Nuclear Free Local Authorities Secretariat
c/o Manchester City Council, Town Hall, Manchester, M60 3NY, UK
Tel: 0161 234 3244 Fax: 0161 274 7397
Chair: Councillor George Regan Secretary: Sean Morris

Mr Nigel Atkinson
Head of Environment Regulation Policy
Environmental Permitting Consultation,
Defra
Area 5B
Ergon House,
Horseferry Road,
London SW1P 2AL

FAO Maria Moynihan: 020 7238 5097
eppadministrator@defra.gsi.gov.uk

28th July 2009

Dear Mr Atkinson,

Environmental Permitting Programme: Consultation on Government Guidance

The NFLA* are grateful for the opportunity to comment on the above. However our comments are restricted to the Guidance on Radioactive Substances Regulation.

Introduction

The Environmental Permitting Programme (EPP2) is designed to cut unnecessary red tape, while continuing to protect the environment and human health.

The NFLA contends that many of the problems with public acceptability which the UK nuclear industry, its regulators, government agencies and policy advisory bodies have encountered in recent years are due primarily to the fact that policies are not underpinned by a clear set of environment principles. The Environmental Permitting Programme would have been a perfect opportunity for the Government to underpin its Guidance with a clear set of environmental principles. Its failure to do so will cause problems of public acceptability in future.

The draft Statutory Guidance to the Environment Agency sets out several environmental principles in paragraph 11, for example, which could have been included. Yet the section in the Environmental Permitting Guidance concerning the regulation of radioactive discharges into the environment focuses almost exclusively on Best Available Techniques, and does not refer to the other principles such as sustainable development and the precautionary principle. These should be set out in the introduction to the Environmental Permitting Guidance on Radioactive Substances Regulation. The Guidance will only help cut 'unnecessary' red tape if it is comprehensive.

Sustainable Development

The overall guiding principle should be one of sustainability. The Government's definition of sustainable development is development which enables all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations. (1)

This is open to wide interpretation. The four principles of sustainability as detailed by the Natural Step, (2) explain that sustainability must involve the elimination of our contribution to the progressive build-up of both substances extracted from the Earth's crust and substances produced by society. In other words, we should be aiming for a goal of zero discharges for all toxic/radioactive and/or persistent or bio-accumulative substances. Any release of such substances is likely to compromise the ability of future generations to satisfy basic needs and enjoy a better quality of life.

Aiming for zero

This means the very title of this programme – the Environmental ***Permitting*** Programme runs counter to the sustainable development principle. Instead this Guidance should be about limiting and restricting, and providing the regulators and regulated with a road map showing how to reach the eventual aim of zero.

Of course, the other reason why we should be aiming for zero is the fact that the UK Government agreed at the 1998 Ministerial meeting of the Oslo and Paris (OSPAR) Commission - the treaty for the protection of the marine environment of the North-east Atlantic - to achieve "*substantial reductions or elimination of discharges*" by the year 2020, "*to levels ...close to zero*". (3)

Comments on specific sections of the Radioactive Substances Regulation Consultation:

Chapter 2 – Scope of the Guidance

The statement that "all matter on earth is, to some extent, radioactive" is not helpful. The nuclear industry and even nuclear regulators have developed the bad habit of comparing man-made collective doses with large background collective doses. Such comparisons invite the inference that natural background radiation may be viewed with equanimity. This is not the case. Background radiation results in an estimated 6000 to 7000 future UK cancer deaths per year (4). It would be better to emphasise the risks associated with natural radioactivity, and point out that where the radioactive content of materials is present simply as a consequence of natural radioactivity in the undisturbed environment, although those materials cannot be within the scope of RSR, it does not necessarily mean they are safe.

Chapter 3 – Permitting

Para 3.8 Justification of Practices Involving Ionising Radiation Regulations 2004.

Following a decision in 1994 by the High Court in a case regarding the Thermal Oxide Reprocessing Plant at Sellafield brought against the Government by Greenpeace and Lancashire County Council, justification decisions were taken on a site-by-site basis by the Environment Agency or the Scottish Environment Protection Agency (SEPA). However, the Government decided in October 2000 that future justification decisions would be for generic classes or types of practice and would be taken by the appropriate Secretary of State or Welsh Ministers, although in Scotland they are still taken by SEPA. (5)

This means that, for example, in the case of the Nuclear Industry Association's Application to Justify New Nuclear Power Stations, it is the Secretary of State for Energy and Climate Change who is acting as the Justifying Authority. This Secretary of State has already confirmed that he wants new reactors to go-ahead, and has said he will carry out a

number of ‘facilitative actions’ to speed up their construction. (6) This puts the Government in the position of being the promoter of new reactors and the Judge and Jury in decisions about whether new reactors are justified.

The Environment Agency would appear to be better placed to provide unbiased justification decisions, perhaps in co-operation with SEPA, whereas, at least in the case of new reactors, DECC has already made its mind up.

The most high profile previous justification exercise was for the Sellafield MoX Plant (SMP). At that time the Environment Agency was responsible for deciding whether the practice was justified. The Agency expressed its dissatisfaction with the fact that, by constructing the MOX plant before seeking authorization, it was no longer necessary to include construction costs in the process of economically justifying the plant. (7) If BNFL had made an application prior to construction of the plant it is clear that any assessment of justification would have concluded that there would be no economic benefit to offset the detriments. The justification process is part of a system designed to protect human health. Clearly an objective decision cannot rest on the timing of the application, so sunk costs should not have been written off. However, assuming this problem is sorted out it appears that the Environment Agency would be much more likely to provide an unbiased decision than a Government Minister.

Para 3.10

It is recommended that the Guidance reiterates the Government’s view -

“…*that the unnecessary introduction of radioactivity into the environment is undesirable, even at levels where the doses to both human and non-human species are low and, on the basis of current knowledge, are unlikely to cause harm*”. (8)

It is noticeable that the most recent UK Discharge Strategy does not set a strategy target of reducing the estimated mean dose to a representative member of a local critical group down to 0.02mSv per year by 2020, as did the previous Strategy. (9) This should be reintroduced as a target at para 3.11.

Para 3.15

This paragraph appears to rely on the Environment Agency publishing guidance on the calculation of prospective doses. It would be pertinent here to mention two things:-

Firstly, in order to meet with the sustainable development principle, attention needs to be paid to the possible habits of people living near nuclear sites in the future. This is set out in the IAEA’s principles of radioactive waste management:

“…*radioactive waste shall be managed in such a way that predicted impacts on the health of future generations will not be greater than relevant levels of impact that are acceptable today*.” (10)

A gradual erosion of the rights of future generations to unpolluted natural resources can occur if critical groups in a prospective assessment are limited to those existing today. For example, doses to high-rate fish and shellfish consumers may fall due largely to a reduction in shellfish consumption because of concerns about contamination.

Secondly, the Precautionary Principle, which has been defined as:-

"*Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation."*

The corollary of this is that:-

"*Where there is uncertainty we should assume the worst*".

Para 3.16

This paragraph discusses environmental monitoring of, for example, radionuclide concentrations in locally-grown foods, and vegetation, in order to produce an effective dose assessment for members of the public. There should be some recognition here of the uncertainties involved. The Food Standards Agency, for example, says:

"*The transfer of radioactive nuclides via the food chain to man involves many complicated processes, some of which are not fully understood. Uncertainty arises in dose assessments partly because of this lack of knowledge and partly because the models and modelling techniques used are simplified representations of complex realities. This uncertainty can be large*." (11)

Managing Radioactive Waste Safely

The Environment Agency's Draft Guidance on the requirements for authorisation of a deep geological facility suggests the risk to members of the public once the repository is closed must not exceed 1 in a million per year. If this risk is converted to a dose it would be equivalent to a dose of around 20 microsieverts per year (0.02mSv/yr) – but could be much larger in some situations if the probability of such a dose occurring was low enough. (12) This compares with a dose of 300 microsieverts per year which should not be exceeded while the facility is in operation. The Agency, however, warns developers that the Government aims to reduce doses to 20 microsieverts after 2020. This target should be made explicit in the Environmental Permitting Guidance.

National Discharges Strategy

As referred to above, this section mainly deals with the application of Best Available Technology (BAT). The Draft Statutory Guidance to the Environment Agency stated that the definition of BAT is considered to be essentially the same as Best Practicable Means (BPM) and Best Practicable Environmental Option (BPEO).

The Royal Commission on Environmental Pollution defines Best Practicable Environmental Option as:-

"…*the outcome of a systematic consultative and decision-making procedure which emphasises the protection of the environment across land, air and water. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefit or least damage to the environment as a whole, at acceptable cost, in the long as well as the short term … openness and accountability are central to BPEO … there should be the widest possible opportunity for others who may be affected to contribute to the decision … where the trade-offs are difficult or controversial, the selection of BPEO cannot be left to scientists, industrialists, and regulatory experts alone. Public involvement is*

needed so that the public values underlying the choice of BPEO are identified … there must be appropriate and timely consultation with people directly affected. The circle of those involved in taking the decisions should be appropriately wide". (13)

It can be seen that this definition has a much greater emphasis on "public involvement" than is contained in the definition of BAT. A BPEO is the outcome of a consultative process. If BAT is indeed the same as BPEO then the Environmental Permitting Guidance needs to make reference to the need for public and stakeholder consultation.

Decommissioning

The NFLA does not believe that decommissioning should be used as an excuse for increasing discharges of radioactivity into the environment. Provided environmental principals are applied, particularly on concentrating and containing waste rather than diluting and dispersing it, then there should be no need to increase discharges. The emphasis in para 3.51, therefore, needs to be changed.

This is not to deny that problems will occur during the decommissioning process, as highlighted, for example, by the recent problems involving aerial discharges of antimony-125 at Sellafield. Operations at Sellafield's B205 Magnox reprocessing plant had to be put on hold in April this year because gaseous discharges from the site's Fuel Handling Plant (FHP), where Magnox fuel is 'de-canned', had risen close to Sellafield's site discharge limit. B205 was closed for several weeks. The release of the Sb-125 is directly associated with the process of de-canning the higher burn-up Magnox fuels.

Anticipating further increases in discharge of Sb-125, as more higher burn-up Magnox fuel is de-canned, Sellafield Ltd applied to the Environment Agency (EA) in October 2008 for an increase to the site discharge limit of Sb-125 from 6.9 GBq to 11.5 GBq. (14)

The Environment Agency claims an increase in the discharge limit would not significantly increase radiation doses to people. However if the Agency was truly striving to reach a goal of zero emissions on the basis that the "*unnecessary introduction of radioactivity into the environment is undesirable"* it would seek an alternative solution to the problem. It is noteworthy that the final two Magnox stations have both had their lives extended, and yet the manufacture of fresh Magnox fuel ended in 2007. An environmental approach, based on environmental principles, would look instead at reversing the decision to extend the life of Oldbury and Wylfa and/or storing spent Magnox fuel rather than reprocessing it.

Summary of NFLA Recommendations

1. The Environmental Permitting Guidance Radioactive Substance Regulation document should include a clear set of environmental principles.

2. Sustainable development should be the overriding principle. This means that we should be aiming for a goal of zero discharges into the environment for all toxic/radioactive and/or persistent or bio-accumulative substances. It should be emphasized that the system is not about 'permitting' but is about 'limiting and restricting', and providing the regulators and regulated with a road map showing how to reach the eventual aim of zero.

3. The document needs to acknowledge that background radiation is also hazardous and results in an estimated 6000 to 7000 future UK cancer deaths per year.

4. The Environment Agency is better placed to provide unbiased justification decisions than the Department for Energy and Climate Change.

5. The guidance should reiterate the idea that "*the unnecessary introduction of radioactivity into the environment is undesirable"* and the target of reducing the estimated mean dose to 0.02mSv per year by 2020.

6. Environment Agency Guidance on prospective doses should take into account future generations and the precautionary principle, and take account of the uncertainties involved in environmental modeling.

7. The target dose of 0.02mSv per year by 2020 also needs to be taken into account in the Guidance on Requirements for Authorisation for Deep Geological Disposal.

8. Decisions on BAT need to be the outcome of a consultative process.

9. Decommissioning should not be used as an excuse to increase discharges of radioactivity into the environment.

If you have any issues or queries with any aspect of this response please do not hesitate to get in touch with the NFLA Secretariat.

Yours sincerely,

Baillie George Regan
Chair of Nuclear Free Local Authorities

* The Nuclear Free Local Authorities are made up of over 70 councils from England, Scotland, Wales, Northern Ireland and the Republic of Ireland who take a critical look at all aspects of nuclear power, radioactive safety and nuclear weapons proliferation. Fir further details consult the NFLA website on http://www.nuclearpolicy.info or contact the NFLA Secretariat on 0161 234 3244.

References

(1) http://www.defra.gov.uk/sustainable/government/what/index.htm

(2) The four system conditions: http://www.naturalstep.org/the-system-conditions

(3) UK Strategy for Radioactive Discharges 2001-2020, DEFRA July 2002. http://www.defra.gov.uk/environment/radioactivity/government/discharges/pdf/rad_dischargestrat1.pdf

(4) Robb JD (1994) Estimates of Radiation Detriment in a UK Population. NRPB Report R-260. National Radiological Protection Board. Chilton. Oxon.

(5) Proposals for the Justification of Practices Involving Ionising Radiation Regulations 2004; Consultation document, DEFRA, 2004.

(6) BERR Press Release 10th January 2008,
http://nds.coi.gov.uk/environment/fullDetail.asp?ReleaseID=343892&NewsAreaID=2&Navig atedFromDepartment=True
For information on other facilitative actions see New Nuclear Monitor No.14 “The Government’s Facilitative Actions to Speed Up Nuclear Developments”.
http://www.nuclearpolicy.info/docs/nuclearmonitor/NNM14.pdf

(7) EA Document Containing the Agency’s Proposed Decision on the Justification for the Plutonium Commissioning and Full Operation of the Mixed Oxide Fuel Plant, October 1998.

(8) UK Strategy for Radioactive Discharges, July 2009. Exec Summary para 5.
http://www.decc.gov.uk/Media/viewfile.ashx?FilePath=What we do\UK energy supply\Energy mix\Nuclear\radioactivity\1_20090722135916_e_@@_dischargesstrategy.pdf&filetype=4

(9) UK Strategy for radioactive discharges 2001 – 2020, July 2002, para 6.2.6.
http://www.defra.gov.uk/environment/radioactivity/government/discharges/pdf/rad_dischargestrat1.pdf

(10) Quoted in Review of Radioactive Waste Management Policy: Final Conclusions. HMSO (1995). Cm2919.

(11) Rio Declaration on Environment and Development
http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm

(12) Consultative Exercise on Dose Assessments, 3rd & 4th Oct 2000, Final Report FSA, 2001

(13) Deep Geological Disposal Facilities on Land for Solid Radioactive Wastes: Guidance on Requirements for Authorisation. Draft for Public Consultation.
http://www.environment-agency.gov.uk/static/documents/Research/gd_consultation_2052368.pdf

(14) Royal Commission on Environmental Pollution, 21st Report Setting Environmental Standards, October 1998. http://www.rcep.org.uk/reports/index.htm

(15) Quarterly report to West Cumbria Sites Stakeholder Group, 1 October to 31 December 2008
http://www.wcssg.co.uk/2009m04/eareport020409.pdf
and Raised Gas Discharges of Antimony-125 from Sellafield’s Fuel Handling Plant force temporary closure of Magnox Reprocessing, CORE Briefing 17th June 2009
http://www.corecumbria.co.uk/newsapp/pressreleases/pressmain.asp?StrNewsID=264