 2004*' [Document 2], which runs to just over 6 pages and condensed the 139 recommendations and responses to 63.

Stage 3

Stage 3 used a classification template developed by the BFWG. It is reproduced below, with 'major points' for each topic agreed by the Group.
The condensed points from the Document 2 were then pasted into the relevant category of the template. This has been attempted in '*Recommendations and Responses – Classification for Ongoing Work'* [Document 3]. During the work, it was found that two more categories, 'other BNFL sites' and 'ongoing use of reports and methodology' were required, and these were added.




Stage 4

In Stage 4 the relevant parts on the November 2003 Company response, and the elements and dates of the SFMOWG Strategic Action Plans (SAPs), were added to Document 3, together with a 'timeline' of programmed events (power station closures etc.) and SFMOWG SAP dates [Document 4]. This makes it easy to determine which options are still open and when they will be foreclosed. The groupings prompted a number of reporting topics under each of the 12 categories, and the Company was asked to respond to these.

Stage 5

BNFL has used this format to produce the Company's responses to the Main Group Meetings. This has included the nomination of Executive Directors to responding to recommendations falling within their area of responsibility. See the tables below and Appendix 7 of this report.

Stage 6

The Co-ordination Group has compiled the recommendations and identified the continuing responsibilities after the formation of the Nuclear Decommissioning Authority. These are detailed in the Tables below, which give the reporting points to be addressed by the named individuals.

The DTI's NDA Team has developed a list of Strategic Issues. The tables have been extended to include references to the relevant issues from the current Strategic Issues List associated with each Working Group recommendation.

## *2. Working Group Recommendations – As Consolidated*

1. Thorp Programme

The Thorp programme was discussed in the Spent Fuel Management Options Working Group (SFMOWG), although the issue of Thorp programme and performance was also considered as a factor in most of the Working Groups. SFMOWG examined Thorp programmes from immediate closure to 30-year life, plus the potential use for Magnox reprocessing.

| *Consolidated Recommendation* | **WG Recommendations** |
|---|---|
| BFWG should use SFMOWG work as a basis for ongoing work *(BNFL agreed),* and should examine any alternative use for Thorp after whichever scenario unfolds*. This will be monitored by BFWG*. | SF15, SF16<br>SF17<br>SF18 |

| Key Dates | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2002-2004 | SFMOWG Exec Summary S7.1 | Arrive at decision on future Thorp programme based on throughput, contracts, pond storage capacity, and vitrification plant performance. | Company |
| 2011 | SFMOWG Exec Summary S7.1 | Thorp reprocessing completed – current orders only | Company |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 1.1 | Thorp Programme - Thorp performance against 2004/5 target of 625 tonnes | Barry Snelson | Barry Snelson | 31 March 2005 | 23 |
| 1.2 | Decision on future Thorp programme | Barry Snelson | Secretary of State | 2002-2004 | 23, 35 |

2. Magnox Programme

The Magnox reprocessing programme is the main source of both discharges and intermediate level waste from Sellafield operations and was examined by both the Waste and Discharges Working Groups (WWG and DWG). Examination of Magnox programmes in SFMOWG was curtailed by the BNFL announcement of Magnox station lifetimes in May 2000. This announcement also prompted a review of recommendations by WWG and DWG. SFMOWG developed recommendations for contingency planning should Magnox reprocessing throughput fail to meet the fuel arisings from the stations, and agreed with BNFL a methodology for making public progress on reprocessing.

| *Consolidated Recommendation* | **WG Recommendations** |
|---|---|
| *The Magnox announcement (23/5/00) firmed up the programme for reactors and B205, including Calder closure in March 03 which was later implemented. The throughput of B205 etc covered in SAP and fed into SFMOWG and covered by SAP.* | D2, D18, D19<br>D4, D20 |
| The late mentioning of Magrox fuel with potential extension of Magnox lifetimes was a process failure(78) but then examined by current groups and Magnox Task Group. | W30, W21<br>W33 |

| Key Dates | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2000 May 23 | BNFL | Magnox lifetimes announcement | Company |
| 2001 | BNFL | Magrox abandoned | Company |
| 2003 March | BNFL | Calder closure | Completed |
| 2003 end | BNFL | Storing fuel in reactor cores – technical issues | Company |
| Spring 2004 | BNFL | ISS of fuel in purpose built stores | Company |
| 2004 latest end | SFMOWG Exec Summary S7.1 | Decide whether or not to build head end on Thorp | Company |
| 2005 | BNFL | Chapelcross closure | Company - Magnox |
| 2006 | BNFL | Sizewell A closure | Company - Magnox |
| 2006 | BNFL | Dungeness closure | Company - Magnox |
| 2008 | BNFL | Oldbury closure | Company – Magnox |
| 2009 by | SFMOWG Exec Summary S7.1 | Close Magnox stations to 23 May 2000 programme | Company – See individual station closure dates |
| 2010 | BNFL | Wylfa closure | Company – Magnox |
| 2012 latest end | SFMOWG Exec Summary S7.1 | Close B205 | Company |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 2.1 | Progress against Magnox reactor closure programme, include financial year date 2009/10 for Wylfa | Mark Morant | NDA | To 2009/10 | 14 |
| 2.2 | Progress on defuelling reactors | Mark Morant | Mark Morant | To 2012 | 14 |
| 2.3 | Fuel delivery strategy and performance | Mark Morant | Mark Morant | To 2012 | 14 |
| 2.4 | B205 performance against 2004/5 target of 800 tonnes | Barry Snelson | Barry Snelson | 2004/5 | 14, 35 |
| 2.5 | B205 performance – 'reprocessing envelope diagram' | Barry Snelson | Barry Snelson | Updates to 2012 | 14 |
| 2.6 | Projected Magnox reprocessing throughput before 2012 B205 closure, assuming that Magnox stations continue to operate to declared lifetimes *(combine with 2.5)* | Barry Snelson | Barry Snelson | Updates to 2012 | 14 |
| 2.7 | Decide whether or not to build head end on Thorp – progress on R&D work. Has a decision been taken? | Barry Snelson | Not applicable | End 2004 | 34, 35 |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 2.8 | Develop contingency plans for wetted fuel and dry fuel in reactor cores | Mark Morant | NDA | Available if required by 2012 | 14 |
| 2.9 | Technical issues of dry transportation of fuel from Magnox stations to Sellafield – technical issues resolved, regulatory aspects? | Mark Morant | NDA | Available if required by 2012 | 14 |
| 2.10 | Progress on ISS of fuel in purpose built stores | Mark Morant | NDA | Available if required by 2012 | 14 |

## 3. Cleanup and Decommissioning Programme

WWG and DWG concentrated on the impacts from reprocessing operations and SFMOWG examined a range of reprocessing scenarios. The increased emphasis on the cleanup of legacy waste, with the consequent restructuring of BNFL and the advent of the Nuclear Decommissioning Authority (NDA), led to the Business Futures Working Group (BFWG) being mandated to focus on the development of the NDA's programmes and processes.

| *Consolidated Recommendation* | WG Recommendations |
|---|---|
| DWG recommends studies on the discharge impacts of decommissioning, which were unaffected by Magnox announcement, *and discharges from legacy wastes will be looked at in BFWG*. The Historic Waste Management project was welcomed. | D31, D32<br>D33, D34<br>D35 |
| *WWG did not consider decommissioning and an overall evaluation is needed* (70): this was addressed in BFWG. | W22, W23 |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 3.1 | What information can BNFL make available? Needs to be linked with the current review of Life Cycle Baseline | Lawrie Haynes | NDA<br>Lawrie Haynes | September 2004 | 18 |
| 3.2 | What would BNFL want to see as a product from stakeholders in this area? | Lawrie Haynes | NDA<br>Lawrie Haynes | April 2005 | |

## 4. Programme Delivery

This category covers the interactions between the Magnox, Thorp, and cleanup and decommissioning programmes. Detailed points on throughputs and stocks have been covered under their appropriate sections above. The key factor here is the prioritisation of the programmes and how competing demands are managed – for example between risk and hazard reduction, discharge reduction, socio-economic effects and costs.

| *Consolidated Recommendation* | **WG Recommendations** |
|---|---|
| Specific examples of increased priority by the Company were R+T investment, HAL stock management, the Historic Waste Management Project, and Drigg PCM retrieval. Scenarios and framework have been taken up by SFMOWG and PuWG. BFWG should look at passivity measurement | W9<br><br><br>W11 |
| SFMOWG asked for more time (10/11/01) to complete its work *and this was approved, with comments (86) by Main Group (83).* When published (Summer 2001) the Group commended the report and the Strategic Action Plans to BNFL and other decision makers in role development of LMA and possible funding for early closure scenarios. The overriding need is to be transparent in taking conflicting needs of environment and socio-economic into account. *BNFL responded to SAPs.* | SF1<br>SF2, SF5<br>SF6, SF3<br>SF4<br>SF78<br>SF8 |
| BNFL must match Magnox lifetimes to B205 performance with minimum fuel in ponds and no plans for long term wet storage *and BNFL agreed to report on B205 throughput.* Reduction of discharges and waste volumes with early passive storage must be a feature of whichever option chosen. *BNFL agreed*. | SF9<br>SF10<br><br>SF11, SF12 |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 4.1 | Work on the hazard indicator | Barry Snelson<br>Mark Morant | NDA | Responsibility transferred to LMU, 2003 | N/A |
| 4.2 | Review of Life Cycle Baseline planning and prioritisation | Barry Snelson<br>Mark Morant | NDA<br>Lawrie Haynes | LCBL2 September 2004 and ongoing | N/A |
| 4.3 | How are stakeholders being involved in this review process? | Barry Snelson<br>Mark Morant | NDA<br>Lawrie Haynes | In line with engagement frameworks and 4.2 above | Topic area – issues to be added |

## 5. Contingency Planning

All currently identified contingency planning has been dealt with in the relevant sections.

## 6. Socio-economic Impacts and Planning

Early work in the Dialogue identified the importance of the socio-economic effects of different Sellafield programmes on the West Cumbrian Economy. A joint fact-finding study and analysis project was commissioned and steered by the dialogue. This revealed extensive employment effects which had not been previously anticipated. These results have been crucial in informing local stakeholders on the effects of early plant closure, and in giving agreed facts on which to base the ongoing robust debate on the balance of the environmental and socio-economic effects of different programmes. Subsequently, a diversification study was undertaken, with terms of reference agreed by stakeholders prior to the commencement of the study. It looked at potential new business directions for BNFL, including renewable energy options and non-nuclear business in relation to sustaining local business economies.

| Consolidated Recommendation | WG Recommendations |
|---|---|
| Socio-economic, cost and safety may produce pressure against discharge reductions and suitable studies should be commissioned. The ERM study was welcomed, was being used by in planning by local and regional Government, and went a long way to fulfilling the need, while having no direct impact on DWG recommendations. Socio-economic data for Ireland and Norway was to be supplied. | D6<br><br>D7,D9,D10<br><br>D8 |
| *Socio-economic factors are accepted as being crucial – work must be commissioned and it was.* | W18, W19, W20, W21, W26, W27 |
| Mitigation plans are required whichever option is involved, and the ERM report is being updated. | SF13, SF14 |

| Date | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2012 | ERM update 2003 | Significant Sellafield job reductions begin | |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 6.1 | Report on initiatives and plans to mitigate expected socio-economic effects of Sellafield job reductions | Barry Snelson | NDA<br>Barry Snelson | NTWP2<br>March 2005 and ongoing | 43 |

## 7. Vitrification Performance

The key observation from the Dialogue work is the interaction between vitrification performance and the reprocessing programmes which can be carried out while still conforming to the obligation to reduce stocks of liquid high level waste.

| Date | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2015 | NII-BNFL | Reduction of HAL storage to 200m3 buffer level | Company |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 7.1 | Vitrification plant progress – production and containers to store against 2004/5 target of 460 containers to store | Barry Snelson | Barry Snelson | Reporting against NTWP2 March 2005 and ongoing | 22 |
| 7.2 | Progress on line 3 commissioning | Barry Snelson | Barry Snelson | Reporting against NTWP2 March 2005 and ongoing | 22 |
| 7.3 | Progress in the reduction in stocks of High Active Liquid Waste against NII specification curve | Barry Snelson | Barry Snelson | Reporting against NTWP2 March 2005 and ongoing | 22 |

## 8. Discharges

This was the main study of the DWG, which concentrated on Sellafield discharges reduction in the light of the OSPAR agreement. Importantly, this introduced the concept of 'regions of optimisation' where apparently opposing factors could be represented to clarify constraints on, and opportunities for, discharge reduction.

| *Consolidated Recommendation* | WG Recommendations |
|---|---|
| Discharges – indicative reduction programmes were a good start though details of OSPAR implementation not agreed. BNFL should 'strive to the utmost for reductions over and above pre-OSPAR plans with clear commitment to plant timescales. | D1 |
| On discharges, the announcement did not meet all aspirations, being towards the end of range studied, but firmed up the expected profile. The changes could increase the rate of reductions in the period before 2020, *with total lifetime discharges capped by lifetimes plus Calder and actions by BNFL and regulators for reductions.* | D3<br>D5<br><br>D13 |
| BNFL should reduce discharges within region of optimisation – D1 plus/ D2 minus and D3 plus. There was some disappointment that increased B205 throughput would increase discharges – but still within region of optimisation as long as Tc reduction is achieved and most changes move towards lower end of the region of optimisation. | D11<br><br>D12<br>D14 |
| BNFL should make utmost endeavours on Tc reduction, with C-14, Sr-90, Ru-106 and Pu/Am as next tier priorities. Tc was consulted on by EA, and the later decision document supports early reduction subject to technology – in line with original DWG recommendation. *A-41 reduction achieved by early Calder shutdown*. | D15<br>D16<br>D17<br>D21 |
| There was uncertainty in I-129 with *impact below model* and appropriate reduction strategies plus work on the model were urged plus work on model. S*treet 3 scrubber was brought into operation* and a Thorp iodic acid trial planned. | D22, D23<br>D24,D25, D27<br>D26 |

| Date | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2020 | SFMOWG Exec Summary S7.1 | Sellafield site to comply with OSPAR requirements as defined | |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 8.1 | Report on discharge reduction – 'within region of optimisation – D1 plus/ D2 minus and D3 plus' | Barry Snelson | NDA<br>Barry Snelson | Annual discharge reporting | 36 |
| 8.2 | Progress on technetium discharge reduction | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |
| 8.3 | Progress on reduction of C-14, Sr-90 and Ru-106 discharges | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |
| 8.4 | Progress on modelling of I-129 discharges and use of iodic acid | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |
| 8.5 | Total Alpha discharges | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |

## 9. Waste

WWG examined waste generation and storage on the Sellafield site to produce a comprehensive and understandable picture. The key agreement reached within WWG was the need to move the emphasis towards the achievement of monitorable and retrievable storage of passive waste forms, in a timely manner.

| *Consolidated Recommendation* | WG Recommendations |
|---|---|
| Government and regulators should set criteria for acceptability of waste forms.<br>No progress was noted but *MAC diversion being proceeded with* and DWG urged a TPP trial. | D40<br>D41, D42<br>D43 |
| A future group should study prolonged dry storage of Magnox – plus feedback into Magnox programme and discharge reductions, and this was taken on by SFMOWG. | D28<br>D29, D30, D31 |
| Urges all to accept its agreed principles<br>• Package waste in passively safe monitorable retrievable form in shortest possible time<br>• Interim storage (with suitable performance and safety review) offers a feasible option for >50 years – but the Company must involve itself in research on long term storage and the possibility of disposal<br>• Changing values of stakeholders within 50 years will necessitate revisiting all assumptions, factors and standards, with different timescales being considered in MADA/SAP work in SFMOWG.<br>• The Company must successfully embrace change, and should use the 9 scenarios adopted elsewhere in Stakeholder Dialogue which has occurred. | W3<br>W4<br><br><br><br>W5<br><br>W6, W14<br>W15<br>W7<br>W8 |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 9.1 | Progress on the definition and achievement of monitorable and retrievable storage | Barry Snelson | NDA<br>Lawrie Haynes | Response to CoRWM recommendations 20?? | 1, 2, 6, 26, 32, |

10. Plutonium

The Plutonium Working Group (PuWG) overall objectives were to develop and recommend principles for BNFL's management and reduction of separated plutonium stocks. The PuWG achieved these objectives through four main phases of work:

- reviewing current arrangements for the storage of separated plutonium, drivers for change and a preliminary screening of options for long term management;
- monitoring, reviewing and steering a BNFL study of long-term management options;
- examining key options using Strategic Action Planning (SAP); and
- analysing outputs, formulating recommendations, and drafting this final report.

The PuWG made a series of recommendations on the further explorations necessary to reach an informed decision on the future management of the plutonium stocks owned by BNFL. The PuWG stressed that the recommendations are interconnected, and should not be selectively implemented.

PuWG recognised that decisions on the adoption of specific long-term management options were unlikely to lie with BNFL, but recommended that some of the key explorations could be initiated by the Company. The 7th Main Group meeting in November 2002 endorsed the PuWG report and asked BNFL to formally consider and respond to its recommendations."

| *Consolidated Recommendation* | **WG Recommendations** |
|---|---|
| *DEFRA should take the lead in establishing a waste form qualification system, which can be applied to potential plutonium waste forms, as a matter of urgency, taking into account the work currently being done for intermediate level wastes by the Health and Safety Executive (HSE), the Scottish Environmental Protection Agency (SEPA) and the Environment Agency (EA).* | *Pu1* |
| *The 'plutonium owner' should ensure that the development of detailed proposals for the management of separated plutonium, the associated decision making, incorporate stakeholder engagement is an integral part of the process. Where appropriate, this should extend to the associated investigations***.** | *Pu3* |
| *The 'plutonium owner' should disregard use of MOX in the Dungeness B, Hunterston B, Hinkley B, Hartlepool and Heysham 1 reactors as options for the management of separated PU* | *Pu5* |

| | |
|---|---|
| *In the interests of fully establishing the practicability or otherwise of using MOX fuel in Sizewell B, Heysham 2 and Torness, and before any decisions on implementation are taken:*<br>- *The 'plutonium owner' and BE (as the 'plutonium user') should enter into initial discussions to explore the financial basis for this option (NB This recommendation may change depending on outcome of current restructuring of BE).*<br>- *The availability of capacity in SMP should be reviewed, taking account both of the duration and timing of fulfilling contract commitments to overseas customers and the feasibility of a life extension for the plant.*<br>*Should these explorations indicate that using plutonium in Sizewell B or either of the AGRs may be attractive from liability management point of view, the 'plutonium owner' and 'user' should undertake a comprehensive environmental assessment including the evaluation of transport, reactor safety, environmental discharge, public safety (including the risks from extreme core disruption events), and waste form storage issues. This assessment should be conducted in consultation with stakeholders at national and local levels.* | *Pu7* |
| *To explore the feasibility or otherwise of utilising plutonium, in the event that any programme of new build reactors were to proceed, we recommend that before any decision are taken:*<br>- The financial basis on which plutonium might be utilised in new build reactors should be explored at an early stage between the 'plutonium owner' and the likely developer of any new build reactors. The existing collaborative agreement on new build between BNFL and BE may be a suitable vehicle for this.<br>- The availability of capacity in SMP should be reviewed, taking account of the feasibility of a life extension for the plant.<br>- Should these explorations (and the outcome of the energy review) be favourable to plutonium use in new build, the prospective developer should undertake a comprehensive environmental impact assessment on the proposal including the evaluation of transport, reactor safety (including the risks from extreme core disruption events), environmental discharge, and waste form storage issues. This assessment should be conducted in consultation with stakeholders at national and local levels.<br>A detailed comparison of MOX, Inert Matrix Fuel (IMF) and conventional uranium fuels should be undertaken prior to deciding which fuel type to use | *Pu9* |
| *In the light of long lead times, the 'plutonium owner' should commit promptly to an immobilisation research, process development and design study to more fully establish the optimum technology for plutonium immobilisation. This should include:*<br>- *Underpinning research on ceramic immobilisation matrices*<br>- *Consideration of possible plutonium loadings, inclusion of neutron absorbers, safety and safeguards requirements*<br>- *Assessment of possible product forms against waste specification requirements*<br>- *Design studies for process optimisation*<br>- *Consideration of low spec MOX as an immobilised plutonium product*<br>- *A Best Practicable Environmental Option (BPEO) analysis, conducted with stakeholder involvement, which brings together findings of the above in order to establish the optimum process and waste form*<br>- *A comprehensive environmental impact assessment on the proposal including the evaluation of plant safety, environmental discharge, and waste form storage issues. This assessment should be conducted in consultation with stakeholders at national and local levels.* | *Pu11* |

| | |
|---|---|
| We do already have an immobilisation research programme focussed initially on Pu residues. This could readily be extendable to the balance of the UK's inventory should a Government policy change be made to alter Pu's current status as a source of energy for use in the future to a waste. BNFL will continue to actively work with the Government and other stakeholders as policy is clarified and resolved in a timely manner. The area of plutonium management will require formulation of policy and guidelines to enable appropriate waste forms to be developed and Pu's role within them would need to be assessed. Low specification MOX is but one possible option on which we comment in more detail later. | *Pu12* |
| *In order to ensure the option of using SMP immobilised plutonium as low-spec MOX is not foreclosed, the 'plutonium owner' should before final decisions about plutonium management are made:*<br><br>- *Undertake a more detailed assessment of the suitability of low spec MOX as a form of immobilised plutonium product, including consideration of security, safety, safeguards, waste form qualification and other relevant issues.*<br>- *Undertake a design study to establish whether SMP could feasibly be modified to produce a more 'optimised' plutonium waste form, either in current or newly added production lines.*<br>- *Review the use of SMP in the light of the above investigations and those of the other options as recommended above, once the future contractual commitments of SMP for overseas and domestic customers become clearer.*<br>- *Include the 'SMP option' in the BPEO for immobilisation options recommended in respect of new build plant.* | *Pu13* |
| *Research and process development for plutonium immobilisation should concentrate on those options which do not involve an added external radiation barrier. However other means of increasing the intrinsic security of the product should be explored.* | *Pu15* |
| *At this stage, it is important to keep options open so that contingencies are available for each plutonium disposition option. In order to ensure this:*<br><br>- *All the actions and explorations indicated above should be carried out to the point at which the 'plutonium owner' can make informed decisions (with stakeholder involvement) on the contribution each option should make to management of the plutonium stockpile.*<br>- *In reaching these decisions, consideration should be given to: maintenance of contingency in the longer-term, community views on the long-term storage onsite of plutonium waste forms, social-economic factors including employment, and the impact of plutonium stockpile management options on the wider Sellafield clean-up programme*<br>- *The 'plutonium owner' should then develop a more detailed plan which shows how the options could be used to convert the current and projected future stockpile of separated plutonium into a passively safe form suitable for long-term storage and, potentially, ultimate disposal.*<br>- *Such a plan should aim to achieve conversion to a timescale which would render construction of new plutonium dioxide stores, or refurbishment of existing stores unnecessary, except for compelling safety or security reasons.* | *Pu17* |

| Date | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2006 | PuWG response | Mineral phases for Pu disposition – current research programme end | Company – R+T |
| 2006 March | PuWG response | Magnox Pu – disposition options identified | Company – R+T |

| | | | |
|---|---|---|---|
| 2006 | PuWG SAP Anx4 | Develop criteria for Pu product specification | |
| 2007 | PuWG response | Ceramics for Pu residues – small scale facility designed and built | Company – R+T |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 10.1 | Report on forward R&D programme – *see Pu11, 13, 15 below for details* | Sue Ion | NDA<br>Lawrie Haynes | 2006/7 – see PuWG response and SAP work | 3, 34 |
| 10.2 | BFWG Position Paper submitted to DTI, CoRWM, No10, etc | Complete | See 10.1 | | 3 |
| 10.3 | Report from a meeting between the Pu Drafters and Sue Ion on 5 March 2004 | Complete | See 10.1 | | 3 |
| Pu1 | | *Defra* | Defra | | 3 |
| Pu3 | | BNFL – Sue Ion | NDA | | 3 |
| Pu5 | | BNFL – Sue Ion | NDA | | 3 |
| Pu7 | | BNFL – Sue Ion<br>BE | NDA<br>BE | | 3 |
| Pu9 | | BNFL - Sue Ion<br>DTI | NDA<br>DTI | | 3 |
| Pu11 | | BNFL – Sue Ion | NDA | See10.1 above | 3 |
| Pu13 | | BNFL – Sue Ion | NDA | See10.1 above | 3 |
| Pu15 | | BNFL – Sue Ion | NDA | See10.1 above | 3 |
| Pu17 | - | BNFL – Sue Ion | NDA | | 3 |
| Pu19 | | BNFL – Sue Ion | NDA | | 3 |

## 11. Other BNFL Sites

The Dialogue Working Groups have mainly concentrated on Sellafield operations and their associated impacts. A number of Working Group recommendations have relevance to other sites and could be used by future stakeholder engagement processes at those sites.

| *Consolidated Recommendation* | WG Recommendations |
|---|---|
| DWG recommends that BNFL use the methodology from its report to create strategy and site specific plans for all other BNFL sites. The announced closure dates will affect reactor sites plus fuel supply from Springfields. | D36, D37<br><br>D38, D39 |

| No | Reporting Points | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 11.1 | Use DWG methodology to create strategy and site-specific plans | Mark Morant<br>Steve Tritch | NDA<br>Lawrie Haynes<br>Steve Tritch | | N/A |

## 12. Ongoing Use of Reports and Methodology

All these recommendations have either been closed out or superseded by the work of the Communications Sub-group of the Co-ordination Group or within current BFWG work.

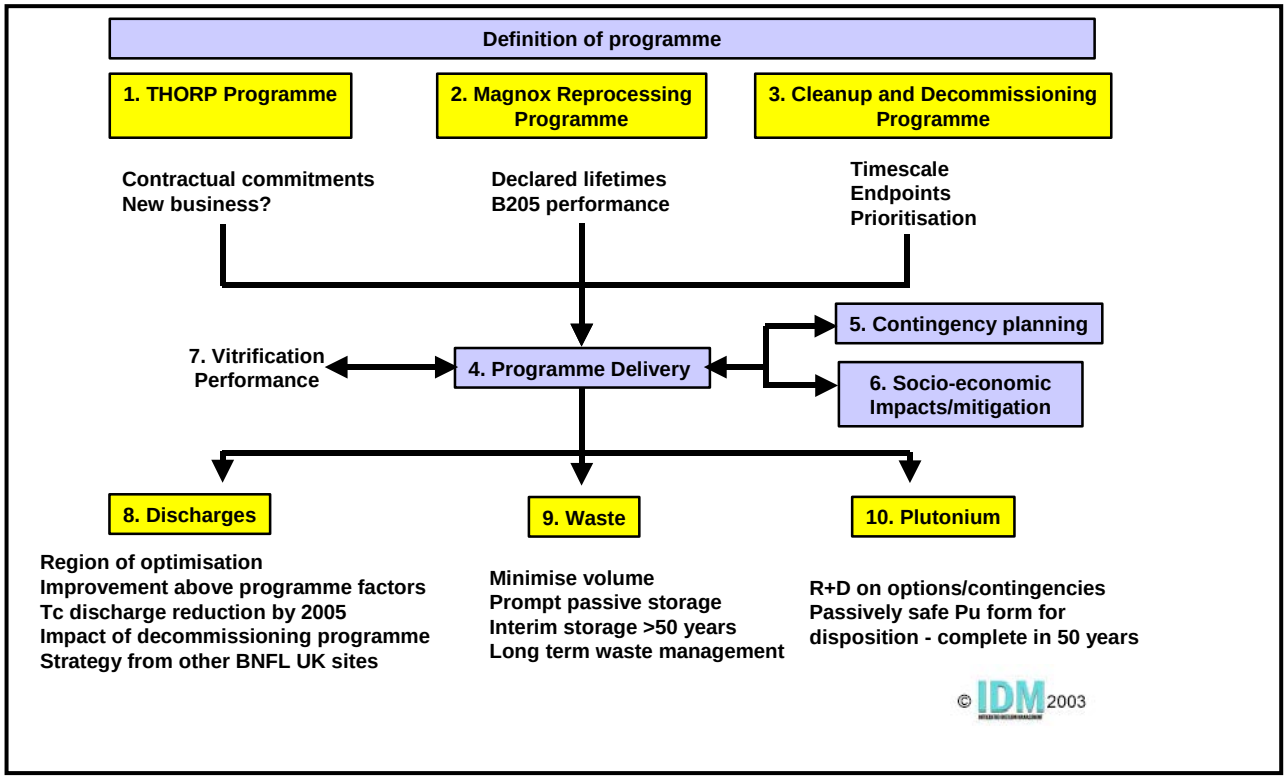
| *Consolidated Recommendation* | **WG Recommendations** |
|---|---|
| DWG results should be made available to be used by Government *which was done*, though there were problems with selective quotation. | D44, D45, D46, D47 |
| Waste Working Group presented a Work in Progress report by 15 stakeholders. It was reconvened on 23.11.01 to review progress. | W1<br>W2 |
| Factors other than waste important and must be addressed in future work - these include discharges, types and forms of waste, income/ability to fund, amounts of Pu and U, occupational doses, transport differences, socio-economic effects, public and political acceptability, regulatory considerations, safeguards, proliferation and institutional control aspects. *These were fed into SFMOWG work with PuWG looking at proliferation – and* both groups are concentrating on holistic and balanced solutions*. The Energy review, MRWS, any outcome on passivity and LMA development could affect future work.* | W10<br><br>W12<br><br>W14<br>W16, W17<br>W13 |
| The studies by WWG and DWG should form the basis of future work, *and this work was carried forward into SFMOWG* | W24<br>W25 |
| There was a fundamental divergence on appropriateness of reprocessing between Company and NGO views, and separate statements were appended. | W28, W29 |
| The Group hopes that its work and that of future Groups will make a real difference to the company's future plans. | W32 |
| BNFL should consider that a future group refine SFMOWG contingency plans and review DWG/WWG conclusions. *This will be being monitored by BFWG*. | SF19<br>SF20 |
| Future dialogue should jointly agree procedures, apply joint fact finding, joint selection of contractors, monitoring, agree terms of reference, and may want to build in formal peer review. *This was noted by BNFL*. | SF21, SF23<br><br>SF22, SF24 |
| BNFL should forward report to appropriate Minister(s) for consideration in light of previous reports. | SF25 |

## Appendix 7. BNFL Responses to the Consolidated Recommendations

### *Introduction*

The March 2004 Main Group Meeting agreed to support the Business Futures Working Group (BFWG) proposals for consolidating all historic recommendations and responses to make them transparent and accessible. The Co-ordination Group was tasked to finalise this work, and is providing a report to the Main Group meeting on 13/14 October 2004, where there will be a formal hand-over of recommendations, actions and any outstanding issues to their new "owners" (e.g. the Nuclear Decommissioning Authority (NDA), British Nuclear Group or "new BNFL").

In order to update the Main Group, BNFL has been using topic headings derived from the consolidation work[12] to structure the Company's responses to the recommendations. These subject areas are given in the following diagram:-




BNFL has also nominated Executive Directors to respond to recommendations falling within their area of responsibility. In transferring ongoing responsibilities for recommendations, it is intended to continue to nominate individuals wherever this is possible. The Co-ordination Group has compiled the recommendations and identified the continuing responsibilities after the formation of the NDA. These are given in the tables below which include references to working group recommendations (e.g. Spent Fuel 15), key actions, dates or milestones for decisions and references to the NDA Team's Strategic Issues List. Please note that recommendations under topic headings 1-10 are related to Sellafield and Magnox operating stations. A further topic heading 11 was introduced to

[12] Reference documents detailing the consolidation process were made available to the March 2004 Main Group and can be found on the Environment Council's website (*the-environment-council-org.uk*)

cover "Other BNFL sites" and is also included here. Previous recommendations under topic heading 12 "Ongoing Use of Reports and Methodology" have either been closed out or superseded by the work of other Groups. The recommendations from the BFWG and Security Working Group, dependent upon their acceptance by the Main Group, will also be consolidated and transferred to their appropriate new owners.

Since BNFL continues to be the prime recipient of recommendations from the Dialogue in the run-up to the formation of the NDA, the Company has been requested by the Co-ordination group to provide responses as a "baseline" against which future monitoring and reporting can take place. The responses are given in the form of a narrative under each section.

## Consolidated Recommendations and Continuing Responsibilities

### *1. Thorp Programme Barry Snelson/David Bonser*

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| BFWG should use SFMOWG work as a basis for ongoing work *(BNFL agreed),* and should examine any alternative use for THORP after whichever scenario unfolds*. This will be monitored by BFWG*. | SF15, SF16<br>SF17<br>SF18 |

| Key Dates | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2002-2004 | SFMOWG Exec Summary S7.1 | Arrive at decision on future THORP programme based on throughput, contracts, pond storage capacity, and vitrification plant performance. | Company |
| 2011 | SFMOWG Exec Summary S7.1 | THORP reprocessing completed – current orders only | Company |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 1.1 | Thorp Programme - Thorp performance against 2004/5 target of 725 tonnes | Barry Snelson | Barry Snelson | | 23 |
| 1.2 | Decision on future Thorp programme | Barry Snelson/David Bonser | Secretary of State | 2002-2004 | 23, 35 |

**BNFL Update**

Thorp is expected to operate until contracts with existing customers are completed (anticipated around 2010) or the plant is no longer economic. Responsibility for Thorp's operational performance remains with Barry Snelson, Managing Director Management Services, Sellafield. Management Services is part of British Nuclear Group, the decommissioning and clean up arm of BNFL.

In April/May 2004, essential maintenance and plant improvement work was undertaken during a planned shutdown period. Particularly challenging tasks during this maintenance period included the removal and replacement of complex pipework and remote handling

equipment in the Head End and chemical plant areas. Complexity is increased because these areas are radiologically challenging which also restricts access and working time. Both tasks were completed to time and without incident.

In early June, the plant was forced out of operation due to a failure of a mechanical drive shaft used to operate a system which holds fuel while it is being processed. This failure resulted in an eight-day delay to fuel shearing operations. Production then recovered to meet targets but was again affected by a pipeline failing in the chemical plant area which required repairs to be effected in August. To 16 September 2004, Thorp had processed 288 tonnes of fuel against the year's target of 725 tonnes.

Meeting the 2004/05 target will require high levels of both plant availability and performance over the remaining months. Stocks of irradiated fuel in the Thorp Ponds remain high, but there have been no constraints to either ongoing receipts from UK or overseas customers. The key factor in achieving the programmed completion of all existing business in Thorp remains the improvements to the operational performance of the vitrification facilities which will facilitate reductions in the amount of High Level liquid waste held in storage on the Sellafield site.

Executive Director David Bonser is responsible for Spent Fuel Services. This Business Group manages the commercial contracts with UK and overseas customers for reprocessing and Mixed Oxide fuel services. The "Managing the Nuclear Legacy" White Paper considered current and future Thorp business and specified that existing contracts would be honoured to avoid breaking contractual commitments and Government undertakings. When the Nuclear Decommissioning Authority assumes ownership of the operational plants at Sellafield (Thorp and Sellafield MOX plant) profit from commercial contracts will contribute towards clean up costs.

The White Paper also stated that any proposals for new contracts for reprocessing would only be sanctioned if these were consistent with the clean-up of the Sellafield site; if a positive return to the UK taxpayer was expected after allowing for any additional clean-up costs or other risks and if the UK's environmental and international obligations were met. The definition of the future Thorp programme will therefore become an NDA responsibility, with reporting of progress against that programme by the Sellafield Site Licensee Company.

## *2. Magnox Programme Mark Morant/Barry Snelson*

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| *The Magnox announcement (23/5/00) firmed up the programme for reactors and B205, including Calder closure in March 03 which was later implemented. The throughput of B205 etc covered in SAP and fed into SFMOWG and covered by SAP.* | D2, D18, D19<br>D4, D20 |
| The late mentioning of Magrox fuel with potential extension of Magnox lifetimes was a process failure(78) but then examined by current groups and Magnox Task Group. | W30, W21<br>W33 |

| Key Dates | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2000 May 25 | BNFL | Magnox lifetimes announcement | Company |
| 2001 | BNFL | Magrox abandoned | Company |
| 2003 March | BNFL | Calder closure | Completed |
| 2003 end | BNFL | Storing fuel in reactor cores – technical issues | Company |
| Spring 2004 | BNFL | ISS of fuel in purpose built stores | Company |
| 2004 latest end | SFMOWG Exec Summary S7.1 | Decide whether or not to build head end on Thorp | Company |
| 2004 | BNFL | Chapelcross closure[13] | Company - Magnox |
| 2006 | BNFL | Sizewell A closure | Company - Magnox |
| 2006 | BNFL | Dungeness closure | Company - Magnox |
| 2008 | BNFL | Oldbury closure | Company – Magnox |
| 2009 by | SFMOWG Exec Summary S7.1 | Close Magnox stations to 23 May 2000 programme | Company – See individual station closure dates |
| 2010 | BNFL | Wylfa closure | Company – Magnox |
| 2012 latest end | SFMOWG Exec Summary S7.1 | Close B205 | Company |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 2.1 | Progress against Magnox reactor closure programme | Mark Morant | NDA | To 2009/10 | 14 |
| 2.2 | Progress on defuelling reactors | Mark Morant | Mark Morant | To 2012 | |
| 2.3 | Fuel delivery strategy and performance | Mark Morant | Mark Morant | To 2012 | |
| 2.4 | B205 performance against 2004/5 target of 800 tonnes | Barry Snelson | Barry Snelson | 2004/5 | |
| 2.5 | B205 performance – 'reprocessing envelope diagram' | Barry Snelson | Barry Snelson | Updates to 2012 | |
| 2.6 | Projected Magnox reprocessing throughput before 2012 B205 closure, assuming that Magnox stations continue to operate to declared lifetimes *(combine with 2.5)* | Barry Snelson | Barry Snelson | Updates to 2012 | |

[13] The closure of Chapelcross was brought forward to June 2004.

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 2.7 | Decide whether or not to build head end on Thorp – progress on R&D work. Has a decision been taken? | Barry Snelson | Not applicable | End 2004 | |
| 2.8 | Develop contingency plans for wetted fuel and dry fuel in reactor cores | Mark Morant | NDA | Available if required by 2012 | 14 |
| 2.9 | Technical issues of dry transportation of fuel from Magnox stations to Sellafield – technical issues resolved, regulatory aspects? | Mark Morant | NDA | Available if required by 2012 | 14 |
| 2.10 | Progress on ISS of fuel in purpose built stores | Mark Morant | NDA | Available if required by 2012 | 14 |

**BNFL Update**

The closure dates for the Magnox reactor programme were published on 23 May 2000 and continues to be implemented. Responsibility for endorsing or amending the programme will lie with the NDA after April 2005. Progress against that programme is the responsibility of Mark Morant, Managing Director Reactor Sites, within British Nuclear Group.

The Magnox Lifetime programme implementation has continued. Closure of the Chapelcross station was announced in June 2004, adding to the previous closures of Bradwell, Hinkley Point and Calder Hall. The remaining four operational stations continue to generate electricity, and their programmed closure dates are unchanged. Wylfa is the final reactor scheduled to close on 31 March 2010.

Hinkley Point defuelling has continued to programme, and the core inventory of fuel has been reduced to less than 60 tonnes compared to an initial stock of 470 tonnes. Bradwell defuelling has continued but at a lower rate. The remaining Bradwell fuel stock is currently 280 tonnes compared with the initial 460 tonnes. Calder Hall and Chapelcross defuelling is not scheduled to start during this financial year. Stocks of fuel within station ponds awaiting transport to Sellafield are all well within their target range.

The total Magnox fuel delivery to Sellafield during 2003/04 was 1079 tonnes compared with a target of 940 tonnes. Deliveries to date during 2004/05 have reached 400 tonnes which remains on schedule to achieve the annual target of 1002 tonnes.

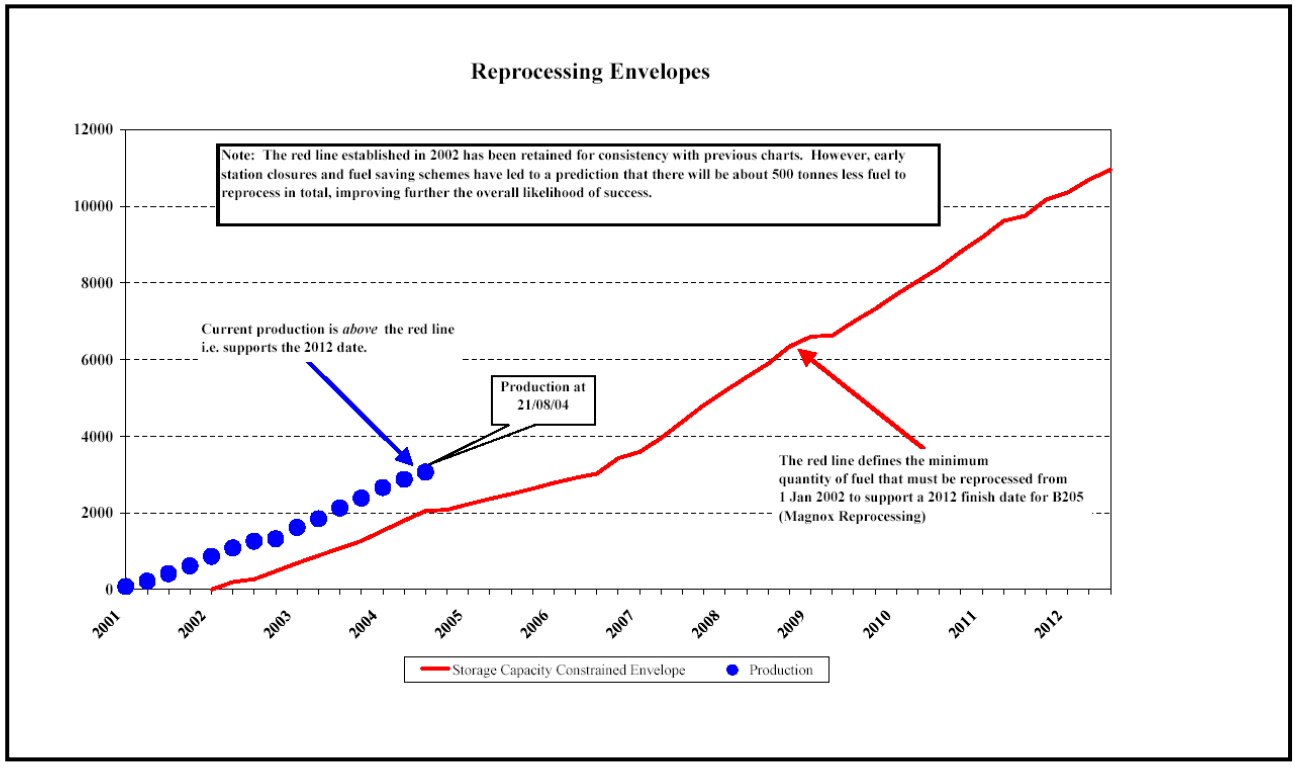
Responsibility for delivering the Magnox reprocessing programme remains with Barry Snelson, Managing Director Management Services, Sellafield. In 2003/04, 1038 tonnes of Magnox fuel was reprocessed compared with an annual target of 905 tonnes. This was the highest total achieved since 1995/6. At the time of planning the 2004/05 production run for the Magnox reprocessing plant, a scheduled three month biennial maintenance shutdown was envisaged. This resulted in a production target of 800 tonnes being set for the remaining nine months of operation. To 16 September 481 tonnes have been reprocessed. Currently, a case is being considered to extend the 2004/05 production run

by three months, which if implemented would lead to a revised annual target of about 1000 tonnes.

At Sellafield a stock of lower yield Magnox fuel is in pond storage awaiting reprocessing. This fuel has been stored for prolonged periods which has led to fuel corrosion and associated increases in total alpha discharges. Since April 2003, 175 tonnes of this fuel has been reprocessed, exceeding the target quantity. For a variety of technical reasons this fuel is slower to process and exceeding the target was judged to be a significant success in dealing with this legacy fuel.

As previously recommended by Dialogue Working Groups, the Magnox "reprocessing envelope diagram" has been updated and is reproduced below. The red "minimum required" delivery line on the envelope diagram has been retained for consistency with previous reports. However, earlier station closures and fuel savings schemes have led to a prediction that there will be about 500 tonnes less fuel to reprocess before closure of the Magnox reprocessing plant at the end of 2012.

The amount of Magnox fuel to be reprocessed before the end of the reprocessing programme is some 7,500 tonnes requiring a reprocessing rate of 1000 tonnes per year in a full twelve month operating period. Magnox reprocessing remains on schedule for completion of reprocessing operations by the end of 2012.




Should the Magnox reprocessing plant be unable to process fuel, and there were significant quantities of wetted fuel remaining to be processed, one option recommended by the Spent Fuel Management Options Working Group (SFMOWG) was the possibility of using Thorp to process Magnox fuel. Research and development has been evaluated which indicates that processing Magnox fuel through Thorp was feasible, although at a lower rate than might have been anticipated. However, significant technical risks have also been identified, including controlling the chemical processes and the logistics of

transferring the Magnox fuel to Thorp. These risks will require detailed assessment, together with further development work, before the Thorp option could be considered to be a practicable alternative option to the existing Magnox reprocessing plant.

An alternative contingency option for Magnox fuel which is already wet, is to encapsulate intact fuel elements in drums for interim surface storage. Research has concentrated on the thermal and corrosion effects of a range of encapsulants. Full-scale durability trials of the resultant encapsulated package have been encouraging. There are outstanding regulatory and other stakeholder issues associated with this option, particularly around long term storage of Magnox fuel.

BNFL has also examined the potential of dry storing Magnox fuel which has not been wetted and forms the bulk of the remaining fuel inventory. The engineering and technical issues associated with the temporary storage of fuel in reactor cores: dry transport and interim storage in a surface store were investigated and no major technical "show stoppers" have been identified. However, as with the encapsulated option discussed above, there are wider associated regulatory and other stakeholder issues which would need to be addressed.

Current activities include continued research and development into the thermal and corrosion effects associated with the long-term storage of Magnox fuel. All of the alternative Magnox management options described above are subjected to regular technical reviews to keep them relevant.

### *3. Cleanup and Decommissioning Programme- Lawrie Haynes*

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| DWG recommends studies on the discharge impacts of decommissioning, which were unaffected by Magnox announcement, *and discharges from legacy wastes will be looked at in BFWG*. The Historic Waste Management project was welcomed. | D31, D32<br>D33, D34<br>D35 |
| *WWG did not consider decommissioning and an overall evaluation is needed* (70): this was addressed in BFWG. ***See also 3.1-3.5*** | W22, W23 |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 3.1 | What information can BNFL make available? Needs to be linked with the current review of Life Cycle Baseline | Lawrie Haynes | NDA<br>Lawrie Haynes | September 2004 | |
| 3.2 | What would BNFL want to see as a product from stakeholders in this area? | Lawrie Haynes | NDA<br>Lawrie Haynes | April 2005 | |

**BNFL Update**

All civil nuclear sites which will become the responsibility of the NDA have prepared Life Cycle Baseline (LCBL) plans to a specification determined by the NDA Team within the Department of Trade and Industry (DTI). The Baseline plans define what activities are to be done on a site over a period of decades, when these activities are to be done and an

assessment of costs. They cover future work to take a site from its current state to an assumed and defined end state. Sites are also required to produce Near Term Work Plans (NTWP) which sets out planned activities for the next 2-3 years. Both LCBLs and NTWPs are living and evolving processes.

Work has already begun on updating the first iteration of LCBLs and NTWPs. Of particular relevance is the Treasury's recent 2004 Spending Review[14]. The DTI's objective and performance targets in this areas is stated as:-

*"Reduce the civil nuclear liability by 10% by 2010, and establish a safe, innovative and dynamic market for nuclear clean-up by delivering annual 25% efficiency gains from 2006-07; and ensure successful competitions have been completed for the management of at least 50% of UK nuclear sites by end 2008."*

Funding limits have been set for the next three years and LCBLs and NTWPs are being revisited in the light of the Spending Review.

The LCBLs and NTWPs are of necessity highly detailed technical documents and therefore not very accessible to the lay reader. There are also issues around commercial confidentiality and security that restrict access to the plans. However, examination of these plans is vital to allow stakeholders to identify issues of importance, for example, hazard reduction, discharges, jobs and ultimate use of land and site end points. The Sellafield Local Liaison Committee has established a special sub-group which is interacting with the Site Licensee Company and other stakeholders to gain a better appreciation of the plans for the site.

As part of the work programme of the Business Futures Working Group (BFWG), a generic template has been developed to describe specific projects or potential areas of clean-up work. BNFL has produced two examples using this framework to outline the wet silo project and what could be done regarding contaminated land on the Sellafield site. These examples are not meant to be exhaustive in terms of the information provided but can act as prompts for further questions and enquiries from stakeholders. The examples should enable issues of interest to be identified and therefore be particularly relevant in enabling local stakeholders to engage more effectively with Site Licensees. BNFL will continue to use the frameworks as part of ongoing stakeholder engagement on site remediation.

### *4. Programme Delivery Barry Snelson/Mark Morant*

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| Specific examples of increased priority by the Company were R+T investment, HAL stock management, the Historic Waste Management Project, and Drigg PCM retrieval. Scenarios and framework have been taken up by SFMOWG and PuWG. | W9 |
| BFWG should look at passivity measurement | W11 |

[14] 2004 Spending Review, Stability, security and opportunity for all: investing for Britain's long-term future, New Public Spending Plans 2005-2008, Chapter 16 Department of Trade & Industry

| | |
|---|---|
| SFMOWG asked for more time (10/11/01) to complete its work *and this was approved, with comments (86) by Main Group (83).* When published (Summer 2001) the Group commended the report and the Strategic Action Plans to BNFL and other decision makers in role development of LMA and possible funding for early closure scenarios. The overriding need is to be transparent in taking conflicting needs of environment and socio-economic into account. *BNFL responded to SAPs.* | SF1<br>SF2, SF5<br>SF6, SF3<br>SF4<br>SF78<br>SF8 |
| BNFL must match Magnox lifetimes to B205 performance with minimum fuel in ponds and no plans for long term wet storage *and BNFL agreed to report on B205 throughput.* Reduction of discharges and waste volumes with early passive storage must be a feature of whichever option chosen. *BNFL agreed*. | SF9<br>SF10<br><br>SF11, SF12 |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 4.1 | Work on the hazard indicator | Barry Snelson | NDA | Responsibility transferred to LMU, 2003 | |
| 4.2 | Review of Life Cycle Baseline planning and prioritisation | Barry Snelson | NDA<br>Lawrie Haynes | LCBL2 September 2004 and ongoing | |
| 4.3 | How are stakeholders being involved in this review process? | Barry Snelson | NDA<br>Lawrie Haynes | In line with engagement frameworks and 4.2 above | Topic area – issues to be added |

## BNFL Update

This category covers the interactions between the Magnox, Thorp, and cleanup and decommissioning programmes. Detailed points on throughputs and stocks have been covered under their appropriate sections above. The key factor here is the prioritisation of the programmes and how competing demands are managed – for example between risk and hazard reduction, discharge reduction, socio-economic effects and costs.

Successive Dialogue Working Groups have noted the need for measures of progress in achieving "passively safe, monitorable and retrievable" waste storage during decommissioning on nuclear sites. Early work by BNFL and the United Kingdom Atomic Energy Authority (UKAEA) produced a "Waste Conversion Index" which lacked the transparency for stakeholder acceptance.

Following comments from Dialogue participants, a Hazard Potential Indicator, has been developed with input from representatives from the BFWG as part of a working group led by the NDA Team. This was a cross-representational group, including the Nuclear Installations Inspectorate (NII), the Environment Agency (EA), the Ministry of Defence (MOD), industry representatives and independent experts.

The Hazard Potential Indicator is not a precise form of measurement but aims to provide a direct indication of progress towards increasing the passive safe storage of wastes. It is an example of one "tool" to help the justification of spend and prioritisation of clean-up programmes on sites and between the twenty sites which will be the NDA's responsibility.

BNFL is using the Hazard Potential Indicator as one factor in prioritising projects within the NTWPs and LCBLs.

The NDA Team is now chairing a similar cross-representational group looking at other prioritisation "tools". This group is drawing upon experienced participants from the National Dialogue to help develop further methodologies and measures. Prioritisation will involve balancing the environmental, safety and socio-economic effects of different programmes. The importance of socio-economic impacts in determining clean-up priorities has been identified through a series of DTI Stakeholder Workshops. Site Licensee Companies will be required through the contractual Heads of Terms with the NDA to develop socio-economic packages in support of their local communities.

### *5. Contingency Planning*

All currently identified contingency planning has been dealt with in the relevant sections.

### *6. Socio-economic Impacts and Planning - Barry Snelson*

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| Socio-economic, cost and safety may produce pressure against discharge reductions and suitable studies should be commissioned. The ERM study was welcomed, was being used by in planning by local and regional Government, and went a long way to fulfilling the need, while having no direct impact on DWG recommendations. Socio-economic data for Ireland and Norway was to be supplied. | D6<br>D7,D9,D10<br>D8 |
| *Socio-economic factors are accepted as being crucial – work must be commissioned and it was.* ***See also 6-10*** | W18, W19, W20, W21, W26, W27 |
| Mitigation plans are required whichever option is involved, and the ERM report is being updated. | SF13, SF14 |

| **Date** | **Origin** | **Action or Event** | **By whom/Notes** |
|---|---|---|---|
| 2012 | ERM update 2003 | Significant Sellafield job reductions begin | |

| **No** | **Reporting Issue** | **Current Responsibility** | **Future Responsibility** | **Key Dates** | **NDA Strategic Issue** |
|---|---|---|---|---|---|
| 6.1 | Report on initiatives and plans to mitigate expected socio-economic effects of Sellafield job reductions | Barry Snelson | Barry Snelson | NTWP2 March 2005 and ongoing | |

**BNFL Update**

Early work within the Dialogue identified the importance of the socio-economic effects of different Sellafield programmes on the West Cumbrian economy. The jointly sponsored ERM study provided extensive employment effects which had not previously been anticipated.

BNFL continues to work closely with the Cumbrian local authorities, trades unions and regional development agencies, such as the North West Development Agency, West Cumbria Development Agency and Westlakes Renaissance regarding the socio-economic impacts of changes in the operational focus of the Sellafield site.

The Company will take note of the findings of the Diversification Joint Fact Finding study which are being tabled at the October Main Group meeting. One of the issues associated with direct diversification is the potential for exploiting BNFL's intellectual property rights (IPR) in the development of renewable energy options and non-nuclear business in relation to sustaining local business economies. Discussions are continuing between BNFL and the DTI regarding "who will own what?" by way of IPR as part of the transfer of assets to the NDA.

### *7. Vitrification Performance - Barry Snelson*

| Date | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2015 | NII-BNFL | Reduction of HAL storage to 200m3 buffer level | Company |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 7.1 | Vitrification plant progress – production and containers to store against 2004/5 target of 460 containers to store | Barry Snelson | Barry Snelson | Reporting against NTWP2 March 2005 and ongoing | 22 |
| 7.2 | Progress on line 3 commissioning | Barry Snelson | Barry Snelson | Reporting against NTWP2 March 2005 and ongoing | 22 |
| 7.3 | Progress in the reduction in stocks of High Active Liquid Waste against NII specification curve | Barry Snelson | Barry Snelson | Reporting against NTWP2 March 2005 and ongoing | 22 |

## BNFL Update

The vitrification plant at Sellafield began the 2004/05 financial year with two operational lines and the third line being rebuilt as part of routine maintenance. To 16 September, 184 containers have been consigned to store against a target of 460 containers. Problems have been encountered with a revised melter heating control system installed on Line 2 which is restricting throughput. Until this problem is rectified, achieving the 460 container target remains a risk although this is still considered achievable. The quantities of high level liquid waste remains within the specification envelope specified by the NII.

### *8. Discharges Barry Snelson*

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| Discharges – indicative reduction programmes were a good start though details of OSPAR implementation not agreed. BNFL should 'strive to the utmost for reductions over and above pre-OSPAR plans with clear commitment to plant timescales. | D1 |
| On discharges, the announcement did not meet all aspirations, being towards the end of range studied, but firmed up the expected profile. The changes could increase the rate of reductions in the period before 2020, *with total lifetime discharges capped by lifetimes plus Calder and actions by BNFL and regulators for reductions.* | D3<br>D5<br><br>D13 |
| BNFL should reduce discharges within region of optimisation – D1 plus/ D2 minus and D3 plus. There was some disappointment that increased B205 throughput would increase discharges – but still within region of optimisation as long as Tc reduction is achieved and most changes move towards lower end of the region of optimisation. | D11<br><br>D12<br>D14 |
| BNFL should make utmost endeavours on Tc reduction, with C-14, Sr-90, Ru-106 and Pu/Am as next tier priorities. Tc was consulted on by EA, and the later decision document supports early reduction subject to technology – in line with original DWG recommendation. *A-41 reduction achieved by early Calder shutdown*. | D15<br>D16<br>D17<br>D21 |
| There was uncertainty in I-129 with *impact below model* and appropriate reduction strategies plus work on the model were urged plus work on model. S*treet 3 scrubber was brought into operation* and a Thorp iodic acid trial planned. | D22, D23<br>D24,D25, D27<br>D26 |

| **Date** | **Origin** | **Action or Event** | **By whom/Notes** |
|---|---|---|---|
| 2020 | SFMOWG Exec Summary S7.1 | Sellafield site to comply with OSPAR requirements as defined | |

| **No** | **Reporting Issue** | **Current Responsibility** | **Future Responsibility** | **Key Dates** | **NDA Strategic Issue** |
|---|---|---|---|---|---|
| 8.1 | Report on discharge reduction – 'within region of optimisation – D1 plus/ D2 minus and D3 plus' | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |
| 8.2 | Progress on technetium discharge reduction | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |
| 8.3 | Progress on reduction of C-14, Sr-90 and Ru-106 discharges | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |
| 8.4 | Progress on modelling of I-129 discharges and use of iodic acid | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |
| 8.5 | Total Alpha discharges | Barry Snelson | Barry Snelson | Annual discharge reporting | 36 |

**BNFL Update**

The Discharges Working Group concentrated their attention on the environmental impacts from the Sellafield site. The Environment Agency (EA) has published Sellafield's new discharge authorisation for implementation from October 2004. This represents a significant step in bringing up to date the regulation of discharges and disposals and will promote improved environmental performance, against the current work plan for Sellafield. There remains a real challenge around how to accelerate clean-up, with benefits from earlier hazard potential and environmental risk reduction, whilst maintaining a proper degree of protection for the environment.

Of particular interest to stakeholders have been discharges of technetium 99 to the Irish Sea. The successful implementation of the diversion of Medium Active Concentrate (MAC) to the vitrification process has reduced significantly the technetium inventory to be processed through the Enhanced Actinide Removal Plant (EARP). Diversion has had an additional benefit of avoiding discharges to sea that would otherwise have arisen from the processing of the MAC, such as carbon-14, strontium-90 and ruthenium-106.

The successful implementation of the "TPP process" as a modification to EARP, has permitted both a substantial reduction in marine discharges of technetium-99 (by around 90%) and acceleration of the processing of backlog MAC, thus reducing hazard and environmental risk. Further benefits have included the UK's relations with its OSPAR partners and to the OSPAR process itself.

Detailed investigations are continuing to identify whether there are any other practicable means to further reduce aerial discharges of iodine-129, although none have been revealed so far. In contrast, a series of investigations and plant trials has led to some changes to equipment and mode of operation in the Thorp fuel storage pond which together will reduce discharges of cobalt-60.

A substantial effort has been made, and is continuing to be undertaken, to achieve improved environmental performance from the Site Ion Exchange Effluent Plant (SIXEP) and the Fuel handling Plant (FHP), including performance against total alpha discharges. Processing Magnox fuel is important in this context as a means of reducing environmental risk from actual or potential corrosion of fuel. There are some early signs of reducing discharges to the environment and further work is underway to secure these improvements.

**9. *Waste Barry Snelson***

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| Government and regulators should set criteria for acceptability of waste forms. No progress was noted but *MAC diversion being proceeded with* and DWG urged a TPP trial. | D40<br>D41, D42<br>D43 |
| A future group should study prolonged dry storage of Magnox – plus feedback into Magnox programme and discharge reductions, and this was taken on by SFMOWG. | D28<br>D29, D30, D31 |

| | |
|---|---|
| Urges all to accept its agreed principles<br>• Package waste in passively safe monitorable retrievable form in shortest possible time<br>• Interim storage (with suitable performance and safety review) offers a feasible option for >50 years – but the Company must involve itself in research on long term storage and the possibility of disposal<br>• Changing values of stakeholders within 50 years will necessitate revisiting all assumptions, factors and standards, with different timescales being considered in MADA/SAP work in SFMOWG.<br>• The Company must successfully embrace change, and should use the 9 scenarios adopted elsewhere in Stakeholder Dialogue (which has occurred) | W3<br>W4<br><br><br><br>W5<br><br>W6, W14<br>W15<br>W7<br>W8 |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 9.1 | Progress on the definition and achievement of monitorable and retrievable storage | Barry Snelson | NDA<br>Lawrie Haynes | Response to CoRWM recommendations 20 | 1, 6, 26, 32, |

## BNFL Update

On the 1 May 2004, British Nuclear Group was launched to provide clean-up and decommissioning services to its main customer, the NDA. Management Services within British Nuclear Group covers Sellafield and all the UK's Magnox reactors.

In seeking to address the recommendations from the Discharges Working Groups regarding acceptability of waste forms, new joint NII and EA guidance is being drafted to address this issue. The guidance clarifies accountability and uses the Nirex "Letter of Comfort" process of deemed suitability of wastes for geological disposal. It is also recognised that not all waste forms will receive a Letter of Comfort.

The Nirex process requires waste owners to undertake a gap analysis for the waste in its current form and the conditions necessary to meet the Nirex criteria, and to then produce an action plan to address any mismatch. Production of the draft guidance is not affecting efforts to obtain agreement for wastes arising from key projects, for example the TPP bearing wastes arising from technetium-99 abatement or from the legacy ponds and silos. The drive for improved passive, safe, monitorable and retrievable waste forms is a key requirement of Sellafield site remediation, including interim storage options.

As stated above, BNFL recognises that stakeholders have a keen interest in plans for the decommissioning and clean-up of nuclear sites. It is vital that proactive engagement continues on issues around prioritisation between projects and sites, what to do with contaminated land, site end points, environmental impacts, local infrastructure and socio-economic effects. Future engagement frameworks must also align with those being developed by the DTI on behalf of the NDA.

***10. Plutonium Sue Ion***

| *Consolidated recommendation* | **WG Recommendations** |
|---|---|
| *DEFRA should take the lead in establishing a waste form qualification system, which can be applied to potential plutonium waste forms, as a matter of urgency, taking into account the work currently being done for intermediate level wastes by the Health and Safety Executive (HSE), the Scottish Environmental Protection Agency (SEPA) and the Environment Agency (EA).* | *Pu1* |
| *The 'plutonium owner' should ensure that the development of detailed proposals for the management of separated plutonium, the associated decision making, incorporate stakeholder engagement is an integral part of the process. Where appropriate, this should extend to the associated investigations***.** | *Pu3* |
| *The 'plutonium owner' should disregard use of MOX in the Dungeness B, Hunterston B, Hinkley B, Hartlepool and Heysham 1 reactors as options for the management of separated PU* | *Pu5* |
| *In the interests of fully establishing the practicability or otherwise of using MOX fuel in Sizewell B, Heysham 2 and Torness, and before any decisions on implementation are taken:*<br>- *The 'plutonium owner' and BE (as the 'plutonium user') should enter into initial discussions to explore the financial basis for this option (NB This recommendation may change depending on outcome of current restructuring of BE).*<br>- *The availability of capacity in SMP should be reviewed, taking account both of the duration and timing of fulfilling contract commitments to overseas customers and the feasibility of a life extension for the plant.*<br>*Should these explorations indicate that using plutonium in Sizewell B or either of the AGRs may be attractive from liability management point of view, the 'plutonium owner' and 'user' should undertake a comprehensive environmental assessment including the evaluation of transport, reactor safety, environmental discharge, public safety (including the risks from extreme core disruption events), and waste form storage issues. This assessment should be conducted in consultation with stakeholders at national and local levels.* | *Pu7* |
| *To explore the feasibility or otherwise of utilising plutonium, in the event that any programme of new build reactors were to proceed, we recommend that before any decision are taken:*<br>- *The financial basis on which plutonium might be utilised in new build reactors should be explored at an early stage between the 'plutonium owner' and the likely developer of any new build reactors. The existing collaborative agreement on new build between BNFL and BE may be a suitable vehicle for this.*<br>- *The availability of capacity in SMP should be reviewed, taking account of the feasibility of a life extension for the plant.*<br>- *Should these explorations (and the outcome of the energy review) be favourable to plutonium use in new build, the prospective developer should undertake a comprehensive environmental impact assessment on the proposal including the evaluation of transport, reactor safety (including the risks from extreme core disruption events), environmental discharge, and waste form storage issues. This assessment should be conducted in consultation with stakeholders at national and local levels.*<br>*A detailed comparison of MOX, Inert Matrix Fuel (IMF) and conventional uranium fuels should be undertaken prior to deciding which fuel type to use* | *Pu9* |

| | |
|---|---|
| *In the light of long lead times, the 'plutonium owner' should commit promptly to an immobilisation research, process development and design study to more fully establish the optimum technology for plutonium immobilisation. This should include:*<br>- *Underpinning research on ceramic immobilisation matrices*<br>- *Consideration of possible plutonium loadings, inclusion of neutron absorbers, safety and safeguards requirements*<br>- *Assessment of possible product forms against waste specification requirements*<br>- *Design studies for process optimisation*<br>- *Consideration of low spec MOX as an immobilised plutonium product*<br>- *A Best Practicable Environmental Option (BPEO) analysis, conducted with stakeholder involvement, which brings together findings of the above in order to establish the optimum process and waste form*<br>- *A comprehensive environmental impact assessment on the proposal including the evaluation of plant safety, environmental discharge, and waste form storage issues. This assessment should be conducted in consultation with stakeholders at national and local levels.* | *Pu11* |
| *In order to ensure the option of using SMP immobilised plutonium as low-spec MOX is not foreclosed, the 'plutonium owner' should before final decisions about plutonium management are made:*<br><br>- *Undertake a more detailed assessment of the suitability of low spec MOX as a form of immobilised plutonium product, including consideration of security, safety, safeguards, waste form qualification and other relevant issues.*<br>- *Undertake a design study to establish whether SMP could feasibly be modified to produce a more 'optimised' plutonium waste form, either in current or newly added production lines.*<br>- *Review the use of SMP in the light of the above investigations and those of the other options as recommended above, once the future contractual commitments of SMP for overseas and domestic customers become clearer.*<br>- *Include the 'SMP option' in the BPEO for immobilisation options recommended in respect of new build plant.* | *Pu13* |
| *Research and process development for plutonium immobilisation should concentrate on those options which do not involve an added external radiation barrier. However other means of increasing the intrinsic security of the product should be explored.* | *Pu15* |

| | |
|---|---|
| *At this stage, it is important to keep options open so that contingencies are available for each plutonium disposition option. In order to ensure this:*<br><br>- *All the actions and explorations indicated above should be carried out to the point at which the 'plutonium owner' can make informed decisions (with stakeholder involvement) on the contribution each option should make to management of the plutonium stockpile.*<br>- *In reaching these decisions, consideration should be given to: maintenance of contingency in the longer-term, community views on the long-term storage onsite of plutonium waste forms, social-economic factors including employment, and the impact of plutonium stockpile management options on the wider Sellafield clean-up programme*<br>- *The 'plutonium owner' should then develop a more detailed plan which shows how the options could be used to convert the current and projected future stockpile of separated plutonium into a passively safe form suitable for long-term storage and, potentially, ultimate disposal.*<br>- *Such a plan should aim to achieve conversion to a timescale which would render construction of new plutonium dioxide stores, or refurbishment of existing stores unnecessary, except for compelling safety or security reasons.* | *Pu17* |
| ***The Company provide the Main group with further information about the rationale and timetable for constructing the new store and an explanation of how the rationale can be reconciled with the conclusion that storage of separated plutonium cannot be viewed as a viable long-term solution and The Main group refer this issue to the Business Futures Working group so that it can monitor developments and comment accordingly*** | *Pu19* |

| Date | Origin | Action or Event | By whom/Notes |
|---|---|---|---|
| 2006 | PuWG response | Mineral phases for Pu disposition – current research programme end | Company – R+T |
| 2006 March | PuWG response | Magnox Pu – disposition options identified | Company – R+T |
| 2006 | PuWG SAP Anx4 | Develop criteria for Pu product specification | |
| 2007 | PuWG response | Ceramics for Pu residues – small scale facility designed and built | Company – R+T |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 10.1 | Report on forward R&D programme – *see Pu11, 13, 15 below for details* | Sue Ion | NDA<br>Lawrie Haynes | 2006/7 – see PuWG response and SAP work | 3, 34 |
| 10.2 | BFWG Position Paper submitted to DTI, CoRWM, No10, etc | Complete | See 10.1 | | 3 |
| 10.3 | Report from a meeting between the Pu Drafters and Sue Ion on 5 March 2004 | Complete | See 10.1 | | 3 |
| Pu1 | | *Defra* | Defra | | 3 |
| Pu3 | | BNFL – Sue Ion | NDA | | 3 |
| Pu5 | | BNFL – Sue Ion | NDA | | 3 |
| Pu7 | | BNFL – Sue Ion<br>BE | NDA<br>BE | | 3 |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| Pu9 | | BNFL - Sue Ion<br>DTI | NDA<br>DTI | | 3 |
| Pu11 | | BNFL – Sue Ion | NDA | See10.1 above | 3 |
| Pu13 | | BNFL – Sue Ion | NDA | See10.1 above | 3 |
| Pu15 | | BNFL – Sue Ion | NDA | See10.1 above | 3 |
| Pu17 | - | BNFL – Sue Ion | NDA | | 3 |
| Pu19 | | BNFL – Sue Ion | NDA | | 3 |

**BNFL Update**

A meeting was held on 5th March with Dr Sue Ion and other representatives of BNFL with members of the PuWG drafting team. The discussion focused on possible future funding arrangements for Pu disposition studies and the need to bring this topic to the attention of the NDA and to seek their support.

BNFL has presented to the NDA Team an initial proposal for research and development studies on the principal options for Pu disposition i.e. irradiation in reactor and immobilisation and is now preparing a more detailed scope of work for submission in October/November.

In the meantime, studies continue on a number of aspects identified in the Strategic Action Planning exercise carried out by the PuWG e.g. theoretical studies on the need for neutron absorbers in the MOX immobilisation product ('low spec MOX') - this work has identified the need for some active trials. BNFL continues to keep a watching brief on the irradiation experiments being carried out on Inert Matrix Fuel and has undertaken its own theoretical studies of fission product diffusion behaviour in the inert matrix materials.

A BNFL technical representative has assisted members of the BFWG who were previously involved in the PuWG in the production of a test framework document on the disposition of separated Pu. The purpose of the framework document is to highlight those activities associated with disposition options, which could be included in future NTWPs. This document is incorporated as one of the annexes in the BFWG report.

### *11. Other BNFL Sites Mark Morant/Steve Tritch*

| *Consolidated recommendation* | WG Recommendations |
|---|---|
| DWG recommends that BNFL use the methodology from its report to create strategy and site specific plans for all other BNFL sites. The announced closure dates will affect reactor sites plus fuel supply from Springfields. | D36, D37<br><br>D38, D39 |

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|

| No | Reporting Issue | Current Responsibility | Future Responsibility | Key Dates | NDA Strategic Issue |
|---|---|---|---|---|---|
| 11.1 | Use DWG methodology to create strategy and site-specific plans | Mark Morant<br>Steve Tritch | NDA<br>Lawrie Haynes<br>Steve Tritch | | |

## BNFL Update

Magnox has committed to a lifecycle programme that results in significant reduction of discharges when its power stations cease generation. There is an ongoing programme of investments in effluent and waste treatment linked to the continuing need for such facilities to operate beyond the cessation of generation. An example is the commitment given to fuel cycle and pond management, together with the installation of a caesium removal plant as representing the best practicable means to reducing caesium discharges.
From 1 April, Environmental Services' decommissioning sites came together with Magnox Generation operational and defuelling power stations under the Reactor Sites umbrella.

Springfields has recently completed a review of its site discharge authorisations. Substantial reductions in liquid discharges will occur due to closure of some of the major chemical plants in 2006, particularly the Uranium Ore Concentrate Dissolution and Purification facility which is the principle source of current radiological discharges. It is predicted that beta discharges will reduce to about 5% of current levels, which are already relatively insignificant, whilst total alpha discharges are predicted to fall by about 80%.

## Appendix 8 - Review of 1998 Resources, Innovation and Values (RIV) analysis

This table refers to the prioritisation exercise conducted by Stakeholders attending the September 1998 meeting. It lists the 11 major issues identified and presents the Co-ordination Group's views about how these issues have been addressed in the Dialogue process. The numbers in brackets give the "prioritisation scores" given by Stakeholders to each issue.

| Significant Issue Identified (numbers in brackets are the prioritisation results) | Dialogue Action |
|---|---|
| "End of reprocessing or not" (67) | Addressed in the Magnox Task Group and Spent Fuel Management Options Working Group<br>Strategic Action Plans from the Spent Fuel Management Options Working Group<br>Main Group meetings have monitored BNFL responses to recommendations from Dialogue groups<br>Business Futures Working Group interactions with the joint DTI/BNFL Corporate strategy review in 2004. |
| "Create trust, transparency and accountability through genuine dialogue, based on mutual respect, comprehensive and clear understanding" (57) | Dialogue process work programme defined and implemented. Process and methodologies employed provides the environment within which trust can be developed through working together constructively<br>Business Futures Working Group has provided advice and comments to the DTI as it has developed stakeholder engagement principles and frameworks for the Nuclear Decommissioning Authority.<br>BFWG also provided proposals to inform BNFL's future engagement processes. |
| "What to do with the plutonium stockpile" (49) | Addressed in the Plutonium Working Group recommendations and Strategic Action Planning.<br>Presentations to Company's Technical Executive Committee, the Executive committee and the BNFL Board, Whitehall's Radioactive Waste Advisory Group and the No 10 Policy Unit.<br>Business Futures Working Group members interact with Company to monitor progress against recommendations.<br>The template developed by BFWG to help stakeholders understand and challenge the Life Cycle Baseline plans for the Sellafield site has been used as an example for plutonium disposition.<br>Security aspects have been addressed by the Security working Group.<br>Issue of plutonium swaps (outstanding from PuWG) has been considered by the Security Working Group. |

| Significant Issue Identified (numbers in brackets are the prioritisation results) | Dialogue Action |
|---|---|
| "Global Clean-up" (49) | Some discussion within Waste Working Group.<br>Some of the Principles regarding the clean-up of the UK's civil nuclear sites which were developed by the Business Futures Working Group would be applicable to global clean-up activities. |
| "Internal staff morale – ownership of environmental performance and corporate leadership" (39) | Addressed in part in the Socio-economic studies of West Cumbria, in the work of the Business Futures Working Group Informing the development of the Company's CSR approach and reporting programme. |
| "Decision making on trade offs in society linked to costs and benefits to all stakeholders – what is society willing to pay for cleaner operations" (32) | The Dialogue process has helped Stakeholders to explore how "trade offs" can be considered. For example, Multi Attribute Decision analysis and Strategic Action Planning processes were used in the Spent Fuel Management Options Working Group.<br>The analysis contained in Appendix 10 of the Spent Fuel Options working Group report considered the balance between approaching alternative management options from a socio-economic values or a environmental values perspective.<br>The jointly commissioned socio-economic study of West Cumbria (ERM report).<br>Plutonium Working Group has begun Strategic Action Planning.<br>Business Futures Working Group has interacted with the NDA Team and DTI officials informing the development of the NDA and the processes which it must introduce to demonstrate progressive reduction of hazard on the nuclear sites under its ownership, including value for money spent. |
| "The impacts BNFL's operations will have on the health and environment for future generations" (26) | See comments in section 6 about the consideration of "trade offs". Different values and perspectives can be identified and accommodated in a very transparent way by the use of Strategic Action Plans.<br>The Low Radiation Task group was convened and provided an input into the national deliberations on this important topic.<br>Business Futures Working Group has undertaken a further Resources, Innovation, Values exercise to inform BNFL's future structure and business strategy. BFWG also commissioned work on diversification. |

| Significant Issue Identified (numbers in brackets are the prioritisation results) | Dialogue Action |
|---|---|
| "Ownership of nuclear liability strategy, including disposal, closing the back end of the cycle" (23) | Input from the dialogue process to Defra's "Managing Radioactive Waste Safely" consultation.<br>Business Futures working Group has provided Principles of Liability Management to the DTI as the NDA is being established. BFWG work has also included providing advice on the NDA's contractorisation model, input to the HSE's consultation on de-licensing criteria and in the development of processes to help stakeholders engage with Life Cycle Baseline plans. |
| "Local versus Global environmental impact and benefits and to recognise regional diversity in global context and recognise responsibility to locality/region in which industry set eg local environment and local jobs" (9) | Included in the evaluation criteria in Discharges and Spent Fuel Management Options Working Groups.<br>Socio-economic studies of West Cumbria.<br>Diversification work stream overseen by a sub-group of BFWG |
| "Diversification both within and from the nuclear sector, using/building core competencies" (9) | Diversification work stream overseen by a sub-group of BFWG |
| "Changing course – the problem of momentum" (9) | Setting of milestones and Strategic Action Plans.<br>Consolidation of recommendations and the transfer of responsibilities to their new "owners".<br>Proposals for management of the transition from the National Dialogue process to the new engagement frameworks that will exist from 1 April 2005. |

## Appendix 9 - Co-ordination Group: Draft Revised Terms of Reference

### Background

The agreed programme of substantial work of the BNFL National Stakeholder Dialogue ends at the 13/14 October 2004 with the final meeting of the Main Group[15]. All previous work and recommendations will be passed to the relevant bodies such as DTI, NDA, new BNFL etc. Whilst every effort is being made to manage the handover of previous work between this Dialogue and the new bodies, a need has been identified for a time-limited activity to monitor the progression of the work of the Dialogue into these bodies to ensure the Dialogue's recommendations are adopted where possible. This paper sets out draft revised Terms of Reference for the Co-ordination Group to carry out this work.

### Aim and Scope

The Co-ordination Group will:

1. Support adoption and implementation of Dialogue recommendations where necessary by offering advice, meetings or presentations to relevant bodies such as DTI, NDA, new BNFL, CoRWM, CERRIE etc.
2. Review the take-up of Dialogue recommendations by these bodies
3. Report to the Main Group as to progress of the relevant bodies implementing these recommendations
4. Assist The Environment Council with enquiries from the public and press as necessary e.g. questions of content or more involved questions of process

### Status

The continuation of the Co-ordination Group will need to be mandated by the Main Group meeting in October 2004, where these ToRs would be agreed. After this October meeting the "Main Group" will cease to exist as a body in terms of decision making and mandating, so the Co-ordination Group will then be a free-standing body, not formally 'reporting to' an active Main Group. The Co-ordination Group will however be able to draw on stakeholders from the 'old' Main Group where necessary in order to support its work.

### Membership

We propose that the membership of the continued Group is the same as the current Coordination Group. This will depend on stakeholder capacity but would provide useful continuity from previous work on dialogue coordination. Our proposal to maintain the current membership would not preclude volunteers from the Main Group joining, providing their membership adheres to the usual ground rules for participation in working groups of the Dialogue[16].

### Duration

The Coordination Group would continue to run until the end of the financial year ending on 31 March 2005. It is anticipated that it would meet twice: for one day in January 05 and for one day in March 05, with a planned contingency meeting in February 05. After it has sent out a written update at the end of March to stakeholders who were part of the Main Group, the Co-ordination Group will cease to exist – as would all formal Dialogue structures, entities and procedures.

[15] Following this last Main Group meeting, there are already one-off meetings scheduled for the BFWG, SWG and Coord Gp to tie up reporting issues agreed at the Main Group meeting.
[16] Ground Rules for working groups, Appendix 3 of Co-ordination Group Overview Report.