

# Minutes of the 28<sup>th</sup> AWE Local Liaison Committee Meeting

Held Thursday 28<sup>th</sup> February 2002

## Present:

Dr John Rae	AWE	Chairman
Bill Haight	AWE	
Malcolm Hutchinson	AWE	
Dr Mike Mortimer	AWE	
Frank Winter	AWE	
Graeme Hammond	AWE	
Bill Haight	AWE	
Avril Burdett	AWE	Secretary
Pamela Bale	Pangbourne Parish Council	
Peter Beard	Reading Borough Council	
Mike Broad	Tadley Town Council	
Chris Bridges	Beech Hill Parish Council	
Malcolm Bryant	Wokingham District Council	
Angus Campbell	Wasing Parish Meeting Council	
Bill Cane	Mortimer West End Parish Council	
Margaret Dadswell	Aldermaston Parish Council	
Geoff Eddy	Hampshire County Council	
Maurice Eden	Holybrook Parish Council	
Tony Ferguson	West Berkshire Council	
Pete Frazer	Basingstoke & Deane Borough Council	
Brian Hamilton-Hewett	Silchester Parish Council	
Des Hoad	Theale Parish Council	
Peter Hobbs	Sulhamstead Parish Council	
Philip Kingston	Pamber Heath Parish Council	
David Leeks	Tadley Town Council	
John Mazillius	Stratfield Mortimer Parish Council	
Jeff Moss	Swallowfield Parish Council	
Doug Mundy	Burghfield Parish Council	
John Parfitt	West Berkshire Council	
Murray Roberts	Padworth Parish Council	
John Southall	Purley-on-Thames Parish Council	
Alan Sumner	Wokefield Parish Council	
Peter Taylor	Brimpton Parish Council	
Gerry Traynor	Basingstoke & Deane Borough Council	
Tim Whitaker	Mapledurham Parish Council	

## Observers:

Darren Baker	Environment Agency
Martin Sayers	Nuclear Installations Inspectorate
Mike Jeel	Nuclear Installations Inspectorate

John Rae opened the meeting by reminding members that he would be retiring later in the year, this was therefore likely to be his last meeting as Chairman. He introduced Company Chairman, Malcolm Hutchinson, his successor as Chairman of the Local Liaison Committee.

## 1. Apologies

Alan Brandwood was unable to attend, Dr Mike Mortimer, Head of Health and Safety deputised for him. Apologies also from Ron Meredith, Royce Longton, Jon Gates, Fred Kirkham, Terry Faulkner and Roy Waite.

John Rae also welcomed Philip Kingston, Pamber Heath Parish Council to his first LLC.

## 2. Actions from the last meeting

**Action 27/1 Graeme Hammond:** To get the facts concerning actual rather than perceived risks from AWE into the local press. **This will be an ongoing action.**

**Action 27/2 Graeme Hammond: To show the AWE exclusion zone map at the next LLC.**

Graeme Hammond explained that there was a 2,400 feet ceiling, radius 3 miles centred on the Aldermaston site and 1.5 miles centred on the Burghfield site. The no fly zone exists so that if a pilot suffered an engine failure, the aircraft would not fall onto AWE. It was pointed out that this would not stop suicide bombers or those with malicious intent. Cllr Taylor asked if the UK was considering putting ground-to-air missiles around nuclear sites as the French had done. John Rae responded that this it was a matter of national security and therefore not for discussion at the meeting. It was pointed out that an effective exclusion zone around AWE's sites would also close Heathrow Airport. Brimpton Airfield had special dispensation; landings and take-offs were allowed provided the approach was away from AWE. Circuits also had to be away from AWE, not towards the site.

**Action Complete.** David Leeks still intended to pursue the matter of low-flying aircraft in general and one particular incident.

**Action 27/3 John Rae: to go back to the reports on the Level II exercise and use the information to publicise the actual risks from AWE (See also action 27/1).** Following the Level II Offsite Exercise, AWE had attended meetings with the exercise group, led by Ron Meredith. The group had reviewed the lessons from the exercise and set up a sub committee led by Thames Valley Police to look at the PR aspects and particularly to agree what information could be released in a real event. In addition, a project was in place with NRPB to jointly provide some public information material. The material would be written in an understandable format and would have the advantage of being approved by NRPB as an independent body. In addition, later in 2002, AWE would be circulating a REPPIR leaflet (which replaces the PIRER leaflet) which would be designed to put the real risks from AWE into context. [REPPIR stands for 'Radiation (Emergency Preparedness and Public Information Regulations) 2001'].

**Action 27/4 Chairman: After April 2002 -to report the results of further work to find the source of the Tritium near North Ponds.** Councillor Moss asked what resources were being put into this issue. John Rae said that resources applied so far were considerable, the Company felt that they had put in enough resource and had looked hard enough for the source of the tritium. He appreciated that LLC members did not agree. He said that it was not a case of just sinking more boreholes, but looking at the Hydrogeology of the area to find out where to look further. It had been hoped that the results of this would point to where the source might be. **To be presented at the next meeting**

**27/5: Avril Burdett: to send copies of the Tritium Strategy Information leaflet to members. Action complete.**

**Action 27/6: put on the agenda for the 28<sup>th</sup> meeting - presentation on Conducting Risk Assessments and Writing Safety Cases. Alan Brandwood.** Presentation by Richard Lucking at agenda item 7.

**27/7: Alan Brandwood to provide members with the 2002 performance targets as soon as they had been agreed.** Copies had been sent out to members. See presentation by Mike Mortimer at to agenda item 4.

**Action 27/8: Alan Brandwood to provide information on how many times levels on non RA discharges had been exceeded due to the weather.** Covered at agenda item 7.

**Action 27/8a: Frank Winter to contact OfTel to ascertain whether AWE's proposals for a call out system for emergency use only, could be allowed.** See presentation by Ken Saint at agenda item 9.

**Action 27/9: Avril Burdett to try to arrange a visit to the JET Laboratory in the New Year.** Approximately 25 members wished to attend. Ongoing.

### 3. Chairman's remarks

Lady Penney had sadly died just before Christmas. During Lord Penney's years at AWE, she was a well-known figure in the local community, in fact their home, Heather House, often doubled as a community centre and health centre before the local facilities caught up with the increase in population. She continued her involvement right up to her death with her continued support for the new Heather House in Tadley, a centre for the care of young adults who were both blind and disabled. The day centre at Heather House was to be named The Penney Centre in her honour.

Dick Abbott, MBE. A member of AWE's staff, Dick Abbott had received an MBE in the New Year's Honours List for his services to the defence industry which spanned 44 years, most of which had been spent at Burghfield. He had joined AWE as an Apprentice in 1958 and trained as a craftsman Precision Fitter in the Engineering Workshops. Most recently he had been responsible for the procurement, manufacture and maintenance of specialist tooling for the disassembly of nuclear warheads. He had also passed on his skills to many apprentices as a mentor.

Chevaline. The previous week AWE had completed the disassembly of all of the weapons replaced by Trident. Trident had replaced both the RAF's free fall bomb, the WE177, and the Royal Navy's upgraded Polaris system, known as Chevaline. In 1998 AWE had completed the dismantling of the WE177 and had now decommissioned the last of the Chevaline warheads.

The 1998 Strategic Defence Review had stated that the Government had concluded that the UK needed a stockpile of less than 200 operationally-available Trident warheads – a reduction of more than 70 per cent in the potential power of the deterrent since the end of the Cold War.

John Rae congratulated the team responsible and explained that AWE's work on decommissioning Chevaline was a major technical achievement and met the Government's intention to reduce the United Kingdom's nuclear stockpile ahead of the planned date.

Visits. There had been several visits to AWE, but there were two of particular note; the first from Professor Sir Keith O'Nions, the MoD's Chief Scientific Advisor and the second from the House of Commons Defence Committee.

Sir Keith visited in connection with his wide-ranging study on nuclear capability and he had been particularly interested in AWE's ability to continue to underwrite Trident in a post test ban era. His visit had been timely, given the publication of an article in Nature Magazine (February 2002) on this subject. Sir Keith will be returning to AWE to carry on where this visit left off. John Rae briefed the LLC at agenda item 9.

The House of Commons Defence Committee had a very frank briefing as part of their investigation into security at MoD establishments in the wake of the terrorist attacks in the United States. Members were shown various aspects of AWE's operations and the Chairman believed they had been favourably impressed.

Bill Cane had represented the LLC at an informal lunch with the members.

Legacy tritiated water. As part of the Company's Strategy for the Management of Tritium Waste, options had been considered for dealing with 60 cubic metres of tritiated aqueous waste which had been held in two tanks at AWE Aldermaston for the past eight years. AWE had now submitted proposals to the Environment Agency to deal with the two tanks separately, in line with the discussions at the LLC tritium workshop during 2001. The NII had also been informed.

AWE proposed that the effluent in the first tank, which contained 95 per cent of the tritium, should be solidified in a cementation process. The Company would then seek a variation to the disposal authorisation to allow either storage of the resulting low-level nuclear waste on site or disposal to the national repository for low level nuclear waste at Drigg, in Cumbria.

The effluent in the second tank, which contained only 5 per cent of the tritium, would be treated in AWE's existing effluent treatment plant and discharged through the Pangbourne Pipeline. John Rae said that he believed this presented the best practicable environmental option and was well within existing authorisations.

Schools Liaison. John Rae was pleased to report that, through the Schools Liaison Committee, AWE was again sponsoring "Science Books for Schools." More than 50 schools in the scheme would be receiving a cheque for £200 for the purchase of books.

AWE Managing Director, Bill Haight had also presented a Technology Prize to the Kennet School at Thatcham to be competed on an annual basis. Bill and several other members of AWE had attended the opening of the Kennet School's new technology wing earlier in the year. This modern and well-equipped technology facility had been built as a result of the School's successful application to become a Technology Centre.

Under the same Government scheme AWE had pledged £20,000 to the Hurst School to support its bid to become a centre of science teaching in the local area. This was almost half of the funds that the school needed to raise to qualify under the scheme. In addition, the school must prepare a business plan and demonstrate links with other schools and businesses. Members of AWE's staff are also helping in this project.

AWE would again be holding a Schools Engineering Challenge Competition for local schools in June this year. A Team of first year graduate trainees was organising the event.

Mars in Berkshire Award. AWE had recently won the Mars In Berkshire Golden Oak environmental award. With the award was a £350 cheque which the Company decided to donate to a local school conservation project. After open competition the award will go to Mrs Bland's Infant School for their conservation garden. Members of AWE's Conservation Group would also help with the project and the Company will make the amount up to £500.

ISO 14001. AWE had received ISO 14001 certification for Environmental Management from Lloyds Register. John Rae said that this was a magnificent achievement for AWE. It covered all nuclear processes. Lloyds commented that ours was the most complex organisation that they had assessed.

Drugs and alcohol policy. John Rae had written to members about the investigation that had been carried out by the MoD Police in the area of buildings decommissioning following an allegation of drug misuse. The Police had found no evidence to support any prosecution or further action.

However, the allegation having been made, the Company had decided to suspend operations in this area of work until it was able to demonstrate its confidence in continued safe operations. As a result, the contracting company involved in the operations was informed that there was no work for their staff while the Company carried out its assurance measures.

As part of the confidence building measures, a number of AWE employees and contractor's staff working in this area of operations had been asked to take a drug test. A number of other AWE employees requested that they should also be tested. In total approximately 250 tests had been carried out. Work had been resumed in the area - with full confidence in the safety of operations, within a few days.

The Company's policy was not to disclose the results of drug tests. John Rae advised members that this should not be taken as an indication that any test had been positive. Rather, it was because the Company took a strong view that this for a was a matter between AWE and its employees and a necessary measure in order to maintain the support of members of staff for the drugs and alcohol policy.

AWE did not in any way condone or tolerate the use of illegal drugs. Dealing in drugs would certainly result in immediate disciplinary action. However, the Company's policy is to offer the maximum support to any individual found to have a drug problem. Disciplinary action would be taken in this instance only if an individual failed to respond to the Company's assistance.

AWE's policy of random testing for drugs had come into effect on 1st February 2002. Consultations were taking place with the staff associations on revisions to AWE's alcohol policy, which it was anticipated would be introduced towards the end of 2002.

The Company was also looking at the possibility of taking aspects of the Drugs & Alcohol Exhibition to local schools. John Parfitt suggested that AWE should contact the drugs action team co-ordinator at West Berkshire Council and Hampshire County Council.

Application for variations to RSA Authorisations. John Rae told members that AWE would shortly be applying to the EA for minor variations to existing RSA Authorisations. The variations applied only to the transfer/disposal of wastes to waste treatment plants in the UK and not to any of the airborne or liquid discharges that AWE was authorised to make into the local environment. None of the waste treatment plants concerned would need to increase their authorisations as a result of receiving AWE's wastes. The waste treatment plants concerned were incinerators in Southampton and Leeds, AEA Winfrith in Dorset and the low-level waste site at Drigg in Cumbria.

***NB: The EA will publicise the application and place it on the public register inviting comments and the response to that invitation will determine the extent of any further consultation.***

Scientific Information Group (SIG). John Rae reminded members that Southampton University had been conducting a three-year environmental survey of the areas surrounding AWE Aldermaston and Burghfield to establish the extent of any radiological impact. The study had been led by Dr Ian Croudace, the Director of the Geosciences Advisory Unit of the Southampton Oceanography Centre, at Southampton University.

Although funded by AWE, the survey had been fully independent and the University reported its findings directly to a Scientific Information Group, which included representatives of local authorities as well as members of AWE.

Dr Croudace and his team have now concluded their study and the previous day had presented their third (and final) year report, together with a supplemental Tritium Report, to the Scientific Information Group, which had met at the Basingstoke and Deane Council Offices.

The reports confirmed the previous findings: that whilst there was a very low level forensic evidence of AWE by-products in the local environment but it was far below any national or international radiological limits.

The protocol of the Scientific Information Group was that the reports would not be issued until after the non-AWE members had had the opportunity to comment. Following that, and in accordance with previous years' practice, Dr Croudace would be asked to prepare a layman's summary of the University's findings, which AWE would undertake to distribute to the local community.

Gerry Traynor asked whether there would be a similar sort of study in the future. John Rae said that it would certainly be considered if there was a good reason for doing so.

Murray Roberts referred to the recent changes in senior management and asked for a new organisation chart.

**Action 28/1: Avril Burdett to provide members with a copy of the latest AWE Senior Management organisation chart.**

Cllr Broad congratulated AWE on their support for the Hurst School. He said that improving the local secondary school gave the community a great advantage. John Rae said that he had been impressed with the Hurst School's plans.

#### **4. Health, Safety & Environmental Issues;**

Mike Mortimer, Head of Health & Safety

The presentation slides are attached.

Quarterly Report. Dr Mortimer reported that safety culture remained an emphasis with a need to look at workers' attitude. This was building on the Assurance Conference which had taken place in September the previous year. The previous week the Executive had taken part in a workshop on safety culture.

The Independent Safety Assessment Team had produced a further report which showed there had been a considerable improvement over the previous six months. In particular there had been progress on fire certification, but there were still areas which needed to be looked at more closely.

A security improvement plan on physical security had been introduced as part of continuous improvement. AWE would seek accreditation to the BS 7799 standard, which in part covered documentation. There had been good progress on information controls particularly in operational areas.

Abnormal events - some defects on statutory inspections are had been identified, and there seemed to be some confusion on whose responsibility it was to put them right. One simple way to help to fix the problem had been to make changes to the budget arrangements in Facility Management areas.

Tornado Air Hoods - these airhoods were more comfortable to wear than current ones used by AWE. They had more moving parts which had required enhanced training and looking at different ways of working. AWE was currently working with the manufacturers to improve their product and these air hoods would not be used until these improvements have been made.

There had been one or two abnormal events concerning contractors, the Company now gave the same safety rigorous induction training to contractors as to AWE staff. It was important that contractors understood AWE's systems and what was expected of them.

Source management - as part of the radioactive source controls, all radioactive sources had been identified and recorded and those no longer required had been sent for disposal.

John Mazillius raised concerns that there were still problems where activities had not gone through change control. He felt that a Safe Systems of Work was not addressing all the hazards. Mike Mortimer explained that the emphasis in the last quarter had been on contract working, and the next priority was to risk assessment and safe systems of work which included the working environment. A Steering Group was looking at how improvements could be made. This major project would cover Workload Control Centres which were responsible for deconfliction of works being carried out.

Tony Ferguson asked for more detail of the event reported in the Quarterly Report page 26 reference 212644. Mike Mortimer explained that any move of radioactive material involves independent checking before any move is made. This involved a Movement Identification Tag (MIT). An improvement had been introduced into the way this work was carried out, which was very positive, but it had not been put through the change control process. He assured members that the Company was investigating this event.

**Action 28/2: To write to members giving more detail of the MIT process.**

Key Performance Indicators (KPIs). Dr Mortimer reported that there had been a significant improvement in AWE's safety performance during 2001. However, in three areas they had failed to reach the target set. These were the Event Index, which had nevertheless shown significant improvement. Collective dose again had shown significant improvement on the previous year but had not met the target. The driver was for the Company to manage work patterns in order to improve on this figure. Domestic waste was the third failure, the figures showed that hard work in the last quarter of 2001 had shown improvements and these would continue throughout 2002.

There had been a 17 % improvement in the number of injuries and lost time accident rates. Sickness absence had shown a decline in performance, this was not necessarily only work related and efforts were being made to address the issues behind the problem. For instance, the Company was trying to help people to use work methods in order to reduce the number of DIY injuries at home. There had been good improvements in collective dose and he was looking for improvements whether or not targets had been met. The RIDDOR performance table showed that AWE was making its way towards top industry performance.

2002 targets. AWE was aiming to set targets to give a 10 % improvement on 2001 actual performance. He said that programme changes would lead to changes in releases. Recycled waste would be put back on target. Many of the discharges to the environment were now at the limit of detection. Extra measures had been introduced, with each directorate now setting its own KPIs. Site-wide there was a KPI which required senior managers to go out onto the shop floor and discuss safety issues with their staff. Some KPIs from 2001 had been removed from the 2002 measures. These were where the results had been zero over the last four years. This included warning letters and Enforcement Notices from regulators, as the target for these was always zero. The same applied to failure of nuclear critical plant and breaches of consent limits for mercury in trade waste. The data for these areas would still be collected and reported since any breach of these would be an 'Abnormal Event'.

Tony Ferguson said he was disappointed not to have had the 2002 targets earlier. He felt that it sent the wrong message if the targets were not set until two months into the New Year. He also felt that AWE was sending the wrong message by dropping important targets. Dr Mortimer explained that the targets were set not only as a mechanism for the public to measure AWE's performance, but more importantly were used internally to motivate staff to improve performance. Measuring against these targets gave early indication of problems. The Chairman said that this was a management tool and all the other targets were geared towards improving performance. Those which were consistently at a zero did not achieve this. He undertook to look again at the KPIs for 2002. The performance targets for New Year had to be agreed in consultation with several parties. This consultation process had started with a presentation on the 2001 performance, this was not possible until the year's

figures had been assimilated. The final agreement came from the Executive, the targets were then announced as soon as possible.

**Action 28/3: To look again at the 2002 KPIs in the light of Cllr Ferguson's comments and report back at the next meeting.**

John Southall said that the target for tritium discharge for 2002 was 10 % less than the 2001 target however, when a comparison was made between actual discharges in 2001 against the 2002 target, it was a nine times greater. It was explained that the level had to be set higher because the measurements were at the limit of detection. This and other targets have to allow for the decommissioning of old facilities.

**Action 28/4: To ask George Wall, Head of Environment to explain the background to this reasoning to the LLC.**

Pamela Bale asked if these discharges included the large volume /low concentration batch of tritiated water. She was assured that this discharge could be made within AWE's current authorisations.

- The following item on the agenda was brought forward as John Rae had to leave the meeting early.

## **5. Nature Article – John Rae**

The previous week a scientific paper had been published in Nature magazine. It had explained some of the details of the technical programme being conducted at AWE to give the necessary assurance on the safety and performance of the United Kingdom's nuclear warheads in a nuclear test ban era, in compliance with treaty obligations.

The paper, entitled "The Science of Nuclear Warheads," had been co-authored by the Chief Scientific Advisor to the Ministry of Defence, Professor Sir Keith O'Nions, a senior Ministry of Defence scientist, Mr Robin Pitman and AWE's Chief Scientist, Dr Clive Marsh.

It had been a demonstration of the Government's desire to be as open as possible on such matters without revealing information which might be of use to a potential proliferator.

Meridian Television had broadcast an item which followed up the Nature article. Unfortunately the Meridian report had given a misleading impression. In particular it had said that "nuclear tests" were being conducted at AWE Aldermaston. This was incorrect and did not reflect what had been stated in the Nature article. John Rae said that he would therefore like to set the record straight.

Firstly, he emphasised that none of the explosive experiments referred to could result in a nuclear explosion and they were therefore not "nuclear tests." He reminded members that he had told them in the past that, in the absence of nuclear testing, AWE had to move towards a science-based programme to underwrite the performance, reliability and safety of Trident warheads; and to enable the Company to maintain a capability to design a successor weapon - should that ever be required by the UK Government. There had been an essay on the subject in AWE's 2000 Annual Report.

John Rae re-iterated that there were four main elements to the programme. -

- Supercomputing
- Laser physics
- Hydrodynamics
- Materials science

There had already been some exciting developments in these areas of the programme. Firstly, just before Christmas 2001, AWE had taken delivery of a new IBM supercomputer. It was currently being

assembled and was expected to come on line in April 2002. The supercomputer would be capable of three million million calculations per second and would place AWE in the top ten of the world's most powerful computers and will enable the specialists to approach modelling in 3-D.

AWE was also developing a concept for MoD's consideration for a new high-powered laser. It was envisaged that it would be a national laser facility that could be used by universities as well as AWE. It would be many more times more powerful than the existing HELEN laser and would be in addition to AWE's access to the American National Ignition Facility. Lasers are used to study some of the non-nuclear phenomena encountered in the secondary stage of a nuclear weapon.

John Rae explained that Hydrodynamics was the study of materials when subjected to explosive shock - at which point they behave like fluids. This enabled AWE scientists to study phenomena in the primary stage of the weapon using powerful x-ray machines.

The Nature article had confirmed that, in addition to using simulant materials in these experiments, AWE had in the past and wished in the future, to conduct some experiments using very small amounts of plutonium.

John Rae emphasised that:

- These experiments were NOT nuclear tests or nuclear explosions.
- The amounts used were far too small to produce any release of explosive nuclear energy.
- The object was to study the physical properties of plutonium not its nuclear properties. The data from these experiments could then be cross-referenced to larger scale experiments using simulant materials.
- These tests were allowable under the CTBT because they were not nuclear tests. The US and other nuclear states were doing the same.
- The experiments were safe. They were contained within leak-tight, submarine-quality steel spheres with multiple layers of containment around them. The experiments were conducted in specially built steel-lined concrete facilities.
- There was no escape of any material from within the spheres and no escape of nuclear material to the environment.
- After use the spheres were stored intact as intermediate nuclear waste in one of AWE's specialist stores.
- The NII had to be satisfied with AWE's safety procedures and the EA has a keen interest in the environmental issues.

Later in the year AWE would submit a notice of intended development to West Berkshire District Council for a new hydrodynamics facility. This new facility would have a multi-axis x-ray capability with improved diagnostics and would give the ability to 'photograph' these experiments in 3-D, currently AWE had a dual axis facility. This was very important to AWE's work. Members were told that they would be briefed more fully on this facility at the next meeting.

In addition to this area of experimentation, AWE's materials science programme, which included examination of weapons withdrawn from the stockpile added to the knowledge of the behaviour of materials over time. All of this information, allied to the data from previous nuclear testing, enabled AWE to refine mathematical modelling – which was the only way forward in a testless era. The programme gave AWE some challenging scientific work for the future.

In answer to a question from Peter Taylor, John Rae re-iterated that this was a facility needed for the programme to underwrite the safety and performance of Trident warheads. He said that the warheads did stay safe, but that AWE had to underwrite that assurance. He explained that materials in the current stockpile were ageing in complicated ways. Plutonium was a radioactive material which slowly converted itself to uranium and in the process produced helium which penetrated materials. It was part of AWE's job to ensure and assure that the warhead remained safe and viable.

Part of the Trident warhead programme was refurbishment. During the lifetime of the warheads some components would need to be replaced. Some of the original materials used were no longer available or were prohibited by, for example the Montreal Protocol. AWE had to prove that this would not affect the safety or the performance of the warhead.

**Action 28/5: Members to feed back through Bill Cane if they wanted a more detailed layman's guide to this issue.**

## 6. Dosimetry;

George Sallit, Nuclear & Radiological Safety Authority

The presentation slides are attached.

George Sallit explained that there was currently a major review of radiological surveying and instrumentation. He said that there had been at a significant reduction in dose with the maximum individual dose reducing from 11.5 to 4, the data from 2001 showed it would probably reduce to 3.0.

The reason for this was improvements in technology in ventilation systems, personal protective equipment for radiation workers and the workforce taking action itself to reduce its own doses. In addition to this, over the previous 10 years there had been studies by several bodies which showed that the radio toxicity of plutonium had been over estimated by a factor of between four and ten. He said that AWE was reviewing its processes to provide Dosimetry to match the risks. The process was also taking into account the need for reassurance of the workforce and the requirement to provide data for the compensation scheme.

The project was likely to take between 12 and 18 months with major changes being implemented in 2003. Focal areas included air sampling within buildings where there was a move away from the older static air samplers. Personal air samplers which were worn on the lapel, were currently changed and counted in the laboratory each day. This system would now change to the samplers being checked each day and provided there was no problem they would be re-used and counted every five days. Currently 1200 workers were being checked on urine samples (bioassay). In the future that this would be focused on those at-risk.

Workers who made occasional visits into radioactive facilities currently had a permanent film badge which was checked every three months. It was anticipated that such staff could be given point of entry Dosimetry, i.e. monitored only for their visit. Staff were also looking at new technology and what might better meet the needs of the workforce. There were currently many different types of instrumentation on the sites so one part of the project was to look at a site instrumentation standard. The project looked at the number of surveyors at AWE, this number need to reduce, but this was anticipated to be by natural wastage.

Individual areas would be asked to set their own plans for reductions, which would be peer reviewed. One problem associated with the current system was the measurement of the dose workers received from background radiation. Modern RA facilities at AWE were built using low uranium concrete. The background level in these facilities was lower than in office buildings. In addition there was no way of assessing the background dose in workers' homes. The company needed to focus on what the RA dose was in RA areas. It was anticipated that the collective dose which was 500 mSv in 2001/2 would reduce to 205 mSv.

In answer to a question from Cllr Ferguson, George Sallit said that background radiation was also less in large rooms where there were fewer walls and walls were farther away than in homes or offices. Cllr Leeks asked whether this project would affect air samplers external to the site. He was told that this would not impinge on environmental measurements. John Southall asked whether staff would be given sufficient information to reassure them. George confirmed that, as is the current practice, all workers would be provided with an annual summary which they were at liberty to discuss with specialists who could put it into simple terms.

## **7. Assessments and Safety Cases;**

Richard Lucking, Head of Company Assurance Services.

The presentation slides are attached.

This presentation covered actions 27/6 on Safety Cases and 27/8 on surface water outfalls and consent levels.

Peter Taylor asked what risks the public was exposed to, Richard explained that hazards from chemicals had been individually assessed, and it was from this that consent levels for industry had been set. Mr Taylor asked to be shown the data, it was explained that Safety Cases were extremely complicated and were very large documents, he doubted that putting together an unclassified summary would give the information which Mr Taylor wanted.

**Action 28/6: Richard Lucking to investigate whether it would be a possible to summarise Safety Cases in order to provide the information Mr Taylor is seeking.**

Mr Taylor then asked if there were any numerical values to the risks from AWE's chemical discharges and AWE's RA discharges which would allow comparison. He felt that, as with RA discharges, chemical discharges should be based on risk. Richard explained that over many years work had been carried out to study the effects of chemicals at various levels. Consent limits were set to protect the most vulnerable. For example, limits for copper were set to protect salmon as they had a very low tolerance. The work had also covered the impact of chemicals in the food chain. It was however very difficult to make direct comparisons between chemicals and radioactive substances.

Cllr Ferguson asked what the 16 chemicals were which AWE was consented to discharge, what were the consented limits on these chemicals, what were the actual discharges made and who monitored them externally and internally. Richard said that he would provide this information.

**Action 28/7: Richard Lucking to provide a list of the 16 chemicals AWE is consented to discharge, together with their consented limits, the actual discharges in 2001 and details of monitoring responsibilities.**

At this point John Rae had to leave the meeting and Bill Haight took the chair. Bill Cane thanked John Rae on behalf of the LLC members for his 'excellent' Chairmanship of the previous 2 years.

## **8. Infrastructure Report**

Frank Winter, Director Infrastructure

External Planning Frank Winter reported that AWE took an active interest in planning applications adjacent to the Site Boundary in order to ensure that safety and emergency response issues are not compromised. The Company also takes an interest in implications for traffic flows and volumes. Any comments were made known to West Berkshire Council but any issues resulting from the Explosives Regulations were forwarded to the Ministry of Defence who made their own representations.

Since November 2001 AWE had been informed of fourteen applications adjacent to the Site boundary. These had been scrutinised internally and with Thames Valley Police on traffic management issues. Six of the applications had been referred to the MoD regarding the Explosives Regulations. AWE normally only raised objections on the grounds of Safety or Security. Only two

potential developments had given AWE any cause for concern since November 2001 and AWE's views had been transmitted to the Council and the MoD.

Discussions were taking place with West Berkshire Traffic Planning and Thames Valley Police with a view to improving traffic flows and accident rates around the perimeter of the site. AWE was keen for this dialogue with West Berkshire, Basingstoke and Deane and the Police to continue. AWE had been invited to participate in the Village Design Statement for Tadley and the local area and a representative from AWE would attend the first meeting.

Internal Planning AWE had made one application for on-site development since November 2001. This was for a treatment plant to replace the Pangbourne Pipeline.

Later in 2002 AWE hoped to submit an application for a new Hydrodynamics Research Facility. Other applications might follow for the replacement of old facilities and the LLC would be advised.

Fire Certification AWE's Fire Certificate was undergoing a periodic review by the HSE. Burghfield phase one had been completed - 21/12/2001. Drafts of phases 2, 3 & 4 had been received. An audibility project had been completed on time. A Fire Safety Campaign had removed 35 tonnes of combustible material from site.

Tony Ferguson referred to the dismantling of the Chevaline warheads and how and where the explosives from the warheads had been destroyed. It was explained that they were either exploded or burnt, on approved MoD ranges. It was not known where this had been carried out.

**Action 28/8: Frank Winter to provide information on where and how the conventional explosives from Chevaline warheads had been destroyed.**

John Southall asked whether the disposal of low-level tritiated aqueous waste via the Pangbourne Pipeline would effect its decommissioning. He was informed that this discharge would be made long before the pipeline closed.

Cllr Leeks asked whether speed limits were enforced on site. Frank Winter assured him that they were, through education and awareness; automatic detectors and MoD Police using hand-held radar apparatus. There were penalties for non-compliance.

Cllr Leeks then asked whether AWE had carried out a disabled access audit. He was told that an audit had been carried out and an improvement programme was in place, some actions had already been closed out. Cllr Leeks asked that access to the building in which the LLC meetings took place be addressed.

Mrs Dadswell asked which local planning applications had been sent to the Ministry of Defence. Frank Winter undertook to find out. John Parfitt said that any objections would be a matter of public record and could be viewed at the West Berkshire Council Offices.

**Action 28/9: Frank Winter to inform Mrs Dadswell which local planning applications had been sent to MoD for comment.**

Tony Ferguson asked for details of future planning notices. Frank Winter said that there was a Site Development plan for AWE from 2002 to 2015. The plan included rationalisation and development. Bill Haight said that a public information leaflet outlining the strategy would be produced in due course. He hoped to give a presentation at the next LLC meeting.

**Action 28/10: Frank Winter; to arrange a presentation of the AWE Future Site Development Plan at the next LLC meeting if possible.**

**9. Alerting measures** – Ken Saint, Manager Emergency Response  
The presentation slides are attached

Mr Saint explained that the scheme aimed to provide a system which would enhance the police's measures for alerting the public in the unlikely event of an incident at AWE causing the potential release of radioactive material. He pointed out that no system of public alerting could be totally effective. A telephone-based system would only reach those people who were at home, in local businesses or in schools. It would not reach people passing through. It would however be capable of passing a clear and specific message. Sirens on the other hand pass no specific message, are more likely to cause panic, particularly among those who did not know or could not remember what they meant. However, a telephone system would add a further communication tool for emergency use. He said that it was only recently that the technology had become available for such systems. Doubts had been raised about the possibility of getting a complete database of local telephone numbers. This matter had not yet been fully resolved, although several approaches were being made in parallel. The Company would send a questionnaire to all local homes, businesses and schools asking whether they wished to have their telephone number on the system. AWE would send this out with the REPPiR leaflet. [Radiation (Emergency Preparedness and Public Information Regulations) 2001]. (This gives details of the emergency arrangements and what the public needed to do in the event of an emergency). It was hoped that these leaflets would be distributed in April or May.

Cllr Mundy asked that special consideration be given to those people who worked out of doors. Ken Saint said that he would hope that businesses in the area with workers out of doors would contact their staff. In addition, police broadcasts and local radio and TV would also put out the warnings, as they would for any non-AWE incident. The system was capable of contacting mobile phones and could leave messages. LLC members would be included, provided of course that they returned their questionnaires. It was a police principal to give out an all clear message. Ken Saint said that the system would be put in place and reviewed after one year.

John Southall felt that sirens had a place in this type of situation, their use had been tested. Ken Saint pointed out that telephone systems were not complicated technology, and that even a siren would need to be triggered by telephone or radio. Concerns were raised that only a low percentage of questionnaires would be returned. Chris Bridges asked whether the police had exercised closing of the roads around the sites. Ken Saint pointed out that the MoD Police would support a Thames Valley Police if necessary. In answer to a further question, it was pointed out that Ministry Defence Police would not be armed whilst working offsite. Cllr Leeks suggested that AWE feature the questionnaires in articles in the local press to press home the importance of filling them in and returning them.

**10. Any Other Business**

John Mazillius asked whether the NII had made any comment on the level II exercise, as their report merely stated there had been an exercise. Mike Jeel, NII, said that the exercise had gone well, in fact he had participated in it himself. An NII review team had looked at the overall working of Gold Command at Kidlington, as always there were lessons to be learned. He said that on site the NII had legal power, whereas in an exercise such as this they could only advise. Ken Saint said that any exercise should always show areas for improvement, or the exercise was not doing its job. The purpose of an exercise was practice and learning. Many had noted a significant improvement since the last level II in 1998, there had been progress by all agencies involved which had led to a greater understanding of the issues involved and had also shown a need to develop further.

John Parfitt said that he West Berkshire had an emergency planning role and that the whole idea of emergency planning was to demonstrate what had gone wrong, where and why. He felt he was

better to get it wrong in an exercise and that in this instance there should be a focus on deficiencies in other agencies, not just AWE. The next part of the process was to have post-exercise meetings to look at putting right the deficiencies, but even so there would be failures. He also pointed out that the results of the exercise were a matter of public record.

John Southall asked whether it would be possible for LLC members to visit the Burghfield site.

**Action 28/11: Avril Burdett to look at the possibility of giving members a tour of the Burghfield site.**

Members asked for an update concerning the MoD tritiated waste. Frank Winter said that he believed that contracts were being negotiated for the waste to be stored at other sites, he reminded members that the Minister had promised to write to members on this matter when there were further developments.

In light of the problems at BNFL Sellafield, Frank was asked whether AWE would have similar problems. He said that all waste streams on AWE's sites could be stored on the site or sent for disposal. He added that the UK as a whole faced the problem of having no UK national repository, but that AWE did have facilities to store its waste.

## **11. Closing Remarks**

Bill Haight passed on John Rae's thanks to LLC members for their courtesy and assistance in helping him to open up a communications dialogue with the local community and in ensuring that AWE's operations were properly understood by everyone. He said that the Company would continue to be open and factual as they could.

## **12. Date of Next Meetings:**

**\*\* Tuesday 11 June 2002 – Please note change of date**

**12 September 2002**

**14 November 2002**

The meeting ended with a buffet lunch.