



**Health, Safety and Environmental  
Performance and Management at AWE plc  
(September 2003)**

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## 1. Introduction

In November 2001 a paper (Ref. 1) was presented to NuSAC, which reviewed the Health, Safety and Environmental management at AWE plc under the contract arrangements which came into force on the 1<sup>st</sup> April 2000.

Reference 1 gave:

- i) a broad overview of the operations at AWE plc,
- ii) the history of contractorisation,
- iii) the contracting process (1999 – 2000) including licensing and authorisation,
- iv) Health, Safety and Environmental management and performance during the first 18 months of the new contractual arrangements.

The paper drew 7 conclusions, which included the benefits of the contractual arrangements with respect to Health, Safety and Environmental management and performance.

This paper provides an update from November 2001 to the present.

## 2. Approach

The fundamental approach has proved to be enduring and remains unchanged (Fig. 1). The Assurance (Health, Safety, Environment, Quality and Security) long term improvement programmes are well integrated into the company planning process (strategic to local) and are therefore regularly reviewed in light of progress, priorities and environmental analysis. Detailed changes and some priorities have been made, through the change management process, but the direction and key milestones remain the same.

Similarly the Assurance organisation, launched in April 2001, has been regularly reviewed and improvements made, including some involving personnel.

The development of a learning culture supported by Review, Learn and Improvement (RLI) processes continues. In particular, a continuous improvement ethos is now well imbedded in AWE plc based on the EFQM model.

## 3. Extension of Contract to 25 Years

Earlier in 2003 the MoD extended the contract for the maintenance and operation of AWE plc from 10 to 25 years.

In 1999 all of the three consortia bidding for the contract were asked to submit both a 10 and 25 year proposal. The original contract enabled the 15 year extension to be implemented pending the development of a private finance arrangement. This was duly achieved and the 15 year extension was invoked.

It is important to recognise that the core Assurance, decommissioning and remediation programmes are not affected by the extension of the contract as they are fully resourced through the planning process.

However, a 25 year contract does give a long term view and commitment. The financial flexibility, which is an inherent part of the extension, will allow for the relative acceleration of the re-generation of the sites, i.e. relevant modernisation of existing facilities and the replacement of old facilities with new. This will obviously reduce the overall site risk.

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Finally, as any contract "nears" its end (typically 2-3 years before the end of a 10 year contract), it is possible that the contractor begins to focus on winning the forthcoming competition. Near term decision can be sub optimal from the life time business point of view. The risk is that the truly effective duration of a 10 year contract is reduced by up to 3 years particularly with respect to long term investment.

A 25 year contract mitigates this risk.

### **4. Performance Since 2001**

#### **4.1 Radiological Safety**

The doses received by our staff over the last three years have continued to decrease for both maximum individual dose and collective dose. In 2003, none of our staff should receive a radiation dose greater than 2 mSv. Despite this we will ensure that our radiation doses remain ALARP and that we concentrate appropriate attention on them to maintain close management control. This control will be necessary as the work programmes change with more decommissioning work being undertaken in the next 10 years. It may not be possible to continue to achieve lower doses, but the lessons learnt will be applied to ensure that future doses remain ALARP.

We completed a review of our dosimetry arrangements (internal and external) in 2002 and have re-focused them so that those staff most at risk will receive the most comprehensive monitoring. This review also highlighted some areas of further work needed to enhance the sensitivity of these measurements to better measure the lower doses received by our staff. New techniques developed from this programme are to be presented at the IRPA 11 International Conference in 2004.

#### **4.2 Criticality Safety**

An integrated criticality programme (ICP) has been produced to prioritise, on a company basis, the outstanding criticality work and to bring this programme under a project management style of control. This programme has two main components, the re-assessment programme and the routine operational work programme.

For the re-assessment programme we are reviewing all our current criticality assessments to ensure that they meet the modern standards. This process includes incorporating all the lessons learnt from abnormal events, human factor studies and observations from the operators who are required to implement the control arrangements.

The re-assessment programme also reviews our current management arrangements to ensure that we have, and are able to maintain, sufficient suitably qualified assessors to meet our programme requirements. We are making changes to our Criticality Operating Rules to ensure that they can be aligned to criticality safety parameters, as opposed to operational limits.

We have used probabilistic criticality safety methods to supplement our deterministic approach but do have some concerns surrounding the effort required by specialists with scarce skills and experience to deliver very marginal improvements to the safety assessment. By ensuring that excessive detail is not generated during probabilistic assessments, we can achieve the right balance, but need to agree this with the NII.

This long term programme of reassessment is essentially on target.

For the operational programme we have clearly defined the priority and safety importance of the current criticality assessments and used this programme to plan the operational work of the team. This clarity of work has led to an increase in staff morale and a fourfold increase in the productivity of the assessment team.

### **4.3 Accident Reduction**

The reduction of accidents is driven by:

- i) the effective deployment of our RLI process (see section 4.9), and
- ii) our behavioural safety programme.

During the first 2 ½ years of the contract our total lost time accidents (LTA) were significantly reduced (e.g. total accidents reduced by 33%, LTAs reduced by 50%). However, in the second half of 2002 and the first few months of 2003 we identified an upward trend in both measures. Our RLI process drove several improvements including:

- Accelerated behavioural safety programme
- Tool box talks for all employees on manual handling and slips, trips and falls (a direct output from RLI)
- The development and deployment of a new RLI tool, the best practice matrix where each senior managers' area is assessed against nine key criteria, described in 4.10 iii
- Engagement of all contractors' senior management in the development of improvement programmes
- A "hazards removed" emphasis (and associated measure)
- Rehabilitation to work process which involves the early intervention of both line management and medical staff.

Accident and lost time accident rates are again improving but remain an area for constant management vigilance.

### **4.4. Random Drugs and Alcohol Testing**

All staff and contractors are now subject to both random drug and alcohol testing to provide reassurance to management and all stakeholders that neither is a risk to safety at AWE plc. The results to date have demonstrated this to be the case. The development of both random test regimes was in partnership with our employees and emphasises the support and rehabilitation of those at risk.

### **4.5 Contractors Safety**

Although much has been done in this area, particularly in the assessment of contractor competence, selection of contractors, contractual requirements and induction training to AWE plc, it remains an area of concern due to the forthcoming increases in demolition and construction. An experienced manager from the construction industry has been recruited who is developing an improvement programme, which includes management arrangements and compliance with the CDM regulations, contractor passport system, and monitoring of contractor performance.

### **4.6 Control of Work**

Any work in a facility at AWE plc has to be approved by the relevant Workload Control Centre (WCC) and to be performed to an appropriate safe system of work. Our RLI process has identified improvements that can be made to both of these processes and working groups are developing solutions. Particular improvement areas include the development of consistent standards across all WCC's, training, competence and accreditation of WCC staff (including risk assessors) and simplification of the documentation.

### **4.7 Company Documentation**

Over the years, AWE has developed a number of management systems to address a variety of statutory and regulatory requirements (e.g. safety, environment and quality).

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However, we recognise that the potential for overlap between these systems can provide us with an opportunity for review with the aim of integrating policies, processes and procedures to ensure the AWE management system is effective at meeting our organisational goals in addition to satisfying other stakeholder requirements.

The underlying principles include:

- as simple as possible to enable compliance
- aligned to our business processes (and, therefore, the various ISO standards)
- detail developed with the “users”

A project to integrate our management system was initiated in 2002. Already an integrated policy statement supported by a more detailed policy manual has been agreed by the Board and is close to being launched. At the working level the safety documentation will be the first to be issued starting in two months' time. Several enablers to this have been developed and implemented such as:

- Simple, easily understood format
- Improved review and approval process
- Impact analysis process to allow better planning for implementation
- Clear accountability for standard setting, etc. agreed with the Technical Authorities

### **4.8 Safety Cases**

Safety Case work continues at AWE primarily in support of the Periodic Review of Safety required under Licence Condition 15 with the key end date of July 2007.

Following completion of a revised version of the Safety Case for the first facility on the programme, (which addressed current and future) it was submitted to the NII for their information. At the same time as the Safety Case was completed, the NII issued some guidance on what was expected of a Periodic Review of Safety. Consequently, it was recognised that there were a number of topics where the level of coverage given in the Safety Cases was less than that expected by the NII (primarily engineering substantiation and human factors) for such a Periodic Review of Safety. A work programme was then set in place to cover these shortfalls within the Safety Case.

Work continues on four other Safety Cases as part of the Periodic Review of Safety Programme (RAM Transport, VIPER, A2.1 and Assembly at Burghfield).

### **4.9 Modern Standards**

In addition to the modern standards for safety documentation mentioned above, the Company is developing a series of modern design standards. This supports two significant work areas at AWE, namely the engineering substantiation required as part of the Periodic Review of Safety and also the new build work as part of the Major Investment Schemes.

It is obvious that any new facilities or buildings should meet such modern standards but for existing plant there may well be arguments to justify working at lesser standards. Such arguments are made as part of the Periodic Reviews of Safety, which effectively justify the continued operation of the facilities. Such arguments would need to demonstrate that the operations are ALARP and follow the principles behind the HSE's 'Reducing Risks, Protecting People'. To reach an ALARP position it is recognised that a spectrum of remedial work may be required from nothing, through minor modifications to significant refurbishment.

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{Note : It is recognised that the management of scarce experienced resources is crucial to the delivery of the PRS programme which has several component parts – delivery of appropriate engineering and safety standards, engineering substantiation, the PRS itself and the resultant remedial engineering work. A paper is being presented to the Board in late October which proposes bringing all the above under a programme project management type regime.}

### **4.10 Review Learn and Improve Process (RLI)**

#### *i) Development of Processes*

The Assurance Directorate was re-organised in January 2001 to align with the six key Assurance Processes. These processes were defined, mapped and publicised during 2001. With a view to achieving continuous improvement, a process improvement portfolio was developed and published in June 2002. This contained a set of common objectives applicable to each of the processes and also a set of process-specific objectives. Many of the objectives have already been achieved and implementation of the remainder of the improvements continues. In parallel work is advanced at corporate level to define AWE's top level Company processes. The Assurance processes have been linked with the Company processes and the current emphasis is on understanding how these links will work and in transferring the Assurance processes to the Company format.

#### *ii) Current Level of Achievement*

A key measure of the effectiveness of Review, Learn and Improve (RLI) at any level in the Company is considered to be the number of repeat events, i.e. events which could have been prevented had we learned effectively from previous events. In 2003 we started to develop a key performance indicator (KPI) to measure this at Company level. The measure works by examining each significant abnormal event and determining whether it could have been prevented had robust Company wide remedial action been taken following an earlier event. We have confined the data set to events which have occurred over the past two years.

In addition to investigating each abnormal event immediately after it occurs every each quarter, we analyse them collectively to determine trends (e.g. equipment, people, systems or a combination of these). These categories are then further broken down to more meaningful root causes. This analysis shows that the proportion of events with underlying causes involving equipment and systems is reducing while the proportion of events involving people is increasing. One approach we are using to address the people issues is the introduction of behavioural safety which is discussed below.

#### *iii) New Tools*

Towards the end of 2002 it became apparent that our performance in terms of the number of injuries sustained was increasing. In order to bring our performance back on track a number of new approaches were developed and adopted as described in 4.3 above.

In conjunction with the Assurance Services Managers from across the Company we developed a matrix to assess and record performance in nine key areas of activity for each Senior Manager's area. These areas included: involvement and leadership, the existence and implementation of improvement programmes, deployment of KPIs and use of the RLI process. An initial assessment was performed at the end of last year with a traffic light being assigned (red, amber, green) to each of the nine criteria. Progress in moving the matrix towards green is assessed regularly and reported at each appropriate level in the company.

To increase awareness of hazards in the workplace an internal KPI addressing the removal of hazards has been introduced. This requires team members to report the hazards they personally have removed on a regular basis to their peers. Numbers and types of hazards removed are recorded to enable more comprehensive local RLI action to be taken if any trends and themes are identified.

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Towards the end of each year we assess our performance against the KPIs we set at the beginning of the year. From this assessment, together with the operators, we assess the work programmes for the forthcoming year and the impact of improvement programmes, and make recommendations to the AWE plc Board for the KPIs and targets for the following year. We are constantly looking for KPIs which will enable the business to become more effective, and which will provide leading indicators of performance.

This year we are trailing leading KPIs on hazards removed, compliance with our management systems and regulator perception.

### *iv) Behavioural Safety*

Behavioural Safety is a technique which involves workmates observing each other to identify and praise safe actions. If an unsafe action is observed the emphasis is on understanding the reasons for this way of working and identifying how these might be eliminated.

We have been working with an external consultant, who is a leader in this field, to develop our approach and to deliver training to our staff. We currently have the approach established in three facilities across the Company. Two further major facilities are undergoing training and five more facilities will be trained this financial year. Many simple improvements have been introduced as a result of this activity and we have seen a marked reduction in the injury rate the first of our facilities where the approach is in use.

### *v) Rewarding Good Assurance Performance*

We have also introduced a recognition of good Assurance performance scheme (developed with our Trade Unions during 2002). This reviews the performance of teams, and rewards those where a good standard has been maintained or a significant level of improvement achieved. The winning team in each category nominates a charity to receive a donation. The scheme aims to reward good performance and to identify areas of best practice to allow cross Company learning.

### *vi) Climate Survey*

In 2002 we undertook the first AWE-wide 'Climate' survey. Climate is an HSE product designed to measure the workforce perceptions of health and safety performance. The results of the survey have enabled the identification of key areas for improvement, for example, near miss reporting, and improvement plans to address the issues identified are being implemented throughout the Company.

### *vii) Assurance Conference*

Since 2001 we have been holding an annual Assurance Conference in October. Last year the theme was "Working Together", this year it will be "Target Zero".

Over 300 delegates, drawn from all levels, departments and sites within the Company attend the event as well as representatives from our key Stakeholders such as the Ministry of Defence, Trade Union Representatives, Nuclear Installations Inspectorate, Environment Agency and the Local Liaison Committee.

The key messages from the Conference are rolled-out throughout the Company. The aim is to engage every employee and achieve the same objectives as the Conference itself - inform, inspire and promote best practice.

## **4.11 Decommissioning, Legacy and Waste Treatment**

- i) Good progress has continued to be made since the last report in the autumn of 2001. A 10 year Environmental Programme Management Plan covering Decommissioning, Waste Management and Environmental Projects has been produced and discussed with the Environment Agency (EA) who

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have agreed that it is a good basis for planning and have cited the document as an example of industry best practice.

ii) The decommissioning of A37 has reached the point where all the gloveboxes have been removed. Work is progressing on several fronts in A50 and a new ventilation system has been installed and commissioned in A1, which further reduces airborne discharges even though decommissioning activity is ramping up. Work is also progressing to prepare other facilities such as D7 and R61 for decommissioning.

iii) In Waste Management virtually all of the legacy wastes stored in the open air for many years dating back to the early 1980's and beyond have either been size reduced and packaged for disposal/long term storage or moved under cover prior to such operations. After the successful trial demonstration of a technique for immobilising sludges arising from the treatment of radioactive liquid effluent, preparations are now well in hand to immobilise the remaining sludges which have been stored since sea dumping ceased in 1984. Some of the sludges have been homogenised and transferred from their old storage tanks and new tanks installed as part of the immobilisation process. A programme has also been agreed with the NII to address Licence Instruments relating to the assay and treatment of stored solid Intermediate Level Waste (ILW). The new ILW store is now in full use and all but one of the oldest stores on site has been completely emptied.

iv) Work has started on the site for the new radioactive liquid effluent treatment plant, which will allow the Pangbourne Pipeline (PPL) to be closed by the end of March 2005. Closure of the PPL is the tenth of twelve Improvement Requirements (IR) listed in the current Radioactive Substances Act (RSA) 1993 Authorisation for the Aldermaston site. All of the previous nine IR have been completed on or ahead of programme and AWE has recently written to the EA claiming completion of the eleventh, which also is not due until end March 2005. All of the three IR listed in the Burghfield Authorisation were completed on or ahead of programme.

v) As well as the 10 year plan mentioned earlier, the EA have cited other examples where they consider AWE to be demonstrating best industry practice such as:

- a) AWE's consultation with it's stakeholders through the Local Liaison Committee (LLC) and the PASCALEA (Public And Stakeholder Consultation on AWE's Long-term Environmental Aims) Project,
- b) our joint quarterly communications meeting alternately chaired by and held at AWE and EA offices, and
- c) providing the EA and NII with shared offices and access to AWE databases to help facilitate their "Working Together" initiative.

### **4.12 Security**

Following September 11<sup>th</sup> 2001, AWE plc's Security Improvement Programme (SIP) was reviewed. To date several improvements have been implemented.

#### *i) Physical Security*

Enhancements have made made to the perimeter fences, including to the existing detection and surveillance systems.

Searching of all commercial vehicles, further restrictions on access to secure areas, enhanced exercise programme for the Ministry of Defence Police (MDP), etc.

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The complement of MDP officers on the sites has been supplemented by the introduction of civilian security personnel who now undertake routine tasks such as checking passes at main entrances to the sites and vehicle searches. This allows the more effective deployment of MDP officers, including the maintenance of an armed response at each gate, thus enhancing physical security.

### *ii) Radioactive and Special Nuclear Material (SNM)*

An immediate review was performed after the 11<sup>th</sup> September 2001, and actions taken to minimise the amount of SNM in process at any time. The remainder is securely stored. Therefore, in the event of terrorist action the minimum possible amount of SNM would be released.

Currently a study is underway to establish that all material, which is capable of being used for a “dirty bomb”, is stored in the most secure location. This includes radioactive sources.

### *iii) Information Security*

The implementation of the SIP has made several improvements to the security of information, including that stored and handled electronically by the various computer systems.

Lloyds Register has recently audited the security arrangements for our information using BS7799 (Standard for Information Security Management) and are recommending AWE plc for certification to this standard. AWE plc is by far the largest and most complex organisation to be recommended for this third party accreditation to date.

### **4.13 Scarce Skills**

To deliver our programmes AWE plc relies on the availability of resources which are scarce throughout the UK Nuclear Industry and, in some cases, UK plc (from criticality and safety case assessors through RPAs to nuclear engineers and operators).

Over the past 18 months, AWE plc has enhanced its HR processes with two main objectives:

- i) to attract and recruit the individuals and competencies needed to support the business objectives, and
- ii) to retain and develop the competencies and performance of our current employees.

Improvements in support of (i) above include forming allegiances with key universities, targeted recruitment campaigns which “sell AWE plc”, developing and selling the concept of a total reward package, enhanced relocation terms, etc.

Similarly, in support of (ii) we have introduced a modern rewards package for senior managers, broad banding, the development of career paths, improved recognition processes, performance pay, enhanced competency framework and development workshops aimed at leadership at all levels in the company.

All the above processes are supported by the Directorate and Functional People Development Groups.

### **4.14 Site Development**

Much of AWE plc's infrastructure dates from the 1950's and has the problems associated with hardware of that age. There are currently some 1,500 plus buildings many of which are under-utilised (occupied) and expensive to maintain.

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The Site Development Strategy Plan (SDSP) introduces a long term, company vision and supporting programme, which will maintain a modern, cost effective, safe and efficient weapons system (Trident) into the future by rationalising and update the infrastructure.

Key objectives include the creation of a “science park” environment with facilities which meet modern standards (in the general sense of the phrase) and a much improved quality of working life.

The SDSP is under configuration management by an “on site planning authority” to ensure the technical and safety aspects of any new or modified infrastructure are duly considered. This is particularly important with respect to the more complex modern facilities such as HRF.

### **5. Third Party Views**

#### *5.1 Regulators*

AWE plc continues to be regulated not only by the civil regulators (HSE, EA, etc.) but also by MoD with respect to explosives and security. The MoD is due to introduce a new regulator, the Nuclear Weapons Regulator, who will have a role at AWE plc. Explosives licensing will transfer from MoD to NSE under MSER from April 2004, with a three year transition.

##### *5.1.1. NII*

Following the intense period of regulation during the first 12 months of the contract (3 and 12 month team inspections), NII are now into a “normal” regulatory regime. Two team inspections have been performed since November 2001:

- i) Criticality and Sealed Sources – Several recommendations all related to aspects of criticality management. All have been incorporated into the ICP (see 4.2) and 19 of 26 have been completed. As regards sealed sources, the report concluded “an adequate standard of compliance had been achieved”.
- ii) Acceptance Review Arrangements – Several recommendations were made relating to the process itself but also to the preparation of safety cases. AWE plc has submitted responses to the recommendations with the objective of closing them out by mid 2004. The report also highlighted several areas of best practice and concluded that the process was robust, well resourced and respected.

Recommendations from earlier team inspections have been closed out (i.e. maintenance arrangements and quality assurance). The normal regulatory process has dealt effectively with issues as they have arisen with the issue of Licence Instruments, Approvals and Consents as necessary. No enforcement action of any kind has been necessary. Areas of concern include probabilistic risk assessment as applied to criticality assessment, the response time of NII with regard to the PRS programme and the application of modern standards for refurbishment projects. NII and AWE plc are working together on all of the above to agree the way forward.

##### *5.1.2. Environment Agency*

In a similar way to the NII, the EA are now into a “normal” regulatory regime and the regulatory process has dealt effectively with issues as they occurred.

The Company has produced and discussed with the EA a 10 year Environmental Programme Management Plan. The EA have confirmed that the current plan is acceptable, but have suggested a few areas for further improvement which AWE will develop during 2003. EA acknowledge the detailed planning and analysis undertaken by AWE while encouraging us to a more timely implementation of the plans

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A number of changes to our RSA Authorisations are necessary to permit disposal of certain waste materials, e.g. oils to other operators. Public consultation on the Variations is expected to take place in October and November. Preliminary discussions have also taken place on the review of our current RSA Authorisations which the EA are due to undertake in spring 2004.

Again, no enforcement action of any kind has been necessary although a caution was received earlier this year in relation to the overflow of a few cubic metres of effluent from our Trade Waste System. The caution was on the grounds of:

- a) causing polluting matter to enter controlled water, namely ground water, and
- b) failing to provide the operator with appropriate written instructions.

Whilst the EA acknowledged that there was no significant environmental risk, they were concerned it could be indicative of a breakdown of management systems. They were satisfied with the remedial action put in place.

### 5.1.3. *Other HSE Inspectors*

Both sites have been visited by other HSE inspection principally Fire and Explosives.

The HSE HM Fire Surveyor has accepted AWE plc's fire safety improvement programme and agreed the associated schedules of remedial work. The programme is being delivered to date. Again no enforcement action of any kind has been necessary by HSE.

### 5.1.4. *Nuclear Weapons Regulator (NWR)*

Ref. 2, defined those limited activities which are outside the legislative framework of the Nuclear Installation Act 1965.

For the past few years, a Nuclear Weapons Safety Advisor (NWSA) has provided assurance to the MoD (Secretary of State) on all aspects of the nuclear weapon lifecycle. The NWSA role is advisory and has concentrated, as far as AWE plc is concerned, on these activities outside the requirements of the NIA.

The introduction of the NWR will supersede the role of NWSA with a change of emphasis to "authorisation" and "regulation" rather than advice.

Following a series of meetings involving MoD, NWSA, NWR, NII and AWE plc the following way forward has been agreed:

- i) agree a set of principles by which NWR will operate,
- ii) agree the contractual arrangements between MoD/AWE plc for "shadow operation" of NWR, and
- iii) approximately 12 months shadow operation of NWR (from January 2004) during which time the detailed authorisation and NWR regulatory arrangements will be agreed.

AWE plc's primary concern is one of duplicate regulation whereby activities/processes/facilities which are currently regulated by NII are also regulated by NWR. AWE plc's view is that such a situation would result in confusion which could possibly lead to a reduction in safety and introduce a delay into our programmes.

However, the way forward (described above) should mitigate these risks.

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### 5.2 Other Third Party Views

AWE plc has received unprecedented recognition from RoSPA over the past three years having been awarded:

- three consecutive sector awards (the only other organisation to ever achieve this is Toyota)
- the Sir George Earle Trophy in 2002 (for outstanding achievement in health and safety)
- the Astor Trophy in 2003 (for AWE plc's Occupational Health Programme)

During the same period, we have achieved third party (Lloyds Register) accreditation to ISO14001 (Environmental Management System) and ISO 9001:1994 (Quality Management). In late September of this year, Lloyds recommended AWE plc be accredited to the Information Security Management System BS7799. We are currently being inspected by Lloyds for accreditation to the 2001 version of ISO9001.

The views of our other key stakeholders are reviewed and measured by a variety of means (employees via an employee opinion survey and Climate (see 4.10.vi), the media by positive and negative press coverage, responses to public consultation (such as PASCALEA) and monitoring the views of the Local Liaison Committee).

All the above indicate that these stakeholders have a significantly improved perception of AWE plc particularly with respect to safety management.

### 6. Future Challenges

Although much has been achieved with simplification of process in many key areas, many challenges still remain. Key deliverables in the medium term include:

- embed the improvements already made so they become "business as usual",
- delivery of the PRS programme and ICP,
- resolution and agreement of "safety case" methodologies with NII,
- continued development of the RLI process and our learning culture,
- delivery of the behavioural safety programme,
- agreement of new RSA93 Authorisations which do not restrict our decommissioning, waste or remediation programmes,
- the introduction of the NWR,
- improving accident trends,
- enhanced construction and contractor safety,
- transfer of explosives work, to HSE regulation
- the implementation of the Integrated Management System (IMS).

All the above are included in AWE plc's forward plans and are adequately resourced. Suitable management arrangements are either in place, or about to be introduced to ensure successful implementation.

### 7. Conclusion

The significant conclusions of this review are:

- Real progress has been made in many areas including, decommissioning, waste management, remediation, dose reduction and health and safety.
- Issues which have been long term management issues for AWE plc are now being effectively managed and delivered, e.g. ICP, PRS programme and IMS.

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- A learning culture has been established and is supported by RLI process.
- Third parties have identified several examples of best practice.
- Future challenges are supported by agreed plans and management arrangements.

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**References:**

- Ref. 1 – An overview of Health, Safety and Environmental Management at AWE under the New Contract Arrangements (April 2000 to September 2001)  
Ref. 2 – The Atomic Weapons Establishment Act 1991 Amendment Order 1997

**End**

Fig. 1

### AWE plc's Approach to Assurance Improvement

