

NUCLEAR SAFETY DIRECTORATE - BUSINESS MANAGEMENT SYSTEM		
RESEARCH <b>EXTERNAL RELATIONS FOR RESEARCH</b>		<b>G/RES/012</b>
		ISSUE 002
Approved By: <i>Peter Storey</i>	P Storey	Issue Date: 19/08/05
Open Government Status: Fully Open		Review Date: 31/12/2010

## 1. Purpose and scope

1.1 This guide describes NSD's relationships with external organisations in the area of research, and in particular the role of NSD 4A, the research unit.

## 2. Policy

2.1 In general, nuclear safety policy (which means primarily relationships with Other Government Departments, other countries, the IAEA, OECD-NEA and the EC) is dealt with by HSE Major Hazards Policy Group. However nuclear safety research policy is the responsibility of NSD 4A. However, in keeping with others in NSD, 4A would be expected to respond to matters such as PQs, briefing for ministers, briefings for officials meeting ministers etc. It is unlikely that such requests for briefings would come directly to NSD 4A. Normally, they would be routed through DTI, through HSE or through the Chief Inspector's office. Timescales for response would normally be short and would have to be dealt with urgently. The person responding would need to make himself aware of the issues by undertaking the necessary consultation and to have the necessary skills to normally translate technical issues into a form which can be understood by non-technical people.

## 3. HSC/HSE

### HSC

3.1 The HSC was given responsibility by DTI back in 1989 for what has come to be known as the HSC Coordinated Nuclear Safety Research Programme (a description of the responsibilities and duties carried out under this programme are given on the HSE website). It is envisaged that DTI will transfer responsibility for the guidelines to HSC. The consultation arrangements are described in G/RES/006.

### HSE Major Hazards Policy Group

3.2 Nuclear safety policy is undertaken by Major Hazards Policy Group but in close cooperation with NSD's Operational Strategy Unit (NSD 4B) through a Memorandum of Arrangements. However NSD retains nuclear safety research policy and this is discharged through NSD Research Unit (NSD 4A).

### **HSE non-nuclear research**

3.3 CoSAS (Corporate Science and Analytical Services Directorate) has responsibility within HSE for overall Science policy and strategy. CoSAS deals with the Office of Science and Technology and writes general HSE guidance on research and support. NSD 4A deals with specifically nuclear aspects.

3.4 It is recognised that outside of the nuclear sector research may have some relevance to nuclear issues. Quite often other industrial sectors will share common issues e.g. control systems, human factors, plant structure and NSD 4A has a role to facilitate flow of technical information. This cross sector work is gaining an increased interest within HSE and NSD 4A. There is coordination between the nuclear safety research programme and HSE research for the other major hazard industries involving joint reporting to the HSE Science Strategy Committee (see G/RES/006).

### **HSE Consultative Bodies (NuSAC SCR)**

3.5 The Nuclear Safety Advisory Committee (NuSAC) provides advice to the HSC on Nuclear safety matters. It has formed a Sub-Committee on Research whose terms of reference are given on the HSE website at [www.hse.gov.uk/research/nuclear/nusac.htm](http://www.hse.gov.uk/research/nuclear/nusac.htm): Unit 4A acts as the secretariat to this sub-committee. The majority of papers are written by NSD 4A, with some written by the licensees. Details of the arrangements are given in G/RES/006.

3.6 Until recent times when the sub-committee's terms of reference were expanded, the meetings have concentrated on reactor safety research. Now papers are taken on the safety research programmes of all the licensees contracted by the Nuclear Decommissioning Authority. Each member has much relevant nuclear expertise in his/her own right and the composition of the sub-committee is maintained to reflect the important areas covered by research for chemical reprocessing plant, power plant and the decommissioning of plant. It is a major objective to keep the sub-committee well informed on current issues and to regularly seek their advice. Occasionally, members would express interest or concern in an issue and it would be for the secretariat to ensure that it is addressed to the satisfaction of the member. There are occasional visits to an industrial site or a research

facility, organised by NSD 4A.

#### **4. The Public**

4.1 The transfer of responsibilities to the HSC for the research programme in 1989 was done to ensure that public concern was seen to be addressed. The programme has changed dramatically in the intervening period but at all times public interest and concern for nuclear safety matters have been considered in the approach taken.

4.2 The public normally refers to the informed public which would cover the normal range of nuclear pressure groups, the media, academics and people working in the nuclear sector. The interests of the general public could be seen to be represented best by advisory groups such as NuSAC which has the role of critically reviewing the work of the regulators and the industry and through its advisory role to ministers, can raise concerns if it is not satisfied. NuSAC has a member specifically appointed to represent the public interest (currently Sheila Ashford). The HSC is also answerable to ministers and through its own composition of commissioners does reflect different sectors from industry i.e. the employers, the trade unions and the local administration.

4.3 In principle, public concern would normally be expressed through groups such as these. Direct enquiries from pressure groups arise from time to time and are dealt with in accordance to General Administrative Procedure 1, Freedom of Information Act and disclosure of information to the public. Information on research is brought into the public domain primarily through publication on the HSE website. With reference to the HSC Programme, one major objective is to disseminate research findings but most of the research is commissioned by the reactor licensees who retain ownership of the intellectual property and the desire to exploit it themselves. There is an agreement for HSE to respect the licensees' rights of ownership but for the licensees to respond reasonably to requests for access by third parties (see G/RES/010 on dissemination). In the light of requirements placed on HSE by the Freedom of Information (Fol) Act, NSD 4A will need to review its approach, as this arrangement may be challenged.

#### **5. Other Government Departments and Non Departmental Public Bodies**

##### **Department of Trade and Industry (DTI)**

5.1 DTI acts in many ways as our sponsor department. In matters to do with nuclear safety research policy we are acting on behalf of DTI.

NSD 4A's main contact on research and international relations tends

to be with the DTI on issues which often relate to providing briefing to ministers etc on a range of issues e.g. the EU Joint Research Centre, EC research, collaboration with Eastern Europe. Each briefing note or response is generally treated on a case-by-case basis because the topics can be quite disparate. There is the potential for confusion between our responsibilities and DTI's on these matters but to date this has not been a problem largely because the real expertise on nuclear matters lies in NSD and therefore DTI would always look to us for briefing. The only real issue is how information is routed to OST and at times the same briefing is requested by both OST and DTI.

5.2 UK membership of NEA and the NEA Databank is through DTI EITU. DTI attend the NEA Steering Committee.

5.3 UK membership of Euratom is through DTI, and EITU are represented on CCE Fission (as are NSD, DEFRA and DOH, see below).

#### *Office of Science and Technology*

5.4 The Office of Science and Technology (OST) which is a part of DTI has central responsibility for research and requests responses/briefing on documents which are usually produced by the EC on issues to do with the framework programme. OST organises regular meetings with representatives of OGDs covering various sectorial interests with the objective of sharing information on policy issues normally to do with the EC Framework Programme.

5.5 The BSE Crisis has raised concern amongst ministers that the policy sensitivity of research findings is not always recognised satisfactorily at an earlier enough stage. Requirements have been generated from the Chief Scientific Adviser (head of the Office of Science and Technology) for departments to put procedures in place to address this issue and for these procedures to withstand external scrutiny. This scrutiny is exercised through submissions to OST of research which has been identified as being policy sensitive and an indication of the steps which need to be taken in response. This issue is covered further in BMS document G/RES/013.

5.6 OST carries out audits of government research with the aim of spreading best practices.

#### *Safeguards*

5.7 NSD 4A has responsibility to provide DTI Safeguards Office with information on an annual basis on the significance to safeguards activity of

research funded by HSE. This involves reporting relevant multilateral research projects involving Non Nuclear Weapon States.

## **Ministry of Defence**

5.8 HSE currently operates a collaboration agreement with both DTI and MOD (Directorate of Submarine Propulsion) to share information on nuclear safety research. In practice, the agreement only operates with MOD because the DTI commissions very little relevant research of its own at the moment. The agreement seeks to produce an equitable exchange of research information which it achieves by providing transparency of the research. This starts with an exchange between MOD and NSD of the planned research programmes. The technical people on both sides identify those items of research which they would like access to and normally this would be brought about by exchanging research reports. This may be followed up by technical exchange meetings where certain topics are explored. NSD 4A has a role to play in operating the agreement and facilitating the exchange. This is likely to involve scanning the MOD NuPIP report for research which is likely to be of interest and confirming this with the appropriate NSD assessor. We would consolidate the request to MOD for access to the research reports and responding to their requests by arranging release of HSE. The licensees have separate agreements with MOD.

## **Environment Agency & Department for Environment, Food and Rural Affairs**

5.9 NSD 4A's contact with other OGDs and NDPBs is much more limited and is likely to be restricted to particular topics. Probably, the greatest potential for doing more lies with DEFRA and the Environment Agency (EA/SEPA). Contact was formerly through the Radioactivity Research and Environmental Monitoring committee (RADREM). There is contact with DEFRA's representative on the CCE Fission committee and there will be contact with EA and DEFRA in the future through the NDA Research Board. NSD 4A exchanges relevant information (waste management and radioprotection areas) with EA research unit on the nuclear safety research programme, but there is no coordination.

## **Department of Health**

5.10 NSD 4A has contact with the Department of Health through radioprotection activities in the Euratom Framework Programme. NSD assessors are in contact with the Health Protection Agency Radiation Protection Division, which has the major UK responsibility for radioprotection research.

## **Foreign and Commonwealth Office**

5.11 Requests from non-OECD member countries for NEA Databank codes are referred to HSE. The following has been agreed with FCO (contact Graham Zebedee). The categories of UK computer programmes from the NEA Databank that may be requested are given at <http://www.nea.fr/html/dbprog/category.htm>. All specifically nuclear programmes (categories A-G, J-K) are available only to those countries which have ratified:

- the Non-Proliferation Treaty (i.e. not India, Pakistan, Israel and North Korea) and also
- the safeguards agreements and the additional protocols (<http://www.iaea.org/OurWork/SV/Safeguards/legal.html>). This would exclude the requests from Argentina, Belarus, Egypt, Kenya, Malaysia.
- Iran should also be refused currently, as should North Korea, even if it signs and ratifies the above.
- The USA and Russia have not ratified the Additional Protocol, but they should not be refused.

5.12 All the other programmes on general mathematics, physics and engineering (categories H-I, L-Z) should be available universally.

5.13 FCO (Graham Zebedee) and DTI EITU (Louise Robson) should be informed periodically of requests that have been granted/denied.

5.14 FCO Treaty Section should be consulted about any legally binding agreement signed by HSE with government organisation in other countries. A legally binding document constitutes a treaty and must be laid before Parliament. Non-legally binding documents (Memoranda of Understanding) are therefore preferred by FCO. For guidance see 'Treaties and MOUs: Guidance on practice and procedures' issued by FCO Treaty Section (<http://www.fco.gov.uk/Files/KFile/TreatiesandMOUsFinal,0.pdf>). NEA-CSNI research projects are written in treaty language, but it has been agreed with FCO that as these are multilateral documents with long standing language, that it is not practical to change the wording, nor is it required to lay the documents before parliament. For bilateral agreements/arrangements (as with USNRC) it is possible to use MOU language.

## **Nuclear Decommissioning Authority**

5.15 The main contact with the Nuclear Decommissioning Authority (NDA) is

through NSD Division 2, and there is a Memorandum of Understanding between HSE and NDA. However for research matters, NSD 4A sits on the NDA Research Board and the NDA Technology and Skills Development Manager attends NuSAC SCR as an observer. More detailed arrangements including the Site Licensee Companies are under development.

## **6. International**

6.1 NSD 4A's primary objective is to facilitate technical exchange which is beneficial to NSD's business. NSD also has an objective which arises from the DTI Guidelines for the HSC Coordinated Nuclear Safety Research Programme to collaborate internationally. NSD is active both bilaterally and multilaterally through international organisations such as the OECD NEA, the IAEA and the EC. The arrangements operate either through specific agreements or contracts or through charters/conventions which the UK Government may sign up to.

6.2 In the main, NSD would drive most collaborative activities of the nature described here but would expect that the reactor licensees cooperate wherever necessary to achieve the required result. The licensees will have their own international collaborative activities with other utilities or utility organisations such as the Electrical Power Research Institute and the World Association of Nuclear Operators. NSD would expect that they would bring to our attention information which is of safety critical significance.

### **Other countries' regulators/Technical Safety Organisations**

6.3 NSD reviews its activities and keeps abreast of developments elsewhere. It has developed links with many other nuclear regulators covering all the directorate's interests including research. Normally, these links would be established through collaboration or exchange agreements. The current policy in HSE is that NHIPD would be responsible for establishing such agreements and NSD 4A's role would be in ensuring that their terms would meet our needs and in implementing their use. There are many general Information Exchange Agreements with other regulators which may be used to exchange research information. There are specific research exchange agreements with the US Nuclear Regulatory Commission (USNRC) and GRS (the German Technical Safety Organisation). With USNRC there are activities for which there are associated agreements. An agreement acts as a conduit through which information can pass without any concerns for Intellectual Property Rights issues, since the agreement will already have a commitment from each party as to what it can or cannot do with the information made available to it.

6.4 In principle, NSD has a commitment to bring to the attention of other

regulators safety critical information. For research information there is a guidance which has been agreed with the major licensees which requires NSD to seek permission before it is released to a third party. This includes research funded under the Levy Programme where we have agreed that the reactor licensees have primary responsibility to exploit the intellectual property although legally the information is actually owned by HSE. Therefore we would not want to knowingly prohibit this ability by releasing information which is commercially confidential. In practice, we would make the justification for release to a third party or parties and we would expect the licensees to comply with our wishes. Normally, we would look to the reactor licensees to authorise release but the legal owner is actually the licensee which has commissioned the work.

## **Euratom**

6.5 Collaboration is done through Euratom Framework Programme projects co-funded with the EC Directorate General for Research (DG RTD) through contractual means with a third party. Such contracts which would normally mean that NSD would fund 50% of the costs by the levy programme and the EC the other 50%, leaving ownership of intellectual property with the contractor. This condition is required by the EC and is outside HSE's normal arrangements for letting research contracts where ownership would lie with HSE. EC projects offer the potential for good value for money because NSD's financial commitment may be restricted to half the costs of a single partner but there may be many partners. NSD would get access to the project findings through their own contractor.

6.6 NSD 4A provides representatives to DG RTD's Euratom Consultative Committee (CCE Fission) and currently holds the chairmanship of this committee which oversees the Fission Programme.

## **OECD-Nuclear Energy Agency**

6.7 NSD 4A has a coordinating and advisory role concerning OECD NEA activity. It provides advice to NSD's permanent representative on the CSNI. This takes the form of a brief for the 6 monthly CSNI meetings and requires seeking the views of NSD's representatives on the NEA WGs and consolidating them into information or matters which should be raised at the CSNI meeting.

6.8 NSD 4A also coordinates UK participation in CSNI sponsored research projects, which are usually funded through the levy programme.

6.9 UK membership of the OECD-NEA Databank is paid for by HSE levy research funding and subscriptions from commercial organisations using the

Databank services, and administered by an NSS contractor. As part of this, the contractor represents the UK at the NEA Nuclear Science Committee Executive Group meetings. Requests from non-OECD member countries for UK codes are responded to using an agreement with the FCO (see section 5).

## **International Atomic Energy Agency**

6.10 IAEA has few research activities, although it does organise some Coordinated Research Projects (CRPs). NSD may participate in these through the levy programme.

## **7. Academia**

7.1 Universities provide both a good source of trained scientists and engineers employed by NSD and the licensees and sources of expertise where research can be undertaken or technical advice obtained. However, most universities which have historically been involved in the nuclear sector are currently suffering from the decline in the nuclear business. Some are responding by applying their skills elsewhere and as a result it is becoming difficult to attract students into nuclear related courses. This is exacerbated by the reduction in needs for research. An OECD Education Study has highlighted the current plight of many departments which is reflected to greater or lesser degrees in other countries. Consolidation has started to occur but there is still a long way to go. NSD 4A has a role of raising awareness within the general nuclear sector and encouraging a proactive approach amongst the main stakeholders. NSD 4A was instrumental in setting up a Nuclear Skills forum to explore possible solutions to the problem, and this work is being pursued through the COGENT Sector Skills Council in collaboration with DTI and other sectors such as health.

## **8. Other Bodies**

8.1 There are other bodies with which NSD 4A needs to interface. These include:

- research funding organisations like the Engineering and Physical Sciences Research Council
- professional organisations such as the institutes e.g. Institution of Mechanical Engineers
- nuclear industry bodies such as British Nuclear Energy Society, Nuclear Industry Association, World Association of Nuclear Operators, FORATOM (European Atomic Forum)

- lobby organisations e.g. Greenpeace.

## **8. Associated documents**

RES/001 Nuclear Safety Research

G/RES/006 Consultation, auditing and reporting arrangements

G/RES/010 Distribution and dissemination of research reports and committee papers

## **10. Definitions**

CSNI	Committee on the Safety of Nuclear Installations
DEFRA	Department for the Environment, Food and Rural Affairs
DTI	Department of Trade and Industry
DOH	Department of Health
EA	Environment Agency
EC	European Commission
EITU	Energy Industries and Technology Unit
IAEA	International Atomic Energy Agency
NDA	Nuclear Decommissioning Authority
NEA	Nuclear Energy Agency
OECD	Organisation for Economic Cooperation and Development
OST	Office of Science and Technology
SEPA	Scottish Environment Protection Agency